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Landmark Research, Inc.

[s.l.]: [s.n.], January 1, 1981

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Landmark Research, Inc.

APPRAISAL OF PACK RIVER LANDS

CHELAN COUNTY, WASHINGTON

AS OF JANUARY 1, 1981.

Landmark
Research
Inc.

March 1, 1982

James A. Graaskamp, Ph.D., SREA, CRE
Tim Warner, MS, MAI, SREA
Jean B. Davis, MS

Attorney Ed Parry
Parry & Esposito
Suite 604, Fidelity Building
Spokane, Washington 99201

Re: Appraisal Valuation of Pack River Lands Within Wilderness
Designated by Alpine Management Act of 1976

Dear Mr. Parry:

With this letter we are transmitting to you an appraisal valuation as of January 1, 1981, at fair market value of lands now owned by 20 interests in the former Pack River Company, referred to collectively as Pack River Lands in this report for convenience. This appraisal report culminates a three year research project by a variety of experts at the University of Wisconsin or at Landmark Research, Inc., so that the appraisal report is the conversion of the expertise of many specialties into a pricing model process with which to value the subject land for the owners whom you represent. Therefore this appraisal report incorporates by reference and draws heavily upon the following research compendiums and resources:

- Appendix A - Comparable sales data collection, including appraiser notes, maps, photographs, and legal documentation selected by Landmark Research, Inc. as relevant and suitable to the valuation of the subject property. Photography by Sean Ahearn.
- Appendix B - Report on technical problems of data mapping, reconciliation of legal descriptions, survey location, and computer mapping of subject and comparable properties by Prof. Ralph Kiefer; Professional report and notes of Sean Ahearn, photographer and environmental monitoring technician and surveying specialist.
- Appendix C - Report on methods and procedures for developing a computer data base covering the subject property and environs (100,000 acres plus subject properties), additional computer pricing model programs, and related procedures by Michael Robbins, environmental systems and valuation specialist.

To: Attorney Ed Parry

Appendix D - Survey research of Alpine Lakes hikers and campers using visitors employed photography, questionnaire survey, and graphic response techniques by Professors Bernard Niemann and Richard Chenoweth; procedures and applications of VIEWIT, a computer model for computation of seen areas, slope, and aspects for land use planning, developed by the Forest Service and applied on the University of Wisconsin computer by William B. Gates.

Appendix E - A collection of correspondence, technical tables, and other sources relied on within the appraisal for key assumptions and procedures.

Appendix F - A collection of technical readings and similar materials which provide a broader base of understanding of innovative concepts and current technology which may not be generally familiar or traditionally associated with the appraisal process, but nevertheless relevant to the subject property.

Appendix G - A collection of slide carousels which portray the subject property and comparable sales in three dimensional color with screen projection, which portray data collection and coding procedures, or which provide easily transportable views of cumbersome data sources such as relief maps, wall maps, and computer outputs.

This report provides a separate fair market value as of January 1, 1981 for each owner by parcel in Table 1 attached to this letter and taken from the concluding pages of Section IV of the attached report. The sum of these individual interests represents a total value at fair market value, assuming all conditions requisite of a fair sale with cash to the seller of:

THIRTY-SEVEN MILLION DOLLARS

(\$37,000,000)

TABLE 1

FAIR MARKET VALUE BY OWNER NUMBER AND
COMPLAINT NUMBER AS OF JANUARY 1, 1981

LETTER OF TRANSMITTAL DATED MARCH 1, 1982

<u>Owner No.</u>	<u>Owner Name</u>	<u>Acres Owned</u>	<u>Total Fair Market Value</u>	<u>Complaint No.</u>
1	L. V. Brown	2,342.92	\$ 5,115,551	C-80-365
2	Sheila D. Brown	2,301.68	4,946,204	C-80-351
3	J. M. Brown, Jr.	3,599.78	5,596,217	C-80-362
4	Jean O. Brown	3,483.60	5,318,760	C-80-355
5	Chester Chastek	640.00	899,884	C-80-366
6	Catherine Chastek	640.00	948,628	C-80-367
7	Beverly C. Cook	960.00	1,405,331	C-80-349
8	Deborah A. Hansen	928.40	1,601,770	C-80-352
9	Stephanie M. Brown	979.90	1,369,244	C-80-353
10	Lawrence V. Brown, Jr.	960.00	1,454,397	C-80-361
11	Josephine H. Brown	1,326.56	1,821,154	C-80-350
12	Patricia E. Brown	1,182.40	1,920,792	C-80-359
13	Jacqueline Brown	1,255.57	1,758,148	C-80-363
14	Barbara Huquenin	1,208.80	1,817,368	C-80-364
15	Patrick C. Chastek	101.78	182,234	C-80-348
16	Joyce Esposito	101.79	180,967	C-80-354
17	Gary R. Chastek	120.00	92,577	C-80-356
18	Thomas D. Chastek	110.00	253,306	C-80-357
19	Lawrence F. Chastek	110.00	150,164	C-80-358
20	Michael P. Chastek	<u>103.59</u>	<u>171,336</u>	C-80-360
TOTAL		22,456.77	\$37,004,032	
		Acres		

Signed


James A. Graaskamp

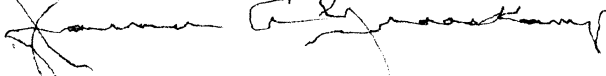
To: Attorney Ed Parry

These value determinations are the result of a thorough and craftsmanlike analysis of the subject property and its attributes, the changing market for wilderness lands in the high country of the northwest, and consideration of the significant alternative uses to which the property might be put. It should be noted that we have concluded the highest and best use to be wilderness. There is a growing and orderly market for wilderness lands among well financed conservation groups and other cognescenti of natural beauty. Certain procedures in the appraisal are innovative in terms of scoring to rank the quality of wilderness, of natural beauty, of naturalness, and of solitude in order to focus more clearly on the superior and outstanding attributes of the subject property in these matters relative to other sales of comparable properties. A short description of appraisal logic and procedures is provided in the Appraisal Abstract following the Table of Contents. We have depended in part on sources and experts considered to be reliable and accurate but no guarantee can be made by Landmark Research for any of these sources and individuals. The findings and valuation conclusions must be read and understood in context with OUR STATEMENT OF LIMITING CONDITIONS as well as the critical assumptions throughout the report WHICH ARE STATED IN CAPITALIZED LETTERS.

Nevertheless all of us associated with the project are pleased and excited that we may have provided some small improvements to appraisal theory and technology, some needed refinements to the appraisal process for wilderness, and a new point of departure for ranking wilderness properties for both public and private decision makers, who need proxies for intangible attributes in the increasingly complex field of land use decisions and valuation.

Sincerely,

James A. Graaskamp, Ph.D., SREA, CRE
Urban Land Economist



Michael L. Robbins, MS
Environmental Monitoring & Valuation Systems Specialist



TABLE OF CONTENTS

	PAGE
LETTER OF TRANSMITTAL	ii
TABLE OF CONTENTS	vi
LIST OF EXHIBITS	viii
APPRAISAL ABSTRACT	xii
I. DEFINITION OF APPRAISAL ASSIGNMENT	I-1
A. The Context for Appraisal	I-1
B. Basic Appraisal Assumptions	I-8
1. Definition of date of appraisal	I-8
2. Definition of appraisal units	I-9
C. Definition of Value	I-29
D. Property Rights Appraised	I-30
E. Highest and Best Use Concept	I-33
1. Wilderness as an economic resource	I-35
2. Valuation of intangible attributes	I-38
3. Collective private markets for rare wilderness	I-40
4. Substituting tangible facts of intangible qualities	I-45
F. Wilderness Defined	I-48
G. Appraisal Methodology	I-52
II. SUBJECT PROPERTY - DESCRIPTION, DATA BASE, AND ECONOMIC CONTEXT	II-1
A. Introduction	II-1
B. General Elements of a Data Base	II-2
C. Subject Property Data Base	II-5
D. Data Organization	II-5
E. Data Recording Process	II-8
F. Data Sources	II-10
G. Legal Attributes	II-15
H. Subject Property Linkages	II-20
I. Dynamic Attributes	II-25
J. Environmental Attributes	II-32
K. The Economic Context	II-44
L. Conclusion	II-55
III. DETERMINATION OF HIGHEST AND BEST USE	III-1
A. Introduction	III-1
B. Recreational Lot Potential	III-1
C. Analysis of Logging Potential	III-8
D. Combined Timber and Development Values	III-13
E. Wilderness as Best Use	III-14

IV. MARKET COMPARISON APPROACH TO VALUE	IV-1
A. Basic Methodology	IV-1
B. Definition of Acceptable Arms-Length Transactions	IV-2
C. Basic Data Screens and Initial Data Sweep	IV-7
D. Adjustment of Comparable Sale Prices for Externalities	IV-11
E. Establishing Comparative Wilderness Scores for Comparables	IV-32
F. Analysis of Summary Scores for Comparables	IV-42
G. Establishing Basis for Market Comparison	IV-45
H. A Brief Explanation of the MKTCOMP System	IV-50
I. Market Comparison Price Model No. 2	IV-68
J. Multiple Regression Application to Valuation of Subject Property	IV-73
K. Synthesis and Reconciliation of Market Comparison Value Indicators	IV-76
L. Final Value Conclusion	IV-80
CERTIFICATE OF APPRAISAL	IV-82
STATEMENT OF LIMITING CONDITIONS	IV-103
QUALIFICATIONS OF APPRAISER	IV-106

LIST OF EXHIBITS

EXHIBIT		PAGE
1	General Vicinity of Alpine Lakes Area	I-2
2	All Non-Federal Lands Being Considered for Acquisition to Complete Alpine Lakes Wilderness	I-3
3	Intended Wilderness Within Which Subject Property is Located in a Checkerboard Distribution	I-4
4	Public Law 94-357, 94th Congress, H. R. 7792, July 12, 1976	I-6
5	Four Acquisition Zones Indicating Ownership Pattern and Related Forest Service Lands Available for Exchange	I-10
6	Detailed Map of Four Appraisal Zones and Ownership of Each Section in Color Code Tied to Exhibit 6A	I-13
6A	Ownership Key and Other Basic Boundaries or Development Factors Affecting Appraisal	I-15
7	Ownership Positions and Legal Descriptions by Appraisal Zones to be Valued as Subject Properties Within this Report	I-17
II-1	Subject Property Data Base	II-4
II-2	Subareas of 100,000 Acres of Alpine Lakes Wilderness Surrounding and Including Pack River	II-7
II-3	Pack River Project, Alpine Lakes Area, Washington: Section Division into 64 Ten Acre Cells	II-9
II-4	Raw Data Geo-Coded into Data Base for All Subject and Comparable Properties as of August 1981	II-12

II-5	Summary of Physical Characteristics Cataloged as Predominant for Each Ten-Acre Cell in Four Appraisal Units . . .	II-16
II-6	Key Trail Linkages to Public Road System . . .	II-22
II-7	Dynamic Attributes of The Wilderness Evaluation System (WES)	II-27
II-8	The Scenic Quality System (SQS)	II-29
II-9	Comparable Summary Sheet	II-30
II-10a	Mean Score of Times Seen from Public Viewing Platforms	II-34
II-10b	Mean Score of Times Seen from Pack River Viewing Platforms	II-39
II-11	Washington State Employment and Income	II-46
II-12	Construction and Housing Statistics and Economic Indicators	II-47
II-13	Use of National Forest Units, National Wilderness Preservation System, Fiscal Year 1979 (10/1/78 - 9/30/79)	II-50
II-14	1977 Transportation Census, Trips Taken for Outdoor Recreation Within the U.S. in 1977	II-54
III-1	Total No. of Lots Per Cluster with Potential Suitability for Low Density Recreational Residential Development	III-5
III-2	Sub-Division and Road Maps	III-3
III-3	An Estimate of Board Foot Volume Assuming Conventional and Skyline Logging Allocated by Four Cluster Groupings	III-10
III-4	Preliminary Estimate of Harvestable Timber Values by Conventional & Skyline Logging . . .	III-12
III-5	Alternative Use Comparisons by Property Cluster for Pack River Properties.	III-17

III-6	1978 National Park Statistical Abstract. . . .	III-18
IV-1	Summary of Selected Comparable Sales and Adjusted Prices for Pack River Appraisal . . .	IV-10
IV-2	Pack River Comparable Sales Chart, Assumptions and Explanations	IV-12
IV-3	Implicit Price Deflators for Gross National Product	IV-19
IV-4	Summary of Results of Three Alternatives Considered for Updating Adjusted Sales Price for Appreciation and Inflation From Date of Sale to January 1, 1981 (Implicit Price Deflator was Used)	IV-20
IV-4a	Updating Adjusted Sales Price for Appreciation and Inflation From Date of Sale to January 1, 1981 at Six Percent (6%) Annual Compounding	IV-21
IV-4b	Updating Adjusted Sales Price for Appreciation and Inflation From Date of Sale to January 1, 1981 at Six Percent (6%) Annual Compounding to January 1, 1974, and Ten Percent (10%) Annual Compounding From January 1, 1974, to January 1, 1981	IV-22
IV-4c	Updating Adjusted Sales Price for Appreciation and Inflation From Date of Sale to January 1, 1981, Using the Implicit Price Deflator for Gross National Product	IV-23
IV-5a	Comparable Sales - Washington	IV-24
IV-5b	Comparable Sales - Idaho	IV-25
IV-5c	Comparable Sales - Colorado	IV-26
IV-5d	Comparable Sales - Wyoming	IV-27
IV-5e	Comparable Sales - Montana	IV-28
IV-5f	Summary of Comparable Sales Adjusted to January 1, 1981, After Adjustment for External Market Conditions	IV-33

IV-6	15 Potential Comparables Ranked by Average Wilderness Score Per 10 Acres Together With Other RARE II Rankings	IV-34
IV-7	Comparable Summary Sheet	IV-39
IV-8	A List of the Dynamic Attributes Used in the Pack River Appraisal	IV-40
IV-9	Subject Property Described as 590 40 Acre Units Identified by Y and X Coordinates, Cell Number of Northwest 10 Acre Cell, Owner, Area, and Number of 10 Acre Cells in a 40 Acre Sub-Unit	IV-48
IV-10	Comparable Sales Described as 173 40 Acre Sub-Sale Units Identified by Y and X Coordinates, Cell Number of Northwest 10 Acre Cell, Owner, Area, and Number of 10 Acre Cells in a 40 Acre Sub-Unit	IV-49
IV-11	Factor Adjustments Used for Two-Stage MKTCOMP Selection	IV-56
IV-12	Graphic Illustration of Euclidian Distance as a Method for Ranking Comparable Sales of Relatively Different Attribute Sets	IV-59
IV-13	Sample Market Comparison Output Available for Each of 590 Subject Property 40 Acre Units	IV-63
IV-14	Summary of MKTCOMP Values by Section or Partial Section	IV-64
IV-15	Summary of MKTCOMP Valuation Results by Cluster I to IV	IV-65
IV-16	Number and Percentage of Selection of Each Comparable Sub-Sale	IV-66
IV-17	Computer Summary of Ownership Values Distributed to Each of 20 Owners by Assemblage of 40-Acre Parcel Values in Each Ownership	IV-67

IV-18 Sorting of Comparable Sales as Wilderness
 and Trail Head with Above Average Scores
 for Wilderness and Scenic Quality IV-70

IV-19 Valuation by Cluster and Ownership
 Using Average Price Per Acre of High
 Quality Wilderness or Trail Head
 Comparables - Pricing Model Number 2 IV-72

IV-20 Multiple Regression Analysis
 of 9 Comparables to Establish
 2 Variable Regression Model as
 Pricing Model Number 3 IV-75

IV-21 Pricing of 20 Ownership Positions
 Using Multiple Regression Pricing
 Model Number 3 IV-77

IV-22 Weighted Average Synthesis of
 3 Pricing Models to Establish
 Fair Market Value as of January 1,
 1981, for 20 Ownership Positions IV-79

IV-23 Fair Market Value by Owner Number
 and Complaint Number as of January 1,
 1981, Letter of Transmittal Dated
 March 1, 1982 IV-81

APPRAISAL ABSTRACT

The appraisal of roadless wilderness lands of great topographical and ecological diversity is a specialty within general appraisal practice which has not received much theoretical or practical development. An appraisal is a systematic collection of facts about a specific property which are organized to explore alternative use scenarios with the objective of identifying the most probable use consistent with constraints of public policy and economic profitability. Given this best use or most probable use, the appraiser can generalize as to the profile of the most probable buyer type, his motivations and his means as a first step toward selecting or developing a model for pricing the property in a manner consistent with best use and probable buyer assumptions. Appraisal value is variously defined as a price under specific conditions and in this case the price is fair market value. Fair market value presumes cash to the seller, knowledgeable buyer and seller, the absence of duress, and an adequate offering time on the market.

The pricing model may be inferential from past sales of comparative properties or may simulate the decision rules of expected buyers, as in the case of cash flow investment models for commercial buildings. Where facts and precedent provide no basis for comparative inference or simulation, the appraiser falls back on normative methods like the cost approach, particularly where price prediction is not as important as a formalized procedure for fire insurance replacement costs or even assessment.

In the case at hand regarding some 23,000 acres of mountainous high country with unique attributes of scenic quality the standard appraisal problem has not quite been specified by the circumstances so the appraiser has established some working premises:

- A. In the absence of determination of a date of purchase or taking by eminent domain, it was necessary to presume a date of January 1, 1981, recognizing that a complex appraisal pricing model would need to be a design that was capable of responding quickly to a court directed change in appraisal date.

- Bank, Inc.**
- B. Since the Pack River lands are generally scattered in approximately 43 sections in a checkerboard pattern with federally owned lands, these sections are organized in clusters to define four appraisal units which seemed marketable, cohesive, and topographically defined.
 - C. Since the start of the appraisal, the original ownership found it necessary to liquidate so that there are now 20 owners scattered among the 43 sections, although not quite randomly. Therefore an appraisal system had to be designed with a land area unit which could be aggregated in the future into any appraisal unit to be later defined by negotiation or by the courts. A 10-acre cell was therefore used as the organizing unit for data.
 - D. In addition to alternative uses for the subject lands such as logging and recreational development which are rather customary scenarios, wilderness as a highest and best use was also considered. Evidence is presented of an orderly market for rare and high quality natural landscapes fostered through private organizations and government agencies without power of eminent domain. At some point wilderness attributes on a specific site are present in such quantity, diversity, and quality that the preservation market will pay more than any alternative use to acquire and preserve. The problem is scoring wilderness in such a way as to rank and price its quality so that the cross over points to best use as wilderness from say, logging, is objective.
 - E. Wilderness as an economic use has been ignored by appraisers and the courts because a significant vector of value is beauty and scenic quality, which did not seem to lend themselves to objective comparison. Therefore it was necessary to find physical ascertainable facts which were correlated into proxies for the degree of naturalness, solitude, recreational challenge and scenic beauty, the general components of wilderness ascribed to by the U.S. Forest Service RARE II.

- [REDACTED]
- F. To establish the relationship between the presence of various land forms, rock forms, water forms, vegetation forms, and vistas to perceived scenic quality, the appraisal uses a recent technique called Visitor Employed Photography, a tool of the Forest Service as well as other private/public sectors. This link made it possible to provide ordinal ranking based on the diversity of a given tract in terms of land form, rock form, water form, etc. Vistas were scored with a Forest Service computer program called VIEWIT.
 - G. Since land appraisal depends primarily on market comparison as opposed to income valuation or a cost approach, it was then necessary to catalog a diversity of rock, land, water, and vegetative forms on the 10-acre cell units of the subject property and of the comparable property to facilitate sensitive comparison of various properties with objective detail. When these physical elements were scored for their absence or presence in combination as found in the VEP studies, it was then possible to compare sites for alternative uses and related values.
 - H. The development of a premise for best use or most probable use explored the most probable options including logging, recreational development, logging and recreational development, and wilderness as an economic use.
 - I. Comparable sale properties were then sought out in mountainous wilderness tracts featuring some commercial forest cover, diversity of lake and stream water forms, with opportunities for challenging wilderness recreation, and roughly similar rainfalls, bought by preservation minded individuals, private organizations, or government agencies proceeding without benefit of eminent domain.
 - 1. The search was further narrowed to emphasize the northern and eastern Cascades in Chelan, Skagit, and Snohomish Counties in Washington, the Primitive Areas along the Salmon, Monumental, and Big Creek areas in Idaho, and in the Spanish Peaks Primitive Area of Gallatin and Lewis & Clark Counties of Montana. In addition several sales in Jackson Hole, Wyoming, and the Colorado Rockies were selected as well.

2. These sales were first adjusted for the classic externalities of terms of sale, improvements which may have been included with the land, differences for mineral rights, development pressure, seller circumstances, or recreational pressures on a comparative regional basis. These adjusted prices were then adjusted for currency devaluation over time using the Federal Reserve Deflator Index.
 3. Each comparable was cataloged as to its physical characteristics with the identical 10-acre unit coding system as was applied to the subject property. Only the vista component had to be simulated by the appraiser as an alternative to VIEWIT because of the absence of sufficient elevation points around some of the comparables.
 4. To place sales on a common denominator, 14 sales were subdivided into 173 forty acre sub-sales by reallocating the adjusted price for the total property to each forty in the proportion that the score on the forty was to the total score on the property.
- J. To match 40-acre units of the subject property to 40-acre sub-sale units of the comparable sales, an automated process known as MKTCOMP developed for market comparison appraisal was used. This system, which has had various government applications in the past ten years, uses Euclidian distance to measure differences between comparables in terms of the sum of the squares of adjustments between ten wilderness attributes of each subject with ten identical categories for the comparables. The dollar adjustment factors were generated in terms of total aggregate attribute scores as a percentage of the sum of total scores for all the comparables times the mean price per 40-acre sub-sale. The MKTCOMP model used permits the appraiser to define the preliminary group of sub-sales appriori, in this case, the best 18 out of 173 potential sub-sale units. Decision rule 2 was to accept only the first and second best sub-sale comparables from any one comparable transaction. As a final screen, the best six of the remaining comparables were then selected and the mean computed of their adjusted prices as representative of the price of the subject property.

K. The appraisal report relies on the basic concept of market comparison and is therefore in the main stream of appraisal; the selection of a fine grained computer mapping technique with which to record the physically ascertainable components which in combination produce a product called wilderness is simply the extension of data techniques in general use for land use planning, zoning, and subdivision land appraisal, where soils, slope, septic suitability, and shoreland preservation are critical to reliable valuation. The use of point systems to establish ordinal ranking and cutoff decision points is well established in decision making methodology. The innovative aspect of this appraisal is to apply these techniques to a commodity called wilderness to rank scenic quality and wilderness as defined in RARE II documentation. To recognize roadless wilderness as an economic commodity when a ubiquitous four wheel drive vehicle has penetrated almost everywhere is shown in the appraisal to be consistent with the literature on the economics of conservation. The correlation of multiple subjective aesthetic judgments to the absence or presence of physical features is a blossoming area of behavioral psychology and gives the appraiser a legitimate mechanism for dealing with the seemingly intangible values of landscape aesthetics.

I. DEFINITION OF APPRAISAL ASSIGNMENT

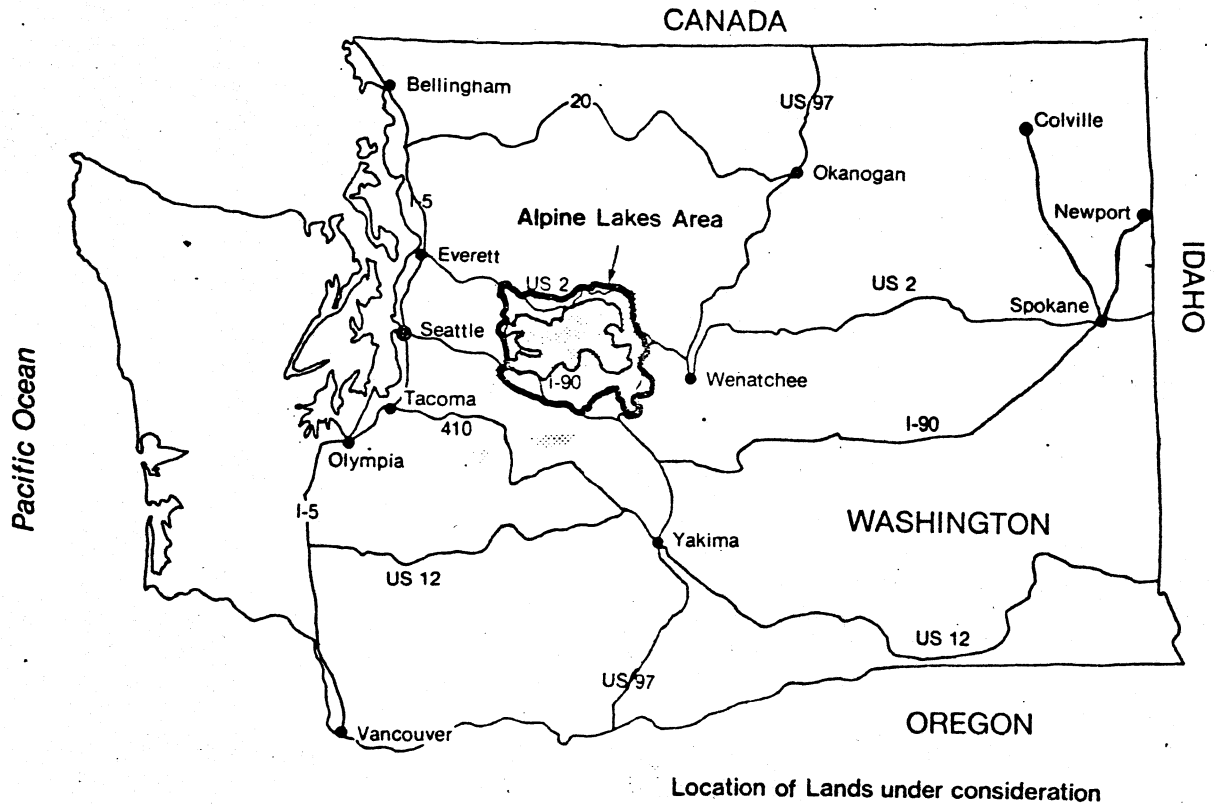
A. The Context for Appraisal

The issue for which fair market value is required as a benchmark for decision making stems from the Alpine Lakes Area Management Act (ALAM ACT) of 1976, Section 4 (Land Acquisition and Exchange)¹ which authorized and directed the Secretary of Agriculture to acquire more than 41,000 acres of non-Federal lands in the Alpine Lakes wilderness and the "intended wilderness". (See Exhibit 1 for general location.) These purchases primarily impact on the interests of six property owners (see Exhibit 2) of which the Pack River Company is the largest. This appraisal has been requested by the successors in ownership to the Pack River Company, which has been dissolved since passage of the statutory intent to acquire. Negotiation prior to the appraisal has apparently ruled out acquisition of lands outside the defined wilderness area but within the management area (see Exhibit 3), has ruled out the possibility of exchange of timber for other timber lands in the National Forest, and discouraged the probability of donation so that acquisition will be by purchase for cash.²

Although the Management Act provided three years for negotiated purchase, the Forest Service saw one of their alternatives to be no action at all (referred to as Plan D) in order to prompt land owners to force a purchase by court action.³ In one of the unique features of the Alpine Lakes

EXHIBIT 1

GENERAL VICINITY MAP OF ALPINE LAKES AREA.



Vicinity Map

Source: Alpine Lakes Area Acquisitions, Final Environmental Impact Statement, Wenatchee, Colville and Mt. Baker-Snoqualmie National Forests, Pacific Northwest Region, Forest Service, US Department of Agriculture, 1979

EXHIBIT 2

ALL NON-FEDERAL LANDS BEING CONSIDERED FOR ACQUISITION
TO COMPLETE ALPINE LAKES WILDERNESS

Non-Federal Property Owner	Wilderness & Intended Wilderness	ALA Management Unit	Outside Alpine Lakes Area	Total
Burlington Northern	8,315.23	9,718.19	116.20	18,149.62
Icicle Irrigation Dist.	361.16	79.86		441.02
Pack River	22,450.63** (22,456.77)	949.47		23,400.10
Sawyer Trust*	(22,318.01)	(949.47)		(23,267.48)
Weyerhaeuser	9,980.70	11,374.18	10,073.15	31,428.03
Keith Williams Family		159.04		159.04
Total	41,107.72	22,280.74	10,189.35	73,577.81

*Not included in Total.

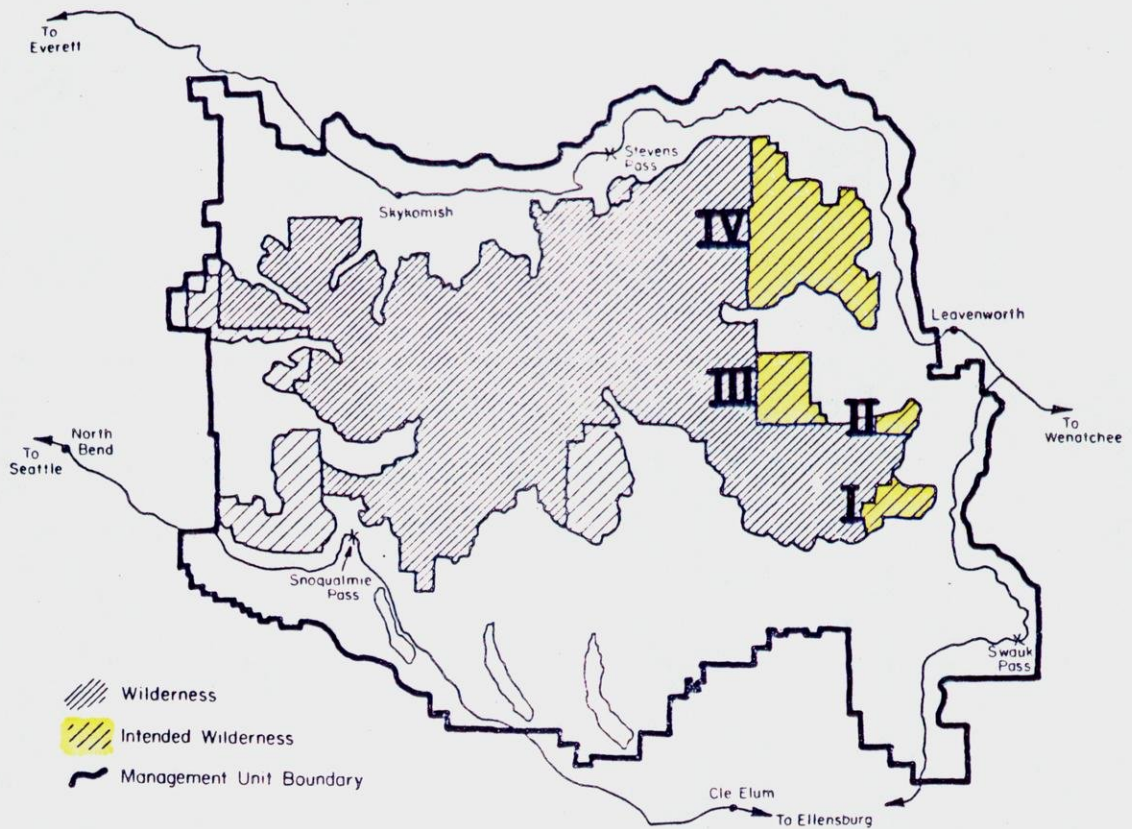
**22,456.77 is corrected survey total.

Source: Page 5, ALPINE LAKES AREA ACQUISITION - FINAL ENVIRONMENTAL
STATEMENT

EXHIBIT 3

INTENDED WILDERNESS WITHIN WHICH
SUBJECT PROPERTY IS LOCATED IN A CHECKERBOARD
DISTRIBUTION DEFINED INTO FOUR SUB-ZONES

Alpine Lakes Area



Source: Alpine Lakes Area Acquisitions, Final Environmental Impact Statement, Wenatchee, Colville and Mt. Baker-Snoqualmie National Forests, Pacific Northwest Region, Forest Service, US Department of Agriculture, 1979

Area Management Act, the owners within the intended wilderness have been given certain rights which modify the appraisal rules affecting condemnation. (See Exhibit 4.) In fact, attorneys representing the Pack River Company successor interests have initiated such a suit as provoked by Plan Alternative D in the United States District Court for the Eastern District of Washington, Complaint Numbers C-80-348 to C-80-367.

While the ALAM ACT uses the term with "just compensation" there is no condemnation action at this time nor are the actions above adverse condemnation but rather suits to proceed with negotiation on purchases in which the court will set the price should negotiations stalemate. In the absence of precedent or instruction from the bench the appraiser must address certain basic issues that are undefined using logic, common sense, and the UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITIONS, U.S. Printing Office, catalog #Y3.L22: 8 AP/6/1973 when applicable.⁴ There is the anticipation that the appraisal system selected must be adjustable quickly to future judicial rulings as the case unfolds. This need for methodology which is responsive has a significant bearing on the appraisal procedures selected as will be detailed below.

B. Basic Appraisal Assumptions

1. Definition of date of appraisal

The intent of Congress and the ALAM ACT placed great stress on donation, exchange, or negotiation for acquisition, and at this time litigation is concerned with the rights of the land owners under the Act to seek a court push on purchase negotiations. While adverse condemnation might choose July 12, 1976 or 1979, as the effective date of Federal control, no such condemnation action has been instituted, and therefore a date of taking is not relevant. This appraisal was instituted prior to current litigation to accelerate purchase negotiations so neither litigation or negotiation has provided a definitive date of acquisition, however, Pack River dissolution with distribution to 20 owners suggests a date following the transfer.

THEREFORE THE APPRAISER HAS CHOSEN TO ASSUME JANUARY 1, 1981 AS THE DATE OF VALUATION, ADJUSTING COMPARABLE SALES TO THAT DATE AND ASSUMING EXTERNAL CONDITIONS AS OF THAT DATE. FUTURE LEGAL INSTRUCTIONS MAY REQUIRE AN ALTERNATE DATE AND AMENDMENTS TO THIS APPRAISAL ACCORDINGLY.

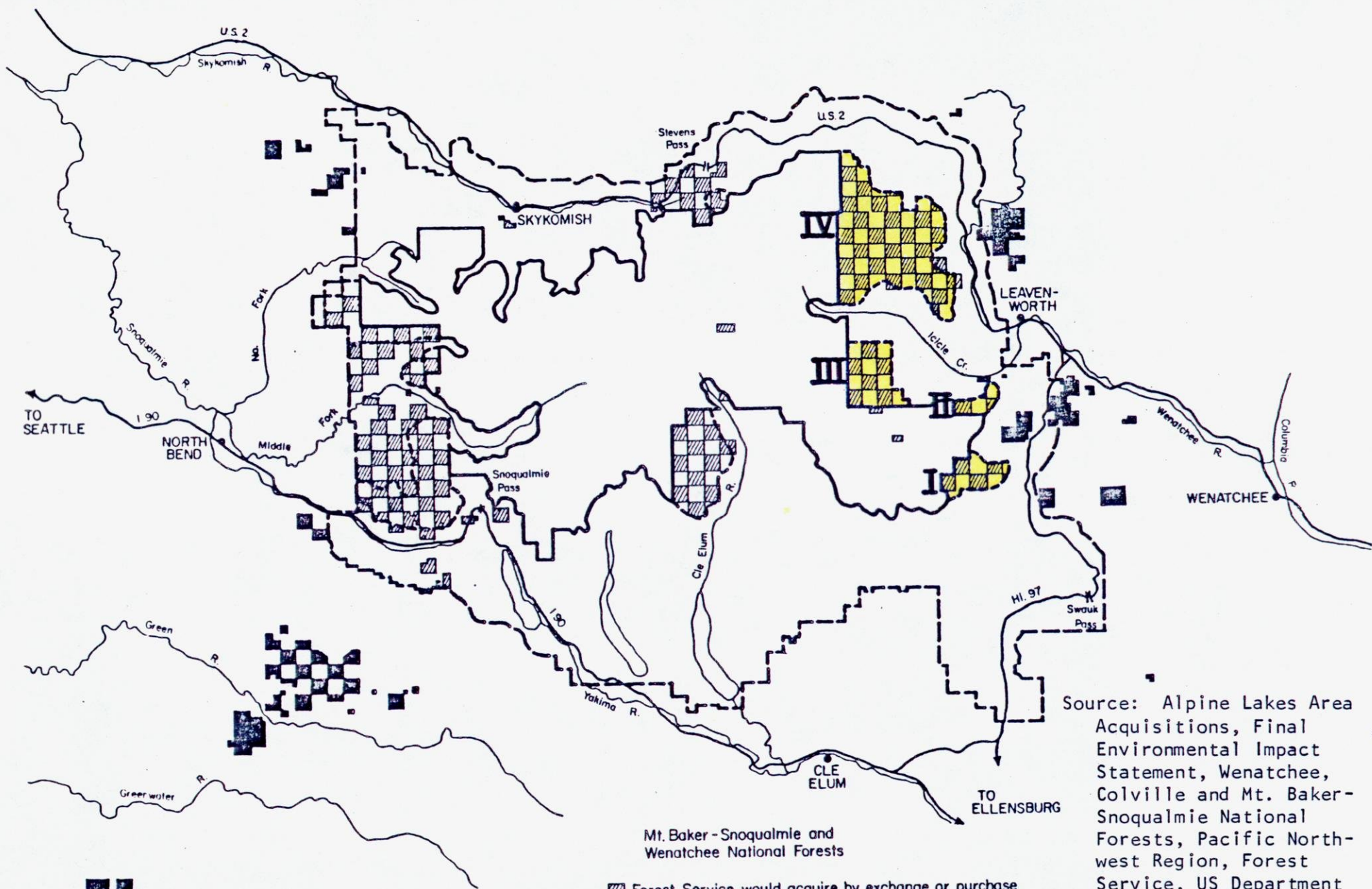
2. Definition of appraisal units

The fair market value concept generally requires application of the so-called "unit rule" which is intended to best reflect the true situation on the market. Unity requires consistency in treatment so that one cannot value a site both for timber and wilderness on a cumulative basis or separate legal interests cumulatively but rather look at the property as a whole in terms of its highest and best use. The property as a whole may be something less than a contiguous parcel where uses are different or may lack contiguity where the best use is mutually interdependent. Therefore, the appraiser must define what shall be considered as an integrated unit. An appraisal unit may reflect best use determinations and distinguish between surface rights, timber rights, or mineral rights. Reference to both the maps of the properties to be acquired (See Exhibit 5) and the ownership pattern will not suggest any clear definition of the unit or entity to be acquired in part or in full.






The parcels to be acquired are located in the central part of the State of Washington, in Chelan County on the Eastern Cascades (see Exhibit 1) and represent the eastern edges of the intended wilderness which is not presently in Federal hands. A large majority of the wilderness is

EXHIBIT 5

FOUR ACQUISITION ZONES INDICATING OWNERSHIP
PATTERN AND RELATED FOREST SERVICE LANDS
AVAILABLE FOR EXCHANGE



Mt. Baker-Snoqualmie and
Wenatchee National Forests

-  Forest Service would acquire by exchange or purchase
-  Forest Service would dispose of by exchange
-  Management Unit boundary
-  Wilderness boundary
-  Intended Wilderness boundary

Source: Alpine Lakes Area
Acquisitions, Final
Environmental Impact
Statement, Wenatchee,
Colville and Mt. Baker-
Snoqualmie National
Forests, Pacific North-
west Region, Forest
Service, US Department
of Agriculture, 1979



already owned as part of the Wenatchee and Mount Baker-Snoqualmie National Forest (see Exhibit 5). A more detailed base map of the 43 sections and partial sections to be acquired from successors to the Pack River Company is provided in Exhibit 6. Although the ALAM Act will consider purchases outside the intended wilderness area in the land management area, it should be noted that litigation and appraisal is limited to those sections within the wilderness line so that partial sections are involved in the eastern edge. Detailed legal descriptions for each ownership position of properties to be appraised are provided in Exhibit 7, and these are given spatial orientation by the general color code of the map provided in Exhibit 6A.

To resolve the definition of the proper unit of appraisal, the appraiser applied the following logic relative to the physical unit. (Legal attributes of the unit are defined in the next section.) The total acquisition of 22,456.77 acres is inappropriate as the appraisal unit as it consists of four distinct parts, separated by rugged terrain, diverse ownerships, and diverse potentials for use. The 20 ownership positions, not including the Sawyer trust that controls the mineral rights to all but 174.3 acres, are scattered throughout the

EXHIBIT 6

DETAILED MAP OF FOUR APPRAISAL
ZONES AND OWNERSHIP OF EACH SECTION
IN COLOR CODE TIED TO EXHIBIT 6A

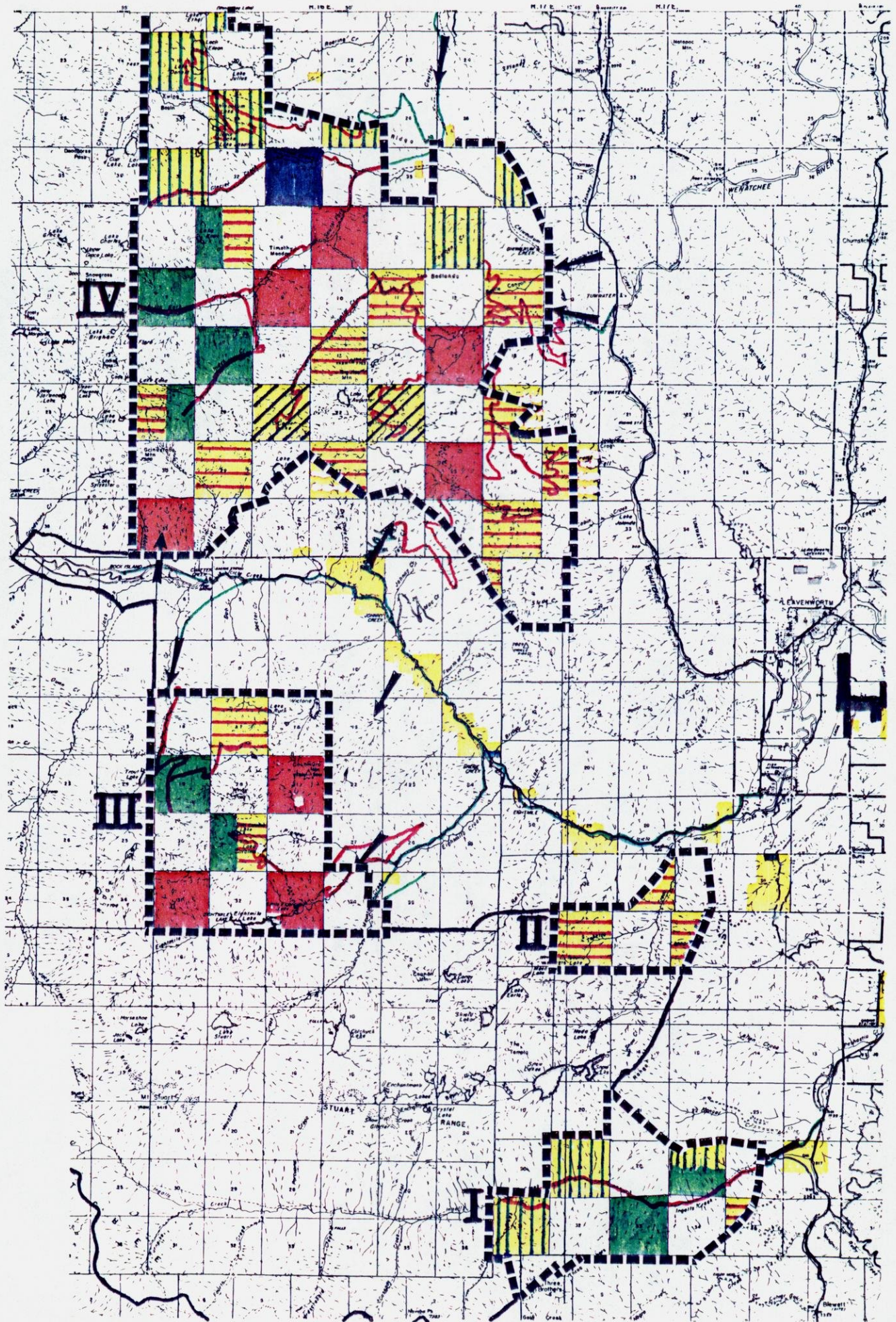


EXHIBIT 6A

OWNERSHIP KEY AND OTHER BASIC BOUNDARIES
OR DEVELOPMENT FACTORS AFFECTING APPRAISAL

OWNERSHIP

As of August 8, 1980

CHELAN COUNTY, WASHINGTON











-  J and L Lands
-  Pack River Parcels Not In Wilderness Area
-  Proposed Roads
-  Existing Roads
-  Existing Wilderness Boundary
-  Intended Wilderness Boundary
-  Sold
-  L. V. Brown
-  J. M. Brown
-  C. Chastek
-  L. V. B. Trust
-  J. M. B. Trust
-  C. C. Trusts
-  Development Pressure From Logging Operations

EXHIBIT 7

OWNERSHIP POSITIONS AND LEGAL DESCRIPTIONS
BY APPRAISAL ZONES TO BE VALUED AS
SUBJECT PROPERTIES WITHIN THIS REPORT

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
BEVERLY CURTIS COOK	320.00 640.00	C-80-349	S½ Section 27, Township 23 North, Range 17 East, W.M.; and Section 33, Township 23 North, Range 17 East, W.M., Chelan County.
JEAN O. BROWN	105.80	C-80-355	That part of Section 35, Township 23 North, Range 17 East, W.M., described as follow: Commencing at the section corner common to Sections 26, 27, 34 and 35, as established by the Bureau of Land Management which is the point of beginning, thence South 89°45'00" East, 2300 feet (701m) along the section line between Sections 26 and 35 to a point on a ridge east of Ingalls Creek, thence South 09°45'00" West, 903 feet (275m) ascending the ridge to an angle point, thence South 42°00'00" West, 1242 feet (378m) following the ridge dividing Ingalls Creek and Negro Creek, thence South 39°45'00" West, 1457 feet (444m) to an angle point, thence South 61°15'00" West, 456 feet (139m) to intersection with the section line between Sections 34 and 35, thence North 00°15'00" East, 3164 feet (964m) along the section line between South 34 and South 35 to the point of beginning.
L. V. BROWN	215.50	C-80-365	That part of Section 27, Township 23 North, Range 17, E.W.M. described as follow: Commencing at the section corner common to Sections 26, 27, 34 and 35, as established by the Bureau of Land Management which is the point of beginning, thence North 00°15'00" East, 4789 feet (1460m) along the section line between Sections 26 and 27 to a point on the ridge, thence North 79°45'00" West, 323 feet (98m) along the ridge to an angle point, thence South 84°00'00" West, 1623 feet (495m), thence South 73°30'00" West, 2511 feet (765m), thence North 83°30'00" West, 944 feet (288m) to an intersection with the section line between Sections 27 and 28, thence South 00°15'00" West, 4050 feet (1234m) along the section line to the section corner common to Sections 28, 27, 35 and 33, Sections 27 and 34 to the point of beginning, Excepting therefrom the South Half of said Section 27; 640.00 Section 29, Township 23 North, Range 17 East, W.M., Chelan County, Washington; and 626.88 Section 31, Township 23 North, Range 17 East, W.M., Chelan County, Washington.

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
JEAN O. BROWN	206.90	C-80-355	<p>That part of Section 33, Township 24 North, Range 17, E.W.M. described as follow:</p> <p>Commencing at the section corner common to Sections 27, 28, 33 and 34 which is located on the Alpine Lakes Intended Wilderness Boundary (Snow Creek Parcel) point of beginning, thence South 00°15'00" West, 5280 feet (1609m) along the section line between Sections 33 and 34, Township 24 North, Range 17 East, W.M., to the section corner common to said sections, thence North 89°45'00" West, 4465 feet (1361m) along the township line between townships 23 North and 24 North, Range 17 East, W.M., to angle point 16-1 located on the Alpine Lakes Intended Wilderness Boundary, thence North 46°15'00" East, 1782 feet (543m), North 74°15'00" East, 912 feet (278m), North 43°15'00" East, 636 feet (194m), North 34°45'00" East, 1348 feet (411m), North 40°00'00" East, 893 feet (272m), North 24°15'00" East, 814 feet (248m), North 15°15'00" East, 810 feet (247m) to the point of beginning;</p>
	210.70	C-80-355	<p>That part of fractional Section 3, Township 23 North, Range 17, E.W.M. described as follows:</p> <p>Beginning at the section corner common to Sections 3, 4, 9, 10, Township 23 North, Range 17 East, W.M., thence North 00°15'00" East, 5062 feet (1543m) along the section line to the section corner common to Sections 3 and 4, Township 23 North, Range 17 East, W.M., thence South 89°45'00" East, 2639 feet (804m) along the township line between Township 24 North and Township 23 North, Range 17 East, W.M. to a point on the Alpine Lakes Intended Wilderness Boundary from which angle point 16-4 bears North 33°00'00" East, 1838 feet (560m) thence South 33°00'00" West, 8 feet (2.4m), thence South 23°15'00" West, 1092 feet (333m), South 18°00'00" West, 1201 feet (366m), South 08°15'00" West, 1032 feet (315m) to an angle point 16-5 (top of Wedge Mountain) on the Alpine Lakes Intended Wilderness Boundary, thence South 00°30'00" East, 440 feet (134m), South 37°45'00" West, 484 feet (147m), South 21°15'00" West, 1076 feet (328m), South 89°30'00" West, 200 feet (61m) to angle point #18 on the Alpine Lakes Wilderness Boundary, thence South 28°45'00" West, 59.27 feet (18m) to a point on the section line between Sections 3 and 10, thence North 89°45'00" West, 800 feet (244m) along the section line to the point of beginning;</p>
	610.56	C-80-355	Section 5, Township 23 North, Range 17 East, W.M., Chelan County, Washington;



<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
DEBORAH ANN HANSEN	608.40 320.00	C-80-352	Section 19, Township 24 North, Range 16 East, W.M.; and W $\frac{1}{2}$ Section 29, Township 24 North, Range 16 East, W.M., Chelan County, Washington.
JEAN O. BROWN	640.00 302.75	C-80-355 C-80-355	Section 17, Township 24 North, Range 16 East, W.M., Chelan County, Washington; The East Half of Section 29, Township 24 North, Range 16 East, W.M., Chelan County, Washington; Subject to a contract of sale, notice of which is recorded at Book 749, page 599, Chelan County Auditor's Office, for the following described parcel, and certain uses in connection therewith in Section 29 and Section 21, Township 24 North, Range 16 East. The description of the land sold in said contract of sale is as follows: Beginning at the East $\frac{1}{4}$ corner of Section 29, Township 24 North, Range 16 East, W.M., and heading in a south-westerly direction, to the westerly shore of Lake Caroline, along a traverse line as follows: Beginning at the East $\frac{1}{4}$ corner of Section 29, Township 24 North, Range 16 East, W.M., thence South 52°01'00" West, 123.09 feet, thence South 83°12'30" West, 252.33 feet, thence South 64°46'37.5" West, 110.56 feet, thence South 34°35'22.5" West, 106.85 feet, thence South 39°22'03.8" West, 180.38 feet, thence South 56°57'56.3" West, 296.28 feet to a one and one-half inch (1 $\frac{1}{2}$ ") iron pipe, and the true point of beginning, thence North 34°29'06.3" West, 514.64 feet, thence North 86°43'41.4" West, 679.45 feet, thence South 19°00'54.7" West, 867.59 feet, thence North 84°46'21.5" East, 1240.15 feet, thence North 04°04'47.7" East, 244.89 feet to the true point of beginning;
JACQUELINE BROWN	615.57	C-80-363	Section 21, Township 24 North, Range 16 East, W.M., Chelan County, Washington; Subject to a contract of sale, notice of which is recorded at Book 749, page 599, Chelan County Auditor's Office, for the following described parcel, and certain uses provided for in connection therewith, in Section 21 and Section 29, Township 24 North, Range 16 East. The description of the land sold in said contract of sale is as follows:

III₂

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
			Beginning at the South Quarter Corner of Section 21, Township 24 North, Range 16 East, W.M., thence North 10°09'15.4" West, 466.95 feet to a one and one-half inch (1½") iron pipe and the true point of beginning, thence North 10°09'15.4" West, 894.38 feet, thence North 80°17'28.3" East, 1190.03 feet, thence South 10°09'15.4" East, 894.38 feet, thence south 80°17'28.3" West, 1190.03 feet to the true point of beginning;
BARBARA JEAN HUGUENIN	608.80	C-80-364	Section 31, Township 24 North, Range 16 East, W.M., Chelan County, Washington; and
	600.00		Section 33, Township 24 North, Range 16 East, W.M., Chelan County, Washington, except Government Lot 1 in said Section 33.

IV₁

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
THOMAS D. CHASTEK	110.00	C-80-357	SE $\frac{1}{2}$ NE $\frac{1}{2}$; S $\frac{1}{2}$ SW $\frac{1}{2}$ NE $\frac{1}{2}$; N $\frac{1}{2}$ NW $\frac{1}{2}$ SE $\frac{1}{2}$; N $\frac{1}{2}$ NE $\frac{1}{2}$ SE $\frac{1}{2}$; SE $\frac{1}{2}$ NE $\frac{1}{2}$ SE $\frac{1}{2}$, Section 33, Township 26 North, Range 16 East, W.M. Chelan County, Washington.
PATRICK C. CHASTEK	101.78	C-80-348	W $\frac{1}{2}$ NW $\frac{1}{2}$; N $\frac{1}{2}$ NW $\frac{1}{2}$ SW $\frac{1}{2}$, Section 33, Township 26 North, Range 16 East, W.M., Chelan County, Washington.
JOSEPHINE H. BROWN	686.56 640.00	C-80-350	Section 3, Township 25 North, Range 16 East, W.M.; and Section 9, Township 25 North, Range 16 East, W.M., Chelan County, Washington.
SHEILA D. BROWN	80.00	C-80-351	West Half of the Southwest Quarter of Section 17, Township 26 North, Range 16 East, W.M., Chelan County, Washington;
	665.94		Section 19, Township 26 North, Range 16 East, W.M., Chelan County, Washington;
	243.10		That part of Section 27, Township 26 North, Range 16, E.W.M. described as follow: Beginning at the section corner common to Sections 27, 28, 33 and 34 Township 26 North, Range 16 East, W.M., thence North 01°00'00" East, 2459 feet (750m) along the line between Sections 27 and 28, Township 26 North, Range 16 East, W.M., to a point on McCue Ridge which is also on the boundary of the Alpine Lakes Intended Wilderness from which angle point 3-8 bears North 81°27'51" West, 5323 feet (1622m), thence South 84°00'00" East, 2392 feet (729m), South 76°45'00" East, 659 feet (201m), South 59°45'00" East, 511 feet (156m), South 52°00'00" East, 677 feet (206m), North 84°15'00" East, 1261 feet (384m) to angle p3-9, which is located on the Alpine Lakes Intended Wilderness Boundary (Chiwaukum Parcel), thence South 01°00'00" West, 1552 feet (473m) along the line between Sections 26 and 27, Township 26 North, Range 16 East, W.M., to angle point 3-10, thence North 89°30'00" West, 5267 feet (1605m) along the line between Sections 27 and 34 to the point of beginning;
	652.92 (USFS 620.77)		Section 29, Township 26 North, Range 16 East, W.M., Chelan County, Washington; and
	659.72		Section 31, Township 26 North, Range 16 East, W.M., Chelan County, Washington.

IV₂

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
STEPHANIE M. BROWN	343.70 636.20	C-80-353	W $\frac{1}{2}$ Section 5, Township 25 North, Range 16 East, W.M.; and Section 7, Township 25 North, Range 16 East, W.M., Chelan County, Washington.
JOYCE ESPOSITO	101.79	C-80-354	^{NW$\frac{1}{4}$} E $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 33, Township 26 North, Range 16 East, W.M., Chelan County, Washington.
JEAN O. BROWN	320.00	C-80-355	The West Half of Section 29, Township 25 North, Range 17 East, W.M., Chelan County, Washington;
	340.60		That part of Section 27, Township 25 North, Range 16 East, W.M., Chelan County, Washington, described as follows: Commencing at the Northeast corner of said Section 27, the true point of beginning; thence South 01°00'00" West to a point on the East line of said section, 730 feet from the Southeast corner of said Section 27 to a point on said section line; thence North 68°15'00" West, 55 feet; thence North 46°30'00" West, 803 feet; thence South 85°00'00" West, 260 feet; Thence North 71°15'00" West, 485 feet; thence North 40°00'00" West, 594 feet; thence North 67°15'00" West, 152 feet; Thence North 46°30'00" West, 944 feet; thence North 73°30'00" West, 271 feet; thence North 65°30'00" West, 330 feet; thence North 46°45'00" West, 634 feet; thence North 64°30'00" West, 1,087 feet; thence North 42°00'00" West, 692 feet; thence South 58°00'00" West, 260 feet to a point on the west line of said Section 27, 4,123 feet from the southwest corner of said Section 27; thence North 01°00'00" East, 1,255 feet along the west section line of Section 27 to the northwest corner of Section 27; thence South 89°00'00" East, 5,304 feet along the north section line of said Section 27 to the true point of beginning;
	636.29		Section 31, Township 25 North, Range 17 East, W.M., Chelan County, Washington;
	110.00	C-80-355	That part of fractional Section 1, Township 24 North, Range 16, E.W.M. described as follows:

IV₃

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
			Beginning at the township corner common to Section 1, Township 24 North, Range 16 East, W.M. and Section 6, Township 24 North, Range 17 East, W.M., thence South 89°15'00" West, 2218 feet (676m) along the township line between Township 25 North and Township 24 North to the point of intersection of the Alpine Lakes Intended Wilderness Boundary, thence South 71°45'00" East, 1231 feet (375m) to angle point 3-27 Alpine Lakes Intended Wilderness, thence South 14°00'00" West, 1151 feet (351m), South 03°45'00" East, 939 feet (286m), South 29°15'00" East, 982 feet (299m), South 29°15'00" East, 938 feet (286m), South 12°15'00" East, 571 feet (174m), South 38°00'00" East, 227 feet (69m), North 87°15'00" East, 110 feet (34m), thence North 00°30'00" West, 4881 feet (1485m) along the rangeline to the point of beginning;
GARY R. CHASTEK	120.00	C-80-356	S $\frac{1}{2}$ SW $\frac{1}{4}$; S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$; S $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, Section 33, Township 26 North, Range 16 East, W.M., Chelan County, Washington.
LAWRENCE F. CHASTEK	110.00	C-80-358	S $\frac{1}{2}$ SE $\frac{1}{4}$; S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$; ^{sw$\frac{1}{4}$} SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 33, Township 26 North, Range 16 East, W.M., Chelan County, Washington.
PATRICIA E. BROWN	542.40	C-80-359	That part of Section 31, Township 25 North, Range 16 East, W.M., Chelan County, Washington, described as follows: Commencing at the Northwest corner of said Section 31, the true point of beginning; thence South 89°45'00" East, 5,312 feet along the north section line of Section 31 to the northeast corner of said Section 31; thence South 00°15'00" West, 4,281 feet along the east line of said Section 31 to the intersection of the section line and the 3,400 foot contour line; thence along the 3,400 foot contour line the following courses and distances: South 80°15'00 West, 121 feet; North 73°15'00" West, 479 feet; South 71°15'00 West, 441 feet; South 89°45'00" West, 439 feet; South 79°30'00" West, 1,337 feet; North 88°00'00" West, 519 feet; South 68°00'00" West, 429 feet; South 87°30'00" West, 998 feet; North 15°30'00 West, 227 feet; South 41°45'00" West, 268 feet; South 76°30'00" West, 348 feet to a point on the west line of said Section 31 intersecting the 3,400 foot contour line; thence North 00°15'00" East, 4,775 feet along the west line of said Section 31 to the northwest corner of said Section 31, the point of beginning; and
	640.00		Section 13, Township 25 North, Range 16 East, W.M., Chelan County, Washington.

IV₄

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
MICHAEL CHASTEK	103.59	C-80-360	N $\frac{1}{2}$ NE $\frac{1}{4}$; N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 33, Township 26 North, Range 16 East, W.M., Chelan County, Washington.
L. V. BROWN, JR.	640.00 320.00	C-80-361	Section 17, Township 25 North, Range 16 East, W.M.; and E $\frac{1}{2}$ Section 19, Township 25 North, Range 16 East, W.M., Chelan County, Washington.
J.M. BROWN	636.72	C-80-362	Section 7, Township 25 North, Range 17 East, W.M., Chelan County, Washington;
	640.00		Section 11, Township 25 North, Range 16 East, W.M., Chelan County, Washington;
	343.70		East Half of Section 5, Township 25 North, Range 16 East, W.M., Chelan County, Washington;
	640.00		Section 15, Township 25 North, Range 16 East, W.M., Chelan County, Washington;
	317.76		West Half of Section 19, Township 25 North, Range 16 East, W.M., Chelan County, Washington;
	381.60		That part of Section 19, Township 25 North, Range 17 East, W.M., Chelan County, Washington, described as follows: Commencing at the Southwest corner of said Section 19, the true point of beginning, thence North 00°45'00" West, 4,603 feet along the west section line of Section 19; thence along the following courses and directions: South 68°15'00" East, 2,606 feet; South 84°45'00" East, 2,238 feet; South 42°15'00" West, 779 feet; South 17°15'00" West, 462 feet; South 03°00'00" West, 1,183 feet; South 32°45'00" East, 324 feet; Thence South 74°45'00" East, 1,239 feet to a point on the east section line of said Section 19; thence South 00°45'00" East, 580 feet to the southeast corner of Section 19, Township 25 North, Range 17 East, W.M.; thence South 89°15'00" West, 5,255 feet along the south section line of Section 19, to the southwest corner of Section 19, Township 25 North, Range 17 East, W.M., the point of beginning;
	640.00		Section 29, Township 25 North, Range 16 East, W.M., Chelan County, Washington;
JACQUELINE BROWN	640.00	C-80-363	Section 25, Township 25 North, Range 16 East, W.M., Chelan County, Washington;

IV₅

<u>NAME</u>	<u>ACRES</u>	<u>COMPLAINT#</u>	<u>LEGAL</u>
L. V. BROWN	686.24	C-80-365	Section 1, Township 25 North, Range 16 East, W.M., Chelan County, Washington;
	174.30	C-80-365	That part of Section 31, Township 26 North, Range 17 East, W.M., Chelan County, Washington, described as follows: Commencing at the township corner common to Sections 36 and 31, thence South 89°45'00" East, 2,863 feet (873m) on the township line between Section 31, Township 26 North, Range 17 East, W.M., and Section 6, Township 25 North, Range 17 East, W.M., to the point on a ridge where the township line intersects the Alpine Lakes Intended Wilderness Boundary, thence along the ridge North 16°15'00" West, 1526 feet (465m), North 32°30'00" West, 1,452 feet (443m), North 52°30'00" West, 2,227 feet (379m), thence South 01°15'00" East, 4,036 feet (1,230m) along the range line between Section 36, Township 26 North, Range 16 East, W.M., and Section 31, Township 26 North, Range 17 East, W.M., Chelan County, Washington.
CHESTER CHASTEK	640.00	C-80-366	Section 23, Township 25 North, Range 16 East, W.M., Chelan County, Washington.
CATHERINE J. CHASTEK	640.00	C-80-367	Section 21, Township 25 North, Range 16 East, W.M., Chelan County, Washington.

various parcels. The current ownership pattern was a necessity of corporate liquidation of the Pack River Company following passage of the ALAM Act, which does not reflect necessarily natural marketing units or necessarily independent buy and sell actions. Potential uses such as timber, private recreational development, dispersed recreational use or public purposes each require a different scale as a minimum economic unit. Thus value by ownership or per acre is rather inexact as an economic unit when dealing with terrain of this scale and uses which have various economies of scale.

However the court may later define that appraisal unit, the appraiser finds that the aggregate properties in question can be naturally divided into four distinct clusters of parcels.

THERE SHALL BE FOUR APPRAISAL CLUSTERS, I, II, III, AND IV AS DELINEATED GRAPHICALLY IN EXHIBIT 6 AND LEGALLY IN EXHIBIT 7 FOR PURPOSES OF APPRAISAL VALUATION: THESE CLUSTERS WILL RELATE TO HIGHEST AND BEST USE DETERMINATION: EACH OWNERSHIP INTEREST WITHIN EACH CLUSTER WILL BE VALUED SEPARATELY BY THE PRICING MODELS APPROPRIATE.

The reasons or purposes served by the delineation of appraisal clusters include consideration of:

1. The severe and difficult physical separation of Pack River lands by the terrain and river system.
2. The distinctly different sets of linkages of each unit to the external encroachment of society around them and their plottage⁵ values to adjacent government lands.
3. A highest and best use consideration which might lead to concerted action by multiple owners who are linked by family and business ties to maximize their sales price.
4. The natural boundaries created by terrain such as in Cluster IV where the wilderness perimeter is defined by ridge lines which create an interior bowl whose only intrusion from the works of man are jet contrails overhead and hikers' trails.
5. The varying degrees of immediate accessibility for resource or recreational development, pressures which create competition among alternative buyers with distinctly different priorities (such as groups protecting rare wilderness attributes versus timber companies).

6. The size and physical character of each cluster represent natural marketing units independent of one another for use or access.

C. Definition of Value

Numerous definitions of Market Value have been devised over the years by professional organizations, government bodies and commissions, professors, and the courts and recently there has been some convergence of language and qualifying conditions. A conference on interagency land acquisition published a bulletin in 1973 called UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITION. On pages 3 and 4 it states that:

"Fair market value" is defined as the amount in cash or on terms reasonably equivalent to cash for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desired but is not obligated to buy. In ascertaining that figure consideration should be given to all matters that might be brought forward and reasonably be given substantial weight in bargaining by persons of ordinary prudence, but no consideration whatever should be given to matters not affecting market value... It is realized that it is difficult to pinpoint an estimating value in an exact dollar amount. And, while eminent appraisers have expressed the belief that it is more logical to speak in terms of a range of a value, for practical purposes of litigation including estimation of just compensation to be deposited in the registry or the court upon the filing of declarations of taking, a specific dollar amount is required.⁶

The revised edition of the joint effort, THE REAL ESTATE TERMINOLOGY HANDBOOK, published in 1981 by the American

Institute of Real Estate Appraisers and the Society of Real Estate Appraisers, has defined and qualified market value as follows:

The most probable price in terms of money which a property should bring in competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. buyer and seller are typically motivated.
2. both parties are well informed or well advised, and each acting in what they consider their own best interest.
3. a reasonable time is allowed for exposure in the open market.
4. payment is made in cash or its equivalent.
5. financing, if any, is on terms generally available in the community at the specified date and typical for the property type in its locale.
6. the price represents a normal consideration for the property sold unaffected by special financing amounts and/or terms, services, fees, costs, or credits incurred in the transaction.

With caveat noted as to the limitation of "probable" to a single value conclusion, the appraiser is following the joint definition as representative of the Federal intent.

D. Property Rights Appraised

The Forest Service contemplates acquisition of all private rights to the parcels defined. However, in the case of most Pack River lands the mineral rights must be acquired separately

from the Sawyer Trust, with the exception of Section 31, T.26N., R.17E., of which 174.3 acres is within the intended wilderness and would include full mineral rights. As noted previously we are treating the property as four assemblages with the assumptions that the multiple ownerships within each assemblage are acting in concert and their individual interests will be valued as a proportionate contribution to the total assemblage. Over the years, the general public has acquired certain privileges for traversing both the national forest and non-Federal lands; these privileges are assumed to have no impact on the marketability of the private interest and no right to compensation from the Forest Service.

Fee simple or marketable title sans mineral rights does not include rights growing out of legal agreements. These rights involve special land uses, mining claims, rights of way, or joint road agreements and permits for various uses on private land. These rights must be acquired or disposed of prior to the assumed purchase of marketable title. For example, Mt. Cashmere, Inc., which purchased certain acreages near Caroline Lake from Pack River, Inc., enjoys a license or permit to use Pack River land to extend the recreational range of Mt. Cashmere clients. A joint road agreement (Appendix E) also exists between Pack River, Inc., and its successors with the Forest Service, called "Chelan Road Right-of-Way Construction

and Use Agreement" (copy included in Appendix E) was assigned to Pack River with acquisition of the subject lands from the Sawyer Timber Trust. Apparently this agreement and right-to-access survive the Wilderness Act, according to Robert W. Long, Assistant Secretary of Agriculture, in a statement dated April 5, 1974 and included in full in Appendix E:

The possibility that the Congress may act to designate the area as wilderness does not override the Forest Service obligation to grant Pack River Company access to its privately owned lands under existing law and regulations. Even if the area were to be designated as wilderness, the company would be entitled to "adequate access" under section 5(a) of the Wilderness Act, 16 U.S.C. 1134 (a). The Chief, in his responsive statement, points out that they have long felt there was no realistic prospect that the private lands within the Coulter Creek checkboard would be transferred to Federal ownership by purchase or exchange. It was this, among other considerations, that formed the basis for the Forest Service position that the area should not be included in an Alpine Lakes wilderness. The record shows that Pack River Company has an immediate need for the access road.⁸

With these exceptions and qualifications, this appraisal is concerned with all property rights in the marketable title possessed by Pack River, Inc., and the indemnity features against loss of value attributable to natural disaster or the economic cycle as intended by Section 4 of the Alpine Lakes Management Act.

E. Highest and Best Use Concept

The central premise to fair market value is determination of the highest and best use or most probable use which in the opinion of the appraiser will serve to focus selection of market comparison sales or the economic logic of other approaches to value. Historically, the concept of highest and best use focused only on wealth maximization for the owner of the land, regardless of the external costs or opportunity costs imposed on society as a whole. The rise of consumerism and environmentalism in the '60s and '70s has meant that the official definitions of the appraisal professional societies now recognize a land ethic. Consider the basic definition and discussion in the fundamental textbook THE APPRAISAL OF REAL ESTATE (7th Edition) which states:

Highest and best use for land is the use that, at the time of appraisal, is the most profitable likely use. It is the use that will provide the greatest return to the land after the requirements of labor, capital, and coordination have been satisfied. Thus it may also be defined as the available use and program of future utilization that produces the highest present land value.

The most profitable likely use cannot always be interpreted strictly in terms of money. Return sometimes takes the form of amenities. A wooded urban site, for example, may have its highest and best use as a public park; or the amenities of living in a private dwelling may represent to its owner satisfaction that outweighs a monetary net rental yield available from rental to a typical tenant. In this time of increasing concern over the environmental effects of land use, environmental acceptability is becoming an addition to the highest and best use concept.

A somewhat more detailed definition of highest and best use is found in the revised edition of the AIREA-SREA joint publication REAL ESTATE APPRAISAL TERMINOLOGY HANDBOOK:

...that use, from among reasonably probable and legal alternative uses, found to be physically possible, appropriately supported, financially feasible, and which results in highest land value.

...Implied within these definitions is recognition of the contribution of that specific use to community environment or to community development goals in addition to wealth maximization of individual property owners. Also implied is that the determination of highest and best use results from the appraiser's judgment and analytical skill, i.e., that the use determined from analysis represents an opinion, not a fact to be found.

Not only does the TERMINOLOGY HANDBOOK avoid the ambiguity and pomposity of the term highest and best use, a real estate anachronism from 19th century laissez-faire economics,¹¹ but it is more explicit in recognizing collective values as distinct from social values when it refers to a community of interests. With growing frequency it is recognized that maximizing values for single individuals may be the result of externalizing cost on the community of other landowners quite unintentionally. Reasonable behaviour by one landowner may in the aggregate be unacceptable if practiced by the community of landowners. For example, the homeowner on the lake who cuts down trees on the shore to enjoy the view of the wooded shoreline is quickly frustrated by all the other cottage owners who do the same,

thus decimating the shoreline. The Institute definition hints at the aggregate creation of value as it speaks of return in the form of amenities. However, the TERMINOLOGY HANDBOOK is more specific in dealing with the aggregate value created by concern for the collective environment, and therefore this definition is felt more applicable to the subject case where properties to be valued exist in a checker-board ownership pattern in a symbiotic relationship with other lands for maximum access, recreational, scenic, and logging value maximization.

There was a time when it would have been adequate to inventory resources such as timber, mineral, hydro-electric potential, soils and slopes suitable for grazing or development as lots, ski slopes, campgrounds, and so on. But today wilderness itself is a resource relative to "community environment and community goals." Wilderness attributes must be considered in the inventory of property attributes to be cataloged for subject property and comparable sale alike.

1. Wilderness as an economic resource

Social, scientific, and political movement toward recognition of wilderness as a distinct, explicit land use which could compete with alternative potential resource uses such as mineral extraction, timber cutting,

recreational development, agriculture or urban uses generated the Wilderness Act of 1964.¹² For wilderness to be recognized as a resource and as a commodity with some economic priority, society has to reach a certain condition to make wilderness an economic good, conditions well stated by Michael McCloskey, Conservation Director, Sierra Club, San Francisco, California:

Though natural beauty is widely appreciated, wilderness is an idealized conception of nature in pure form that becomes generally prized only in advanced cultures. Also conditions seem to be necessary for a consensus that wilderness is a public good that warrants preservation (1) a society with highly educated leaders and economic surplus, and (2) an increasing scarcity of wilderness areas.¹³

Congressional passage of the Wilderness Act in 1964 after ten years of agitation followed by a series of additional congressional designations of specific wilderness areas is prima facia evidence of leadership and a concensus about economic surplus. The initial Act gave Congress exclusive authority to designate a Wilderness area and, initially, "charter membership under the Act included only 54 tracts already part of the Forest Service and National Park Service. 34 areas then designated as primitive by the Forest Service were identified for further review. In subsequent years review was scheduled for perhaps 200 other roadless areas in the National Park

System, wildlife refuges, and game ranges. No mention was made of lands under the administration of the Bureau of Land Management, the federal government's largest landlord. The Secretaries of Agriculture and the Interior are permitted to recommend Wilderness tracts in their annual reports to Congress.¹⁴ Starting about 1970, Congress passed Omnibus bills identifying selected Wilderness tracts, but as of January 1, 1981, less than 100 areas have been selected as sufficiently unique. The search for roadless areas of 5,000 acres or more generated many observations that the number of qualified areas was shrinking quickly under the influence of the ubiquitous four-wheel drive vehicle, further evidence of scarcity of such Wilderness in an area as vast as federal holdings in the western continental United States.

Until the 1970's wilderness was presumed to be subjective and therefore an aesthetic experience for which market pricing systems fail for purposes of economic theory. One of the more cogent critics of economics, Robert Broughton, nevertheless suggests that the aesthetics bias against economics was:

...partly because of need in any rational decision making procedure for a common yardstick. The most available yardstick for value is money; but to value something in money terms required either a functioning market or a reasonably close substitute.

Note this does not preclude the possibility of recognition of aesthetics in the marketplace; indeed it will be shown in this report that there are many organizations raising money from the public and buying land specifically to protect wilderness attributes and that these organizations are a significant force in the functioning market. This report will attempt to document that market as functioning reliably, or as a reasonably close substitute in which certain attributes are valued more or less.

2. Valuation of intangible attributes

Economists, such as Lloyd Irland, who are critical of the market as an imperfect measure of intangible values such as scenic beauty, acknowledge that there is a need to factor in economic tradeoffs to set priorities in public land allocations:

At some point attention must be given to opportunity costs. Market prices of land may be inadequate guides, but basic financial information will be needed.¹⁵

Similar support for the need to value intangible experiences is provided by Clawson in his discussion on recreational values:

Those who argue against monetary valuation of subjective experiences overlook the fact that we do this all the time, not only for such exotics as masterpieces of painting, but also for schooling, medicine and many other aspects of life.¹⁶

A philosophical thought from Santayana provides a succinct summary of the theoretical relationship between scenic beauty and market prices for land:

Aesthetics are concerned with the perception of values.¹⁷

The perception of aesthetics as a rare commodity has led them to be highly valued. Krieger attributes this value to social processes:

As a result of the social process of creating a rare object, the usual indicators of rarity become important. Economically, prices rise...¹⁸

Krieger points out that rarity and price are directly related, and that it is the public's perception of rarity that is the determinant factor. This concept is closely related to the Ricardian rent theory:

Increased demand for nonreproducible assets in short supply result in relative price increases.¹⁹

Later in his treatise on rarity and value, Krieger goes on to discuss preservation:

...That something is rare does not imply that it must be preserved. The characteristics which distinguish it as rare must also be valued.

The social process which has sensitized people to the natural environment has led to a steady increase in the allocation of resources towards its preservation and a general increase in the market value of lands with scenic qualities.²⁰

This discussion illustrates the necessity of determining the qualities or attributes of landscapes that make them rare. It is people's perception of the rarity of these attributes that makes land valuable, and therefore desirable to preserve. Despite the logic of Krieger's argument, some people continue to believe that scenic beauty is intangible. Nevertheless, the growing demand and competition for finite resources has led to a reevaluation of the question of attribute tangibility.

3. Collective private markets for rare wilderness

The fact that rarity alone does not justify preservation is demonstrated by the fact that vacant lands that the layman would describe as wilderness have a progressive lexicon of their own as explained in subsection F below. At the same time the social process of which Krieger speaks has sensitized people to the extent that many cannot wait for the ponderous processes of government

to acquire and preserve. Thus, many local, regional, and national foundations have sprung up to raise funds and compete with those economic entities that consume resources to acquire and preserve high priority, sensitive areas from coast to coast. Acquisitions occur from purchases, gifts with tax benefits to the donor, exchanges, and from sale profits of lower cost acquisitions to government at fair market value, a tacit subsidy of these programs by government which recognizes its own inability to respond in a timely fashion. While it is impossible to identify all of these agencies, consider this quote from the May/June 1981 issue of THE NATURE CONSERVANCY NEWS, (Vol. 31, Number 3), p. 1:

The Nature Conservancy is a national conservation organization committed to preserving natural diversity by finding and protecting areas that contain the best examples of all components of the natural world. Since 1950, the Conservancy and its members have been involved in the preservation of over 1.7 million acres in 50 states, the Virgin Islands, Canada, and the Caribbean. Although some areas are transferred for management to other conservation groups, both private and public, the Conservancy owns and manages a national system of approximately 700 sanctuaries.

Forests, wetlands, prairies, mountains, and islands--refuges for threatened wildlife and rare plants, places of special beauty--remain untouched and protected because the Conservancy and its members cared and acted quickly. These safeguarded areas are a record of our accomplishments, a promise for tomorrow, and a legacy for the future.

While some land is donated, much is purchased. Consider this further quote from the 1980 annual report of the Nature Conservancy, because it suggests both the scale of effective demand for preservation of natural areas and wilderness as well as the fact that knowledgeable buyers develop quality ratings in order to have priority lists and evaluate the cost effectiveness of their purchases. This substitution of tangible facts and scores for intangible qualities is not only a rapidly expanding area in the universities but has been operationalized by the private buyers of wilderness. Consider:

In response to a request from the Goodhill Foundation in early 1980, the Conservancy completed a nationwide assessment of threatened ecosystems and then developed a national priority list of critical areas. These efforts were rewarded by a challenge grant from the Goodhill trustees of \$10 million over the next three years, provided the Conservancy can raise \$20 million more to match the foundation's two-to-one challenge for the National Critical Areas Conservation Program.

Late in the year, the Conservancy had the opportunity to act on behalf of one critical ecosystem from its national list--the bottomland hardwood forests remaining along six rivers of the Gulf States. The Rivers of the Deep South Program was set in motion by a \$15 million grant from the Richard King Mellon Foundation to the Conservancy's Land Preservation Fund, with the request that we match the donation with an additional \$15 million in new capital funds.

Yet a third major program was launched during 1980: the California Critical Areas Program. With a fund-raising goal of \$15 million, the program was established to preserve representative examples of

the 11 California ecosystems now on the verge of disappearing.

In acquiring natural lands during the past year, The Nature Conservancy exceeded its goal, ending 1980 with a "saved" list of 204 projects. More significantly, 80 percent of these areas have top ecological quality ratings (as compared to 69 percent in 1979). Lands saved during the year encompass 143,422 acres with a fair market value of over \$64 million, while the actual cost was approximately \$46 million. Total acreage protected since 1953 amounted to 1,768,940 by year's end.

...Financial support during the year for protecting natural diversity has never been greater. Beyond the \$25 million pledged by the Goodhill and Richard King Mellon Foundation, foundation grants totaled more than \$23 million. The Land Preservation Fund, inaugurated in 1977 to increase our revolving fund capacity, increased by 9.3 percent during 1980. At year's end, its balance was \$25,431,835--more than 25 percent in excess of its original 1980 goal. Growing support from the business world was reflected in the addition of 64 new corporate associates, giving us a total of 308.

...Always the Conservancy's "backbone," membership rose in 1980 by 37 percent, giving us a total of 98,910 members. Over 40,000 new members were recruited during the year, and close to 80 percent of the Conservancy's existing membership was retained."²¹

In other words, these corporate and individual donors are consumers of a resource called wilderness, and because they operate collectively in order to generate effective demand does not detract from the fact that there is effective demand in an organized marketplace. Other examples of this collective action are provided in Appendix E.

The federal government through various agencies of Agriculture and the Interior has continued to acquire significant acreages throughout the 1970s. The Comptroller General reported in 1979 that the federal government had provided authorization to acquire up to \$4 billion of private land during the next eleven years.²² Indeed, the report accused the National Park, Forest, and Fish and Wildlife Services of "following a general practice of acquiring as much private land as possible regardless of need, alternative land control methods, and impacts on private land owners."²³ Moreover, not only have federal agencies acquired lands, primarily for conservation purposes, but the federal government has also spawned state acquisitions to increase effective demand and continually reduce supply of open space. Consider:

During the fiscal years 1973-77, the National Park, Forest, and Wildlife Services acquired full or partial title to 2.2 million acres for \$606 million. The predominant acquisition method used was purchase of full title, accounting for 88 percent of the acreage and 95 percent of the costs. Current legislation authorizes up to \$10 billion through the Land and Water Conservation Fund--\$4 billion for Federal acquisition and \$6 billion for grants to State and local governments--for land acquisition and development over the next 11 years and assures that Federal agencies as well as State and local governments, will continue to increase their inventories of land.²⁴

In addition, land developers of recreational properties in the northwest (interviews with James Tallman, of Talmo

Corporation of Gig Harbor, Washington) have found increasing demand for a 1/4 - 1/4 section or two of wilderness for the individual seeking to own a little piece of the wild west.

All of these actions continue to reduce the supply of lands at all levels of wilderness quality available for trading in the private market with the expected result of pushing up prices on the remaining supply. It is useful to recognize at this point that there are categories of wilderness and that each category can be evaluated for quality including scenic quality in order to appreciate that demand pressure is not just on land representing the out-of-doors in relatively undeveloped areas (see Section F below). Instead demand from all sources is highly selective and increasingly focused by new-found abilities to convert physical ascertainable facts to qualitative rankings of aesthetic matters which have consumer preferences.

4. Substituting tangible facts of intangible qualities

As Bufford has pointed out there is a certain "judicial uneasiness" with matters like wilderness which have an aesthetic and subjective dimension, presumably because:

1. There can be no consensus in matters of aesthetics.

2. No aesthetic judgement is more or less reasonable than any other because no arguments that rely on publicly ascertainable facts can be given in support of an aesthetic judgement.²⁵

However, Bufford points out that there can be general agreement in aesthetic judgments and that there are methods of inventory and evaluation. Bufford raises several salient points in regard to the legal acceptability of reasonable and objective aesthetic evaluations:

The law need not demand absolute certainty...there can be general consensus in aesthetic judgments and that these aesthetic judgments can be supported by reasoned arguments appealing to publicly ascertainable facts.²⁶

Broughton also addresses the traditional notion of scenic beauty as an intangible resource:

...nothing is intrinsically intangible. Intangibility--meaning difficulty in measurement--exists in part because no one has gone to the effort to work out some method of quantification.²⁷

The past decade has been a period in which methods for collecting "publicly ascertainable facts", development of environmental measurement systems with reliability, validity and utility, and research of the public perception of the relationship between physical features and environmental quality have gone on intensively in many quarters of science. At the same time, despite the limitations of economic valuation models relative to intangible attributes of land, most preservationists,

researchers, and public administrators now acknowledge the need for basic attribute inventories and criteria to set priorities in resource protection due to economic and budgetary constraints. Even the ethical economist, Irland, states:

Ranking areas for priority cannot be avoided in a world of scarce administrative time and inadequate information or funding.²⁸

The noted land economist, Marion Clawson, has also recognized the need for monetary measurement in comparison of outdoor values:

The chief argument is that any reasonable estimate of value is better than none at all. Those who advance this argument assume that recreation uses (including wilderness recreation) must in some way be compared, and the more directly the better with other land and water uses.²⁹

In appraisal parlance allocation of land use by setting economic priorities is what is described as the concept of "highest and best use" or in contemporary fashion "the most fitting use." The appraiser has a responsibility of providing some evidence of scarcity or rarity, consumer preferences, and consumer action which not only ranks their preferences but manifests market activity in the land market. It is conventional wisdom that people buy land to extract minerals, cut timber, develop recreational enterprises or graze sheep and these activities are compared as alternatives on a piece of rural mountain

ground because of certain physically ascertainable facts. It will be shown that developments in a variety of applied arts and sciences including environmental resource monitoring, engineering air photo interpretation, computer mapping, appraisal theory and behavior of outdoor recreational consumer groups all support inclusion of wilderness as a special set of physical attributes competitive with attributes for mining, lumber, agriculture, and commercial development for specific parcels of land.

F. Wilderness Defined

The term wilderness itself is something of a semantics wasteland and has a variety of meanings depending on context which impact on the purposes of this appraisal and arguments of scarcity, demand, and attributes which define an economic good. Thus, it may be useful to recognize some significant variations in the definitions of wilderness.

1. Wilderness (without capitalization or quotation marks) is used as the equivalent of what conservationists refer to as de facto wilderness; i.e., the kind of area the ordinary person would think of if he were asked to describe wilderness; an area naturally wild, pretty much unaffected by man or man's works.

2. "Wilderness": certain naturally wild areas designated by executive agencies prior to passage of the Wilderness Act, regulated and managed with preservation of their wild character as the primary objective. It is therefore an administrative, as

opposed to statutory, designation. "Wild area" is a similar official but administrative designation, having the same meaning as "wilderness" but applied to areas smaller in size than "wilderness" areas.

3. "Roadless area" is another administrative designation equivalent to wilderness, except for an important difference; the "wilderness" of No. 2 is administered by the Forest Service of the Agriculture Department while the roadless areas are administered by elements of the Interior Department.

4. "Primitive areas" are only slightly less protected than "wilderness" or "roadless" areas. Land use management in a primitive area permits mixed uses with selected mining, timber, or recreational facilities and supporting infrastructure permitted under controls.

5. Wilderness, or Wilderness Area, with capital letters notation, is an area designated by Congress under the terms of the Wilderness Act as a component of the National Wilderness Preservation System (NWPS).³⁰

A Wilderness as a component of the National Wilderness Preservation System (NWPS) was first defined by the 1964 Wilderness Act as a land use category having both quantitative and qualitative parameters which by their nature would limit the qualified supply within the continental United States:

1. Wilderness is defined by the 1964 Act "as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain..."

2. The Act further defined Wilderness to mean an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human inhabitation, which is protected and managed so as to

preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.

3. Wilderness must provide outstanding opportunities for solitude or a primitive or nonconfined type of recreation.

4. A Wilderness tract (once assembled from existing ownerships) must have at least 5,000 acres of land or be of sufficient size as to make practicable its preservation and use in an unimpaired condition.

5. Wilderness may also contain ecological, geological or other features of scientific, education, scenic or historic value.

Of more than 1,100 candidates for Wilderness designation by Congress, only 240 remain under review for future selection, and since 1964 less than 100 sites have qualified to be designated by Congress. Lands so qualified or still in review would therefore seem to be in short supply, sufficiently rare, and unique for recognition as economic commodities. But where is the market other than the Forest Service?

The concern for preservation of all classifications of wilderness has created a significant number of foundations as well as private patrons who will acquire wilderness properties to frustrate development, to anticipate future

funding of Federal acquisition programs, to create watersheds, to protect scenic vistas, and to interface ponderous government with transient needs of individual property owners.

Contiguity of non-federally owned lands to Wilderness defined by Congress means that private lands cannot be considered as Wilderness unless they are already part of a prescribed Wilderness boundary. NWPS is continuing its review to establish new areas which puts some pressure on private owners to develop candidates prematurely, a possibility which precipitates immediate demand for purchase among conservationist groups to prevent "trammeling" of future Wilderness components. Herein lies the basic dynamics creating markets for small pieces of prized wilderness to conserve them for a future designation as Wilderness.

THEREFORE, IN ADDITION TO ALTERNATIVE USES FOR TIMBER AND RESIDENTIAL RECREATIONAL, "WILDERNESS" WILL BE CONSIDERED AN ECONOMIC USE FOR WHICH THERE IS A FUNCTIONING MARKET. HIGHEST AND BEST USE FOR EACH OF THE FOUR CLUSTERS, I, II, III, AND IV, WILL BE SELECTED FROM ONE OF THE ALTERNATIVES.

G. Appraisal Methodology

The market comparison approach will be the basis for evaluation of the properties, a simple statement of intent with very difficult problems in application to a complex land system on the scale and diversity of the Alpine Lakes District. In order to be properly sensitive to all of the attributes which affect economic value, it is important to analyze any economic unit of land from residential lot to national wilderness by collecting relevant data according to the five following categories.

1. Physical attributes, such as size, shape, soils, geology, slope, water, flora and fauna, etc.
2. Legal attributes affecting use and degree of decision making within the private sector, including federal, state, county, and private land use controls relevant to the parcel.
3. Linkage attributes--those relationships which tie the site to systems such as roads and sewer or to peripheral activities and establishments which may generate demand for the parcel.
4. Dynamic attributes which have to do with how people perceive a site--such as prestigious, dangerous, attractive, enjoyable, beautiful, etc.

5. Environmental attributes have to do with off-site impacts of the subject property. Such as storm water runoff, or destruction of a view shed.

Appraisal of urban commercial property today generally requires a team approach involving an appraiser, and a mechanical or civil engineer. The appraisal of a rare and major wilderness tract requires an even broader array of professional talents in order to structure a data base of the critical attributes necessary to select the most fitting use or best use for each appraisal unit and to compare an appraisal unit so defined with comparable sales. To that end we have assembled a unique team of professionals so that the data base used by this report incorporates by reference the following appendices and comprehensive professional counseling of the following:

Appendix A. Summary Data and Comparisons For Comparable Sale Transactions.

Appendix B. Survey Definition and Airphoto Interpretations of the Subject Property and the Comparables, by Ralph Kiefer, Ph.D., P.E.; Scenic Beauty--Wilderness Inventory Analysis, Sean Ahearn, M.S. candidate, Environmental Monitoring.

Appendix C. Data Collection, Coding, and Computer Mapping System, (plus data management system for automating certain appraisal procedures) by Michael L. Robbins, M.S., Ph.D. candidate.

Appendix D. Alpine Lakes Area User VEP Survey Study to Determine Consumer Ranking of Wilderness Attributes. Richard Chenoweth, Ph.D., and Bernard Niemann, Ph.D. Landscape Architecture.

Appendix E. Legal documents, correspondence, and miscellaneous bibliography of data sources and interviews relevant to Pack River lands which are subjects of appraisal.

Appendix F. Collection of selected literature and articles referenced, bibliography.

Appendix G. Three-Dimensional Photography, study of subject property and all comparables, Sean Ahearn, M.S. candidate, Environmental Monitoring.

Section 2 will summarize the data collection system, salient features, and selection of best use for each of the four appraisal units.

Section 3 of this report will review the search for comparable sales, the adjustments for external influences on prices, and the unit of comparison developed for

external influences on prices, and the unit of comparison developed for this appraisal. Section IV will then value each appraisal unit cluster and allocate these values to the ownership positions within each cluster. Section IV will also provide aggregate values by ownership position for the entire 22,000 acres--plus involved in the four clusters. The report is concluded with a certification of value and statement of limiting conditions. The appraisal report itself is relatively short and brief in presentation because the great bulk of the detail underlying two years of research has been assembled and organized in separate volumes or ring binders which are identified as Appendices A-F and incorporated by reference into this report.

PACK RIVER FOOTNOTES

SECTION I. A.

1. Public Law 94-357 94th Congress, H.R. 7792, July 12, 1976.
2. It was the hope of Congress and the intent of ALAM ACT that compensation agreements could be negotiated which included exchange of other federally owned property or donations. Timber trades for national forest lands were considered probable, but when Pack River sold its saw mill operations in the Wenatchee, Washington, area of the intended wilderness, the Forest Service found it expedient to withdraw any trade offers from Pack River. (See Section 4 (c) (2) of ALAM ACT and Alternatives B1, B2 and E, FINAL ENVIRONMENTAL STATEMENT, ALPINE LAKES AREA ACQUISITIONS, USDA-FS-FES (Adm) 78-06, pp. 50-59.)
3. FINAL ENVIRONMENTAL STATEMENT, ALPINE LAKES AREA ACQUISITIONS, op. cit., See Alternative D--No Action, p. iv.
4. Interagency Land Acquisition Conference, UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITION, U.S. Government Printing Office, Washington, D.C., 1973, pp. 25-28.

SECTION I. B.

5. Plottage - The process of assembling two or more sites under a single ownership such that there is an increment derived from greater utility.

Plottage Value - An increment of value as a consequence of the combining of two or more sites so as to develop one site having a greater utility than the aggregate of each when separately considered, or the value of an existing site of abnormal size or special shape which has greater utility than average lots of more conventional smaller size.

Byrl N. Boyce, comp. & ed., REAL ESTATE APPRAISAL TERMINOLOGY, Revised Edition, AIREA/SREA, Ballinger Publishing Company, Cambridge, Mass, 1981, p. 188.

SECTION I. C.

6. Interagency Land Acquisition Conference, UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITION, op. cit., pp. 3-4.
7. Boyce, op. cit., pp. 160-161.

SECTION I. D.

8. FINAL ENVIRONMENTAL STATEMENT, ALPINE LAKES AREA ACQUISITIONS, op. cit., p. 44.
9. THE APPRAISAL OF REAL ESTATE, 7th Edition, Textbook Revision Committee, AIREA, Chicago, 1978, p. 44.
10. Boyce, op. cit., p. 27.
11. James A. Graaskamp, THE APPRAISAL OF 25 N. PINCKNEY: A DEMONSTRATION CASE FOR CONTEMPORARY APPRAISAL METHODS, Landmark Research, Inc., Madison, Wis., 1977, p. 7.
12. 78 Stat. 890-896 (1964), 17 U.S.C. 1131-1136 (1965).
13. Michael McCloskey, "The Wilderness Act of 1964: Its Background and Meaning," OREGON LAW REVIEW, Vol. 45, 1966, pp. 118-314.
14. Kevin Haight, "The Wilderness Act: Ten Years After," ENVIRONMENTAL AFFAIRS, 1974, p. 275.
15. Lloyd Irland, WILDERNESS ECONOMICS AND POLICY, Lexington, Mass., D.C. Heath and Co., 1979, p. 69.
16. Marion Clawson, "Methods of Measuring the Demand for and Value of Outdoor Recreation," RESOURCES FOR THE FUTURE, Washington, D.C., 1959, Reprint No. 10, p. 3.
17. George Santayana, "The Sense of Beauty," p. 5
18. Martin Krieger, "What's Wrong with Plastic Trees?" SCIENCE, 179, 1973, p. 449.
19. J. V. Krutilla and A.C. Fisher, THE ECONOMICS OF NATURAL ENVIRONMENTS, Baltimore, Johns Hopkins University Press, 1975, p. 129.
20. Krieger footnotes - no pages.
21. 1980 ANNUAL REPORT, THE NATURE CONSERVANCY, Signed by Frank D. Boren, Chairman of the Board, and William D. Blair, Jr., President, p. 7.

- ~~Knudsen, Inc.~~
22. THE FEDERAL DRIVE TO ACQUIRE PRIVATE LANDS SHOULD BE REASSESSED, Report by The Comptroller General of the United States, CED-80-14, December 14, 1979.
 23. Ibid.
 24. Ibid., p. ii.
 25. Bufford, "Beyond the Eye of the Beholder: Aesthetics and Objectivity," MICHIGAN LAW REVIEW, 1973, p. 1443.
 26. Ibid., p. 1447.
 27. Robert Broughton, "Aesthetics and Environmental Law: Decisions and Values," LAND AND WATER LAW REVIEW, 7:2, 1975, p. 485.
 28. Irland, op. cit.

SECTION I. F.

29. Clawson, op. cit., p. 2.
30. Haight, op. cit., pp. 275-276.



Public Law 94-357
94th Congress, H. R. 7792
July 12, 1976

An Act

To designate the Alpine Lakes Wilderness, Mount Baker-Snoqualmie and Wenatchee National Forests, in the State of Washington.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Alpine Lakes Area Management Act of 1976".

FINDINGS AND PURPOSES

Sec. 2. (a) The Congress finds that:

(1) The Cascade Mountains of the State of Washington between Stevens Pass and Snoqualmie Pass, commonly known as the Alpine Lakes region, comprise an environment of timbered valleys rising to rugged, snowcovered mountains, dotted with over seven hundred lakes, displaying unusual diversity of natural vegetation, and providing habitat for a variety of wildlife.

(2) This region is abundant in its multiple resources, including an abundant source of pure water, commercial forests, an outdoor laboratory for scientific research and educational activities, and opportunities for great diversity of recreational use and enjoyment during all seasons of the year, in particular for quality hunting, fishing, motorized recreation, skiing, picnicking, camping, rock collecting, nature study, backpacking, horseback riding, swimming, boating, mountain climbing, and many others, together with the opportunity for millions of persons traveling through the periphery of the area to enjoy its unique values.

(b) Purposes of this Act: In order to provide for public outdoor recreation and use and for economic utilization of commercial forest lands, geological features, lakes, streams and other resources in the Central Cascade Mountains of Washington State by present and future generations, there is hereby established, subject to valid existing rights an Alpine Lakes Area, including an Alpine Lakes Wilderness, an "Intended Wilderness" and a management unit, comprising approximately nine hundred and twenty thousand acres.

Sec. 3. (a) The Alpine Lakes Wilderness (hereinafter referred to as "the wilderness"), the "Intended Wilderness", and the peripheral area (hereinafter referred to as the "management unit"), shall comprise the areas so depicted on the map entitled "Alpine Lakes Area" and dated June 1976, which shall be on file and available for public inspection in the Office of the Chief, Forest Service, Department of Agriculture. The Secretary of Agriculture (hereinafter referred to as the "Secretary") shall, as soon as practicable after the enactment of this Act, publish in the Federal Register a detailed description and map showing the boundaries of the wilderness, "Intended Wilderness", and the management unit.

(b) The Secretary shall administer the Federal lands in the management unit in accordance with the laws, rules, and regulations applicable to the national forests in such a manner as to provide for the management of all of the resources of the management unit.

(c) The Federal lands designated as the Alpine Lakes Wilderness shall be administered in accordance with the provisions of this Act and with the provisions of the Wilderness Act (78 Stat. 890), whichever is the more restrictive.

(d) Federal lands depicted on the map and legal description as "Intended Wilderness" shall become part of the Alpine Lakes Wilderness at such time as the adjacent non-Federal lands, interests or other property become wilderness according to the provisions of section 3(e) of this Act, at which times the Secretary shall file a map and legal description of such additions in the Federal Register.

(e) Non-Federal lands depicted on the map and legal description as "Wilderness" and "Intended Wilderness" shall become part of the Alpine Lakes Wilderness when acquired by the Federal Government in conformance with the acquisition program required by section 4 of this Act.

LAND ACQUISITION AND EXCHANGE

Sec. 4. (a) Within the boundaries of the wilderness and "Intended Wilderness", the Secretary is authorized and directed to acquire with donated or appropriated funds, by gift, exchange, or otherwise, such non-Federal lands, interests, or any other property, in conformance with the provisions of section 4 of this Act: *Provided*, That any such lands, interests, or other property owned by or under the control of the State of Washington or any political subdivision thereof may be acquired only by donation or exchange. Nothing in this Act shall be construed to limit or diminish the existing authority of the Secretary to acquire lands and interests therein within the Alpine Lakes Area in accordance with established law. Notwithstanding any other provision of law, any Federal property located within the management unit may, with the concurrence of the agency having custody thereof, be transferred without consideration to the administrative jurisdiction of the Secretary for use by him in carrying out the purposes of this Act. The Secretary shall exercise caution in exchanging land so as not to impair substantially the programmed allowable timber harvest of the Mount Baker-Snoqualmie and Wenatchee National Forest. Amounts appropriated from the Land and Water Conservation Fund shall be available for the acquisition of lands and interest for the purposes of this Act.

(b) In exercising his authority to acquire property by exchange, the Secretary may accept title to any non-Federal property located within the wilderness and "Intended Wilderness", and convey to the owner of such property any national forest land within the State of Washington under the jurisdiction of the Secretary: *Provided*, That the Secretary may accept cash for or pay cash to the grantor in such an exchange in order to equalize minor differences in the values of the properties exchanged.

(c) (1) As non-Federal lands and interests in the wilderness and "Intended Wilderness" are acquired, and as they become protectable and administrable as wilderness, the lands shall become part of the Alpine Lakes Wilderness, and the Secretary shall publish from time to time a notice of such classification in the Federal Register. It is the intention of Congress that acquisition of the "Intended Wilderness" shall be completed no later than three years after the date of enactment of this Act. At any time after three years from the date of enactment of this Act, an action may be instituted by an owner, all of whose lands within the boundaries of the "Intended Wilderness" have been managed in such a way so as not to become unsuitable or unmanageable as wilderness (except for disturbance affecting a minor land area and found by the Secretary to have resulted from strictly accidental and unintentional circumstances), against the United States in the district court for the district in which such lands are located, to require the Secretary to acquire immediately all of said owner's interest in

such lands, interests and property and to pay in accordance with this section 4 just compensation for such lands, interest, and property the plaintiff may have which are not yet acquired pursuant to this section 4. By February 1 of each year, the Secretary shall report in writing to the Committees on Interior and Insular Affairs of the United States House of Representatives and the Senate, on the status of negotiations with private owners to effect exchanges and acquisition of non-Federal property.

(2) The United States will pay just compensation to the owner of any lands and interests acquired by and pursuant to this Act. Such compensation shall be paid either: (A) by the Secretary of the Treasury from money appropriated pursuant to this Act from the Land and Water Conservation Fund, or from any other funds available for such use, upon certification to him by the Secretary, of the agreed negotiated value of such property, or the valuation of the property awarded by judgment, including interest at the rate of 8 per centum per annum from the date of the acquisition of the property or the date of filing an action according to the provisions of section 4(c)(1) of this Act, whichever is earlier, to the date of payment therefor; or (B) by the Secretary, if the owner of the land concurs, with any federally owned property available to him for purposes of exchange pursuant to subsection 4(b); or (C) by the Secretary using any combination of such money or federally owned property.

(3) Just compensation shall be the fair market value of the lands and interests acquired by and pursuant to this Act, and shall be determined as of the date of acquisition: *Provided, however*, That the fair market value of those lands acquired from owners who, from the time of enactment of this Act to the time of acquisition of any such lands, have managed all lands within the "Intended Wilderness" under their ownership so as not to make such lands unsuitable or unmanageable as wilderness (except for disturbance affecting a minor land area and found by the Secretary to have resulted from strictly accidental and unintentional circumstances), shall be the sum of (A) the value of such lands and interests at the date of acquisition, plus (B) any loss of value of timber from casualty, deterioration, disease, or other natural causes from January 1, 1976, to the date of acquisition, with all existing and lost or damaged timber valued at the highest of (i) its market value on the date of acquisition, (ii) its market value on January 1, 1976, or (iii) the mean average market value between those dates: *And provided further*, That nothing in this Act shall be deemed or construed to deny to owners of non-Federal lands, or to change their rights to access to such lands or to manage the same for any otherwise lawful purpose prior to acquisition thereof by the Secretary. For the purposes of this section, the owner of property is defined as the holder of fee title unless said property is subject to an agreement of sale entered into prior to April 1, 1976.

WILDERNESS MANAGEMENT PLAN

Sec. 5. In conjunction with the preparation of a wilderness management plan for the wilderness designated by this Act, the Secretary shall prepare a special study of the Enchantment Area of the Alpine Lakes Wilderness, taking into consideration its especially fragile nature, its ease of accessibility, its unusual attractiveness, and its resultant heavy recreational usage. The study shall explore the feasibility and benefits of establishing special provisions for managing the Enchantment Area to protect its fragile beauty, while still maintaining the availability of the entire area for projected recreational demand.

Sec. 6. (a) Within two years of the enactment of this Act, the Secretary shall, in accordance with the provisions of this Act and other applicable acts governing the administration of the National Forest system and with full public involvement required by this and other pertinent law, prepare, complete and begin to implement in accordance with the provision of subsection (b) a single multiple-use plan for the Federal lands in the management unit.

(b) The management of the renewable resources will be in accordance with the Multiple-Use Sustained-Yield Act of 1960 (74 Stat. 215; 16 U.S.C. 528-531), with other applicable laws and regulations of the United States, and will be such to obtain multiple use and sustained yield of the several products and services obtained therefrom.

(c) The Secretary shall publish a notice of such plan in the Federal Register and shall transmit it to the President and to the United States House of Representatives and to the Senate. The completed plan will take effect and will be implemented no earlier than ninety calendar days and no later than one hundred and fifty calendar days from the date of such transmittal.

(d) The resources of the management unit shall be managed in accordance with the provisions of the multiple-use plan until such time as the plan may be revised according to the provisions of this section.

(e) The Secretary shall review the multiple-use plan from time to time and, with full public involvement, shall make any changes he deems necessary to carry out the purposes of this Act.

(f) The Secretary shall permit and encourage the use of renewable resources within the management unit, and nothing in this Act shall be construed to prohibit the conduct of normal national forest programs during the formulation of, nor to prohibit inclusion of such programs in the multiple-use plan required by this section.

AUTHORITIES OF THE STATE OF WASHINGTON

Sec. 7. (a) The Secretary shall permit hunting and fishing on lands and waters under his jurisdiction in accordance with applicable Federal and State laws. Except in emergencies, any regulations pursuant to this subsection shall be issued only after consultation with the fish and game departments of the State of Washington. Nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of these agencies.

(b) Nothing in this Act shall deprive the State of Washington or any political subdivisions thereof of its right to exercise civil and criminal jurisdiction within the area or of its right to tax persons, corporations, franchises, or other non-Federal property, in or on lands and waters within the area.

AUTHORIZATION OF APPROPRIATIONS

Sec. 8. There is hereby authorized to be appropriated for the acquisition of lands and interests to carry out the purposes of this Act, not more than \$20,000,000 in fiscal year 1977, \$17,000,000 in fiscal year 1978, and \$20,000,000 in fiscal year 1979, such sums to remain available until appropriated without fiscal year limitation. To prepare the multiple-use plan required by section 6 of this Act, there is authorized to be appropriated not more than \$500,000. Appropriation requests by the President to implement the multiple-use plan shall express in qualitative and quantitative terms the most rapid and judicious manner and methods to achieve the purposes of this Act. Amounts appropriated to carry out this Act shall be expended in accordance with the Budget Reform and Impoundment Control Act of 1974 (88 Stat. 297).

Approved July 12, 1976.

II. SUBJECT PROPERTY - DESCRIPTION, DATA BASE,
AND ECONOMIC CONTEXT

A. Introduction

The ALMA Act of 1976 allowed Congress to wax poetic in describing the subject property with strong visual images, as in Section 2(a)(1):

The Cascade Mountains of the State of Washington between Stevens Pass and Snoqualmie Pass commonly known as the Alpine Lakes region, comprise an environment of timbered valleys, rising to rugged snowcovered mountains, dotted with over seven hundred lakes, displaying unusual diversity of natural vegetation, and providing habitat for a variety of wildlife.

Photographs of the subject property are provided at the end of this section in lieu of several thousand words. The U.S. Geological Survey Maps precede the photographs. A common theme implied by both Congress and the photographs, and identified as a general perception of the area in the Visitor Employed Photography project (in Appendix D) is the natural beauty of the property.

The appraisal process prefers to compare the subject property in terms of specific, physically ascertainable attributes to broadly similar properties which have sold to a class of buyers of generally similar motivation. It is therefore necessary to supply the physically ascertainable attributes of the subject property which may be significantly related to alternative uses and selection of best use. Combining this data into relevant patterns permits comparison

of subject to similar inventories of the comparable sales. In the case of the Alpine Wilderness where the subject properties are owned in a checkerboard pattern, adjoining both government and other private ownership positions, it is also necessary to place the subject properties in context to the regional pattern and sub-environmental systems. Comparison of properties of the scale, physical diversity, ruggedness, and quality of the properties in question creates a data problem of staggering proportions, but nevertheless the distinctions between and among subject properties and comparables must be retained with sensitivity if pricing inferences are to be equitable. Thus a powerful data base system with which to structure an intensive data collection process was implemented for both subject property and comparables. The general process is detailed in Appendix C and is primarily the work of Michael L. Robbins, a Ph.D. candidate under Prof. Ralph Kiefer in Civil Engineering and Environmental Monitoring; Robbins is also a faculty member in the School of Business, Department of Real Estate where he teaches appraisal and property development--unique qualifications for an effort of this magnitude.

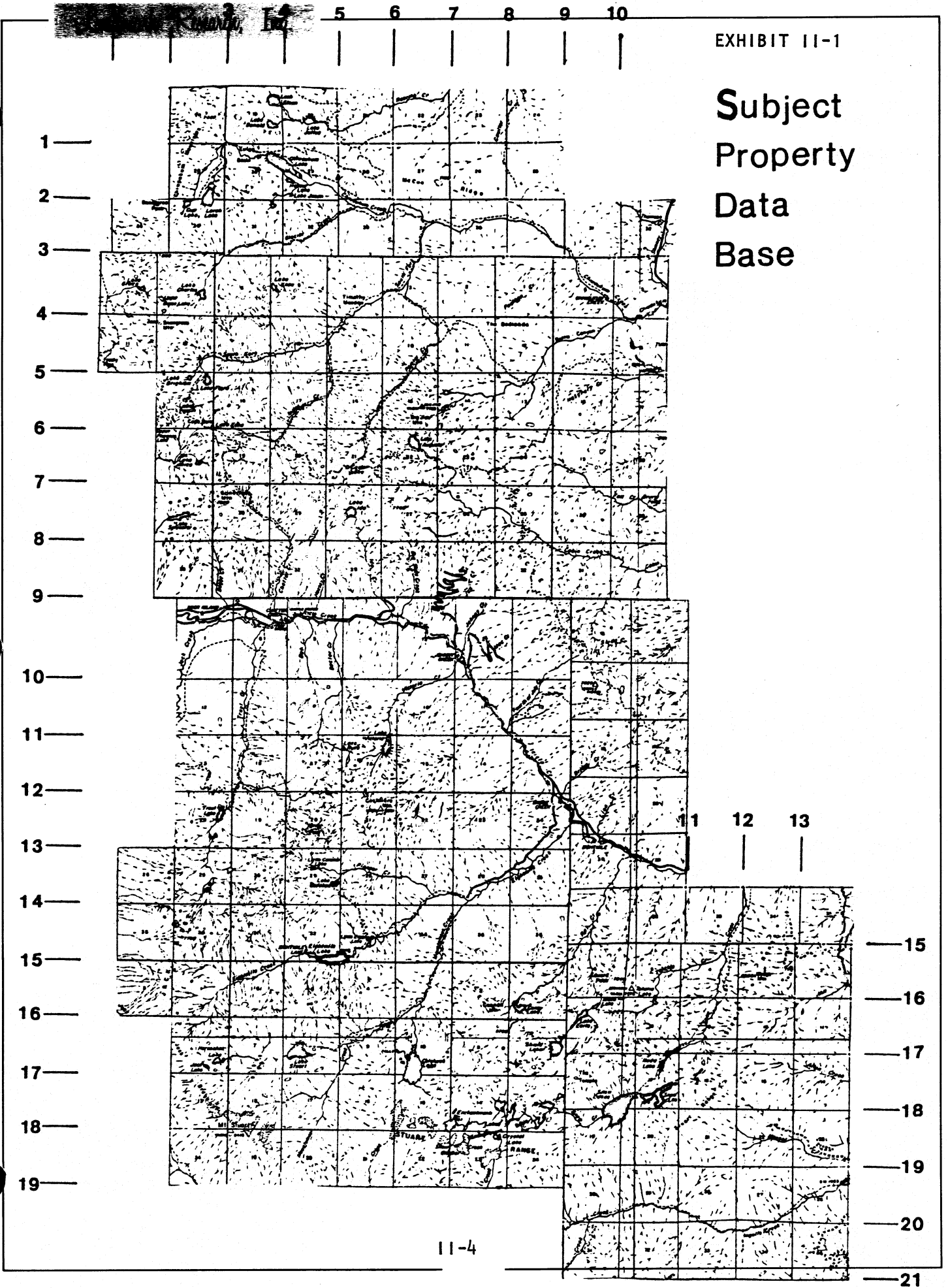
B. General Elements of a Data Base

In broad outline the development of a data base system requires the following steps for computerization:

1. Definition of the spatial area to be included in the data base.
2. Establishment of an X-Y coordinate system which can synchronize with existing legal descriptions, subdivide to geocoded data cells, and permit ease of data entry.
3. Validation of ownership areas with data base coordinates and ownership areas.
4. Validation of land areas contained within each data base cell.
5. Selection of data sources available for both subject properties and comparable properties.
6. Specification of data to be reported, coding system, and data quality entry control system.
7. Development of programs for data retrieval and conversion to various forms of output including graphic display, statistical frequencies, and other relevant quantities.
8. Validation and quality control of retrieval systems.
9. Data storage, access, and protection systems to permit selective retrieval and combination for the appraisal process itself.

Responsibility for and details of these steps represent the bulk of supporting Appendices B, C, and D. More general

Subject Property Data Base



literature can be found in some of the selections reproduced in Appendix F.

C. Subject Property Data Base

The development of a data base for the Alpine Lakes Region affected by the subject property acquisition required nearly two years of work to execute the basic procedures above and this work has been detailed in Appendix B and C, by Kiefer, Ahearn, and Robbins. The general description which follows is taken from the introduction to Appendix C by Robbins, beginning at page 6.

The spatial data base covers an area roughly 11 miles wide by 22 miles long and includes an area of approximately 100,000 acres (Exhibit II-1). The eastern side of the data base is located approximately 3-1/2 miles due west of the City of Leavenworth, Washington. The Icicle River divides the area approximately in half, providing a northern and southern reference.

D. Data Organization

The recording of data for record keeping and storage in the spatial data base is based upon an arbitrary X-Y coordinate basis. Each pair of X-Y coordinates references a unique Section, based on the Township and Range mapping system. The X coordinates range in value from 1 to 13 and the Y coordinates

range in value from 1 to 23. The starting X-Y coordinate is located in the northwest corner of the data base beginning approximately at Range 15E, Township 26N, Section 24. To increase the efficiency of data entry into the data base, the data base is further subdivided into fifteen areas with each subarea labeled with an alpha code, A through O, as in Exhibit II-2.

Therefore, there are four valid township codes; Townships 23N through 26N. There are three valid range codes; Range 15E, 16E, and 17E. Valid section numbers range from 1 to 36, appropriate for the subarea. Not all subareas include all section numbers that fall within the township and range areas. For example, Subarea A includes only section numbers 13-36; Subarea B has two sections: Sections 30 and 31; and Subarea C includes all 36 sections. (See Exhibit II-2.)

Each section is further divided into 64 cells of a theoretical 10 acres each, although the synchronization and validation process must later adjust for the quirks in the actual survey variances on the ground and denote cells of more or less than 10 acres. The 64 cells are represented by a spatial subdivision of 8 rows of 8 cells each, permitting a coding form with a matching 8 x 8 matrix. Each cell is then numbered, with Number 1 being the lower left corner of the

EXHIBIT 11-2

SUBAREAS OF 100,000 ACRES OF ALPINE LAKES
WILDERNESS SURROUNDING AND INCLUDING PACK RIVER

Subarea A	references	Township 26N, Range 16E
Subarea B	references	Township 26N, Range 17E
Subarea C	references	Township 25N, Range 16E
Subarea D	references	Township 25N, Range 17E
Subarea E	references	Township 24N, Range 16E
Subarea F	references	Township 24N, Range 17E
Subarea G	references	Township 23N, Range 17E
Subarea H	references	Township 23N, Range 16E
Subarea I	references	Township 26N, Range 15E
Subarea J	references	Township 25N, Range 15E
Subarea K	references	Township 24N, Range 15E
Subarea L	references	Township 23N, Range 15E
Subarea M	references	Township 24N, Range 16E
Subarea N	references	Township 24N, Range 17E
Subarea O	references	Township 24N, Range 15E

coding form with the sequence moving from left to right, row by row as demonstrated by the sample form in Exhibit II-3.

Thus the grain of resolution for the data base shall be no less than 10 acres, but this unit of data can be aggregated to 40, 80, 160, etc., and represents a relatively fine grain of information for a tract covering 100,000 acres. Naturally it is not of the detailed resolution of digitized electronic photography, but on the other hand, much of the data recorded would not be available with reliability since it would not lend itself to electronic photography. It is small enough that the law of large numbers will essentially neutralize displacement of attributes over the borders of the cell due to mapping and coding errors and is large enough that the typical trained data collector, with the aid of a ten-acre plastic grid overlay, can convert maps and air photos reliably to data reflecting the dominant character, condition, presence or absence of selected variables. The cell provides a spatial location for each attribute recorded.

E. Data Recording Process

The data collection process begins with determination of an attribute to be recorded, identification and review of source and reliability for such information, and then development of an arbitrary numerical code to reflect the discrete or continuous nature of the variable or a sub-category of the

Pack River Project
Alpine Lakes Area, Washington

8	1	2	3	4	5	6	7	8
7	9	10	11	12	13	14	15	16
6	17	18	19	20	21	22	23	24
5	25	26	27	28	29	30	31	32
4	33	34	35	36	37	38	39	40
3	41	42	43	44	45	46	47	48
2	49	50	51	52	53	54	55	56
1	57	58	59	60	61	62	63	64

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

Subarea _____

Section _____

variable type. These code numbers are used for identification purposes only, and at this stage raw code numbers do not reflect value judgments. For example, if the variable being extracted, i.e. being put on the coding form, is Slope Aspect, the value coded into each of the 64 cells would define the prominent direction that the slope is facing within the cell. For this variable, the numerical scale utilizes integer values between 0 and 9 to denote the direction of the Slope Aspect, i.e. the value 1 will denote a north facing slope while the value 9 will denote a multi-directional slope and the value 0 would indicate that the cell is mostly flat. The fact that the north facing slopes have a value of 1 and the multi-directional slope has a value of 9 does not imply that the multi-directional slope is 9 times better or worse than the north facing slope. The transformation from a numerical identification to a judgmental evaluation will be accomplished later in transformation programs.

F. Data Sources

Source documents for data included topographic maps, U.S. Forest Service documents such as the Alpine Lakes and Environmental Impact Statement on Transportation Plans, Pack River In-House Timber and Land Development Plans, Visual assessment surveys and so on. Variables in Class 21 to 24 are from air photos and 3-D slides; in some cases small scale maps

were enlarged by photography to aid data extraction. The reader is urged to refer to the detailed data extraction process for every variable provided in Appendix C by Michael Robbins and Part II of Appendix B by Sean Ahearn. Only then can the arduous craftsmanship and care in data control or data derivation from combined bits of information be fully appreciated. A basic list of 25 physically ascertainable attribute groups coded and placed in individual files as raw information are provided in Exhibit II-4. In addition, three files were created for the subject property based on responses from the Visitor Employed Photography survey to be discussed later (detailed in Appendix D). These files include cells within visitor designated "most beautiful areas", cells within general areas designated as "least beautiful areas", and the access routes through which the visitors were hiking to reach the areas photographed.

The subject property does not lend itself to statistical description alone; the reader is urged to review the color prints of subject property included at the end of this section. In addition, all of the subject property in each of the comparables were photographed by Sean Ahearn in three dimensional slides which are available as a resource, but have not been added to the appraisal set. These slides and other slides of data recording technique and materials are maintained

EXHIBIT 11-4

RAW DATA GEO-CODED INTO DATA BASE FOR
ALL SUBJECT AND COMPARABLE PROPERTIES AS OF AUGUST 1981

As Described in Appendix C

1. Centroid Elevation (CELEV.???)*
Major contour line elev. (ELBAS.???)
#80-foot contours to centroid (ELADJ.???)
2. Predominant slope aspect (SLOPE.???)
 - 1 = North
 - 2 = Northeast
 - 3 = East
 - 4 = Southeast
 - 5 = South
 - 6 = Southwest
 - 7 = West
 - 8 = Northwest
 - 9 = Multi-directional
 - 0 = Mostly flat
3. Contours (CONTO.???)
4. Surface Water (WATER.???)
 - 0 = None
 - 1 = Intermittent stream
 - 2 = Permanent stream
 - 3 = Intermittent and permanent stream
 - 4 = Multi-permanent stream
 - 5 = Small lake (less than 10 acres)
 - 6 = Intermittent stream and small lake
 - 7 = Permanent stream and small lake
 - 8 = Large lake
 - 9 = Intermittent stream and large lake
 - 10 = Permanent stream and large lake
 - 11 = Large and small lake
 - 12 = Lake and small lake and permanent stream
 - 13 = Ice/snow field
5. Trails (TRAILS.???)
 - 1 or 0 or presence or absence
6. Ridge Lines (RIDGE.???)
 - 0 or 1
7. Percent of Slope (PCSLOP.???)
Range between .000 and 1.94
8. Roads (ROADS.???)
 - 0 = No roads existing or proposed
 - 1 = Proposed logging road in joint agreement
 - 2 = Any type of existing road

9. Airfields (AIRFD.???)
 - 0 = No airfields existing or proposed
 - 1 = Existing public airfield
 - 1 = Usable private airfield
 - 1 = Existing U.S. Forest Service airfield
 - 2 = Potential U.S. Forest Service airfield
 - 3 = U.S. Forest Service heliport
 - 4 = Potential U.S. Forest Service heliport
 - 5 = U.S. Forest Service touchdown site
 - 6 = Potential U.S. Forest Service touchdown site
10. Buildings, Mines and Clearcuts (BUILD.???)
 - 0 = No buildings, mines or clearcuts
 - 1 = Presence of buildings
 - 2 = Presence of mine
 - 3 = Presence of timber clearcut
11. Precipitation (PRECIP.???)
 - Annual average rainfall in multiples of 10 inches
12. Relative Distance of Parcel from a Wilderness Boundary (DIPEC.???)
 - 0 = 2 or more full sections from boundary
 - 1 = 1 section from boundary
 - 2 = Parcel adjacent to wilderness boundary
13. Peaks (PEAKS.???)
 - Highest centroid in 10-acre cell of a mountain section coded as a 1 designating peak
14. Mountains (MOUNT.???)
 - Cluster 4 - Any cell over 6,800 feet.
 - Cluster 3 - Any cell over 7,000 feet.
 - Clusters 1 & 2 - Any cell over 7,200 feet.
15. Potential Subdivision (SUBDIV.???)
 - 1 = Tentative Pack River plan for subdivision
 - 0 = All other cells
16. Soils (SOILS.???)
 - Soil code number from county maps
 - (Not available for all comps)
17. Timber Species (TIMSP.???)
 - 1 = Mixed conifer
 - 2 = Douglas fir (70% or more)
 - 3 = Ponderosa pine (70% or more)
 - 4 = Lodgepole pine (70% or more)
 - 5 = Alpine fir (70% or more)
 - 6 = Englemann Spruce (70% or more)
 - 7 = Western larch (70% or more)

18. Timber Size (TIMSZ.???)
 1 = 0 - 4.9" D.B.H.
 2 = 5.0 - 8.9" D.B.H.
 3 = 9.0 - 20.9" D.B.H.
 4 = 21.0" and over D.B.H.
19. Timber Stocking (TIMST.???)
 1 = 10 - 39% stocked (poor)
 2 = 40 - 69% (medium)
 3 = 70% and over, stocked (well)
20. Non-Timber Types (NOTIM.???)
 1 = Fire
 2 = Water
 3 = Non-stocked
 4 = Non-operable
 5 = Grass
 6 = Hardwood
 7 = Rock
 8 = Brush
 9 = Clear cut
 10 = Right of way

Data from Air Photo Interpretation
As Described in Appendix B, Part II

21. Physiography (PHYSI.???)
 1 = Sharp Dissected Uneven Slopes
 2 = Moderately Dissected Slopes
 3 = Irregular Landscape
 4 = Ridged Landscape
 5 = Peak
22. Rockform (ROCKS.???)
 1 = Rock Avalanche Chute
 2 = Snow Avalanche Chute
 3 = Talus Slope or Boulder Field
 4 = Rock Outcrop (less than 2 acres)
 5 = Rock Outcrop (2-5 acres)
 6 = Rock Outcrop (5-10 acres)
 7 = Cliff
 8 = Pinnacle
 9 = Cirque
 10 = Permanent Snow Field
 11 = Glacier
 12 = Rock Dome

23. Vegetation (VEGGY.???)
 1 = Stocking 10-39%
 2 = Stocking 40-69%
 3 = Stocking 70%
 4 = Large Old Growth Timber
 5 = Bushes
 6 = Dry Meadow
 7 = Wet Meadow
24. Waterform (WFORM.???)
 1 = Unusual Shoreline Configuration
 2 = Falls
 3 = Rapids or High Volume Flow
 4 = Meander
25. Ownership (NEOWN.???)
 1 = L. V. Brown
 2 = Sheila D. Brown
 3 = J. M. Brown, Jr.
 4 = Jean O. Brown
 5 = Chester Chastek
 6 = Catherine Chastek
 7 = Beverly C. Cook
 8 = Deborah A. Hansen
 9 = Stephanie M. Brown
 10 = Lawrence V. Brown, Jr.
 11 = Josephine H. Drown
 12 = Patricia E. Brown
 13 = Jacqueline Brown
 14 = Barbara Huquenin
 15 = Patrick C. Chastek
 16 = Joyce Esposito
 17 = Gary R. Chastek
 18 = Thomas D. Chastek
 19 = Lawrence F. Chastek
 20 = Michael P. Chastek

in a pool referred to as Appendix G. An initial summary of physical characteristics identified in Exhibit II-4 have been inventoried for each ten-acre cell in each of the four appraisal clusters in Exhibit II-5. These factors must then be grouped in subsets to represent suitabilities for alternate uses as well as qualities of environment for different purposes. For example, potential development will be sensitive to buildable slopes, soils for percolation, road access, southern aspect. Timber operations will relate to combinations of stocking, size, and species as well as access to road, heliports, and other similar factors.

G. Legal Attributes

All four clusters of the subject property are affected by a pyramid of federal, county, and private covenants or regulations as to their use or pace of development or for logging. Aside from general Forest Service regulations on logging in this district prior to the identification of a Wilderness District and a supplemental Management District, there is an operational joint road agreement which was assigned to Pack River by the previous owners and grantors which the courts have determined to be operational despite the Wilderness Act. These documents are provided in Appendix E. Development potentials are controlled by Chelan County Subdivision Regulations, adopted August 15, 1977 by Resolution 77-103 which

SUMMARY OF PHYSICAL CHARACTERISTICS CATALOGED AS PREDOMINANT
FOR EACH TEN-ACRE CELL IN FOUR APPRAISAL UNITS

<u>Variable Name</u>	Cluster I (N=320)		Cluster II (N=192)		Cluster III (N=384)		Cluster IV (N=1728)	
	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>
<u>Vegetation</u>								
1. Stocking, 10-39% measured as a vertical projection of the crown cover to the ground	78	24.4	46	24.0	129	33.6	549	31.8
2. Stocking, 40-69%	79	24.7	51	26.6	42	10.9	425	24.6
3. Stocking, 70%+	107	33.4	13	6.8	77	20.1	324	18.7
4. Large old growth timber	25	7.8	0	0.0	5	1.3	47	2.7
5. Bushes	69	21.6	8	4.2	51	13.3	581	33.6
6. Dry Meadow	4	1.2	0	0.0	101	26.3	327	18.9
7. Wet meadow	0	0.0	7	3.6	77	20.1	338	19.6
<u>Rockform</u>								
1. Avalanche Chute (Rock)	79	24.7	43	22.4	17	4.4	206	11.9
2. Avalanche Chute (Snow)	37	11.6	0	0.0	18	4.7	23	1.3
3. Talus Slope or Boulder Field	58	18.1	20	10.4	124	32.3	357	20.7

Variable Name	Cluster I (N=320)		Cluster II (N=192)		Cluster III (N=384)		Cluster IV (N=1728)	
	No. of Cells	% of Total	No. of Cells	% of Total	No. of Cells	% of Total	No. of Cells	% of Total
4. Ridged Landscape	19	5.9	23	12.0	63	16.4	150	8.7
5. Peak	9	2.8	23	12.0	0	0.0	0	0.0
<u>Elevation</u>								
1. L.T.* 3400	91	28.4	46	24.0	0	0.0	125	7.2
2. G.T.** 3400 and L.T. 5300	216	67.5	83	43.2	57	14.8	672	38.9
3. G.T. 5300 and L.T. 7100	13	4.1	57	29.7	265	69.1	888	51.4
4. G.T. 7100	0	0.0	6	3.1	62	16.1	43	2.5
<u>Roads</u>								
1. Existing Roads	25	7.8	2	1.0	53	13.8	222	12.8
2. Proposed Roads	0	0.0	0	0.0	0	0.0	9	0.5
<u>Airfields</u>								
1. U.S. Forest Service Touchdown Site	0	0.0	0	0.0	1	0.3	0	0.0
2. Non-existing U.S. Forest Service Touchdown Site	0	0.0	0	0.0	0	0.0	1	0.1
<u>Trails</u>	18	5.6	6	3.1	21	5.5	156	9.0

*L.T. means Less Than

**G.T. means Greater Than

<u>Variable Name</u>	Cluster I (N=320)		Cluster II (N=192)		Cluster III (N=384)		Cluster IV (N=1728)	
	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>
4. Rock Outcrop (2 acres)	46	14.4	53	27.6	77	20.1	495	28.6
5. Rock Outcrop (2 to 5 acres)	26	8.1	33	17.2	32	8.3	181	10.5
6. Rock Outcrop (5 to 10 acres)	8	2.5	12	6.2	28	7.3	69	4.0
7. Cliff	1	0.3	7	3.6	14	3.6	15	0.9
8. Pinnacle	3	0.9	7	3.6	8	2.1	24	1.4
9. Cirque	0	0.0	0	0.0	5	1.3	26	1.5
10. Permanent Snow Field	0	0.0	0	0.0	36	9.4	31	1.8
11. Glacier	0	0.0	0	0.0	0	0.0	0	0.0
<u>Waterform</u>								
1. Unusual Shoreline Configuration	33	10.3	6	3.1	9	2.3	71	4.1
2. Falls	34	10.6	5	2.6	8	2.1	59	3.4
3. Rapids or High Volume Flow	0	0.0	0	0.0	0	0.0	26	1.5
4. Meander	0	0.0	0	0.0	0	0.0	0	0.0
<u>Physiography</u>								
1. Sharp Dissected Uneven Slopes	21	6.6	21	10.9	12	3.1	88	5.1
2. Moderately Dissected Slopes	43	13.4	0	0.0	0	0.0	54	3.1
3. Irregular Landscape	34	10.6	0	0.0	33	8.6	274	15.9

<u>Variable Name</u>	<u>Cluster I</u> (N=320)		<u>Cluster II</u> (N=192)		<u>Cluster III</u> (N=384)		<u>Cluster IV</u> (N=1728)	
	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>	<u>No. of Cells</u>	<u>% of Total</u>
<u>View to</u>								
1. L.E.*20	176	55.0	180	93.7	264	68.7	1212	70.1
2. G.T.**20 and L.E. 40	105	32.8	8	4.2	77	20.1	378	21.9
3. G.T. 40 and L.E. 60	34	10.6	4	2.1	40	10.4	133	7.7
4. G.T. 60 and L.E. 80	3	1.0	0	0.0	3	0.8	5	0.3
5. G.T. 80	2	0.6	0	0.0	0	0.0	0	0.0
<u>View from</u>								
1. L.E. 20	182	56.9	103	53.6	231	60.2	1007	58.3
2. G.T. 20 and L.E. 40	121	37.8	52	27.1	139	36.2	627	36.3
3. G.T. 40 and L.E. 60	13	4.1	29	15.1	14	3.6	88	5.1
4. G.T. 60 and L.E. 80	2	0.6	8	4.2	0	0.0	5	0.2
5. G.T. 80	2	0.6	0	0.0	0	0.0	1	0.1
<u>% Slope</u>								
1. L.E. .25	40	12.5	37	19.3	125	32.6	681	39.4
2. G.T. .25 and L.E. .50	162	50.6	59	30.7	170	44.2	583	33.7
3. G.T. .50 and L.E. .75	107	33.5	58	30.2	67	17.5	373	21.6
4. G.T. .75 and L.E. 1.00	9	2.8	24	12.5	10	2.6	68	3.9
5. G.T. 1.00	2	0.6	14	7.3	12	3.1	23	1.3

*L.E. means Less Than Or Equal To

**G.T. means Greater Than

[REDACTED]

permits a short form platting procedure for subdivisions involving lots which are sized to be 20 acres or more. All of the property is subject to access relative to exercise of mineral rights reserved by a previous owner, The Sawyer Trust. (The only exception is 174 acres previously identified in Section I.) The appraiser is not aware of any reservation of water or hydroelectrical potential on the subject site to other outside parties. There is a license to the Cashmere Mountain Corporation as a result of a land contract between Pack River, Inc. and Cashmere for two parcels in the vicinity of Lake Caroline. (It is understood that this land contract has been rescinded since the onset of appraisal research by the filing of eminent domain proceedings against the Cashmere Mountain vendee, which under the terms of the land contract rescinds the agreement and the licenses therein.)

H. Subject Property Linkages

It has already been noted that the Wilderness region lies between Interstate 90 on the south and U.S. Highway 2 on the north, providing adequate east-west linkages from population corridors on Puget Sound and to Spokane-Coeur D'Alene. Interstate 90 continues eastward as a major transcontinental route. The north-south connector is State Highway 97 which is scenic but curvy and slow. Wenatchee provides an airport for general aviation and a commuter airline but neither represent

~~Leavenworth~~

major factors in utilization of the subject property. Leavenworth, on the eastern edge of the subject properties, is a small town with aggressive tourist promotion utilizing buses from the Puget Sound area during most seasons of the year, but the mountain area provides only a backdrop to these activities.

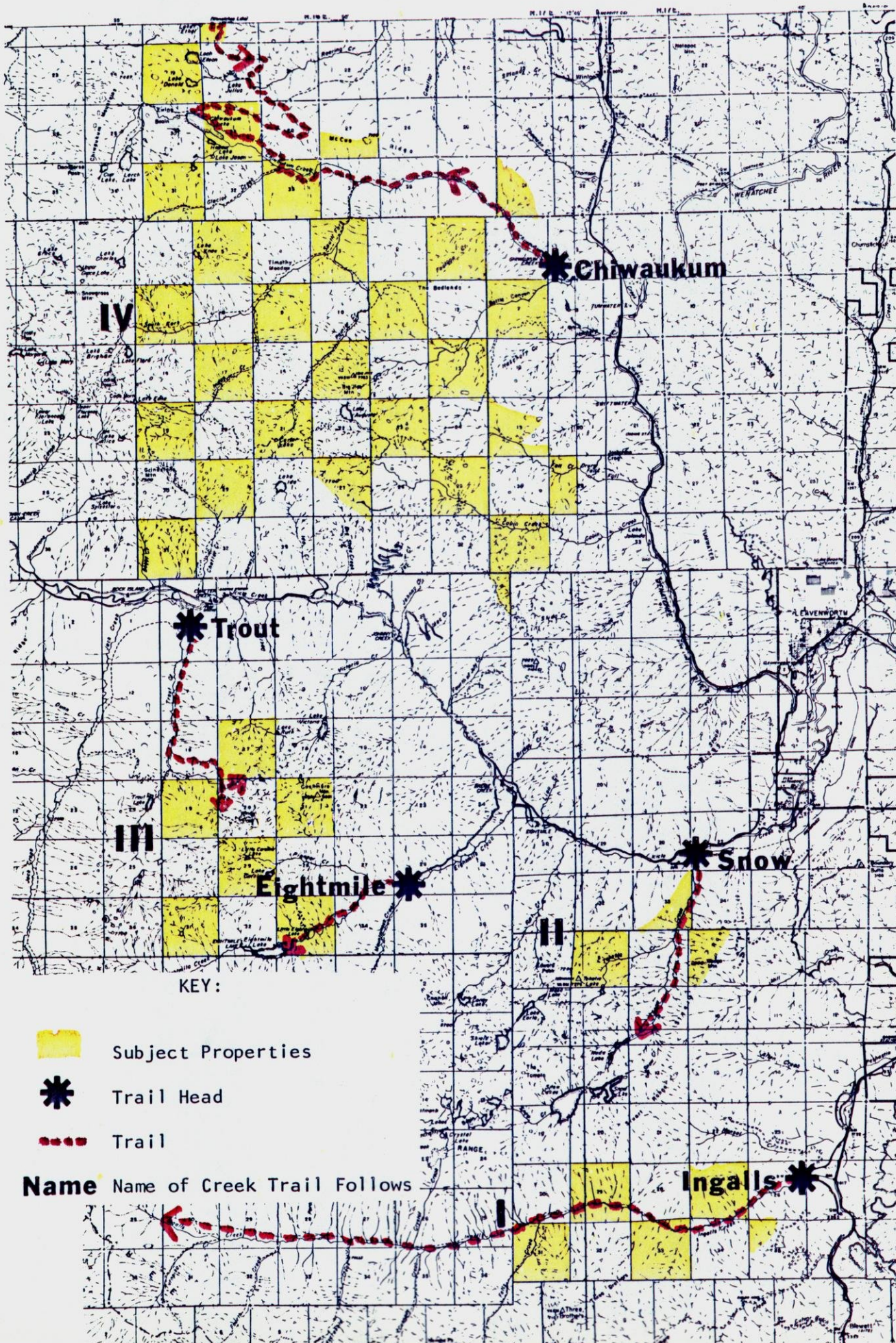
The more significant linkages of these clusters are their individual access points to usable logging roads and recreational trail heads (parking areas where hikers can begin the long climb into the wilderness basins north and south of the Icicle.) Cluster #2 via Snow Creek is probably the main entrance point for hikers entering the Enchanted Area (see Exhibit II-6). Similarly, Cluster #1 via Ingalls Creek is a popular point of entry into the high ground of the Stuart Range south of the Enchanteds, although not as important as Cluster #1. Nevertheless, the trail head for Cluster #1 is closer to State Highway 97 and will be popularized by the recent purchase of land by an outfitter and supply firm on the road rising from the State Highway to the Ingalls Creek trail heads. Both clusters are clearly entry points and vital trail corridors to the Enchanted Area south of the Icicle.

Access to Cluster #3 is somewhat more difficult and requires traveling to the end of the Icicle Creek road and then moving approximately 3 miles up a logging road (Pack River Trail) to the trail head at Trout Creek. This trail leads to

EXHIBIT 11-6

KEY TRAIL LINKAGES TO
PUBLIC ROAD SYSTEM

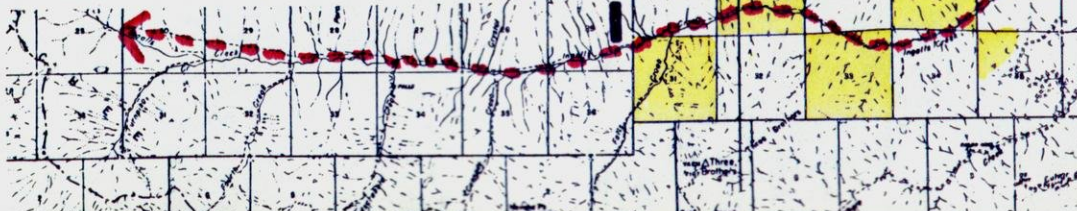
EXHIBIT 11-6
KEY TRAIL LINKAGES TO PUBLIC ROAD SYSTEM



KEY:

- Subject Properties
- * Trail Head
- - - - Trail

Name Name of Creek Trail Follows



the western slopes of Mt. Cashmere and is a back door approach to the northwestern edge of the Alpine Lakes. An alternative and more frequented approach is the Eightmile Creek logging road which leads to a trail head from which to reach Eightmile Lake or the beautiful Colchuck Lake on the northern shoulders of Mt. Stuart. The views from Pack River land in this zone across the Enchanted Basin are some of the best south of the Icicle. North of the Icicle there are two major entrances that are popular with campers. Chiwaukum Creek provides trail access almost directly from U.S. 2 into the Wilderness Area from the east, and it is also the access route to much of the better timber land on the Pack River property. The alternative is a trail to the north where the trail head is slightly north of the upper edge of Exhibit II-6, a trail which leads to a number of lakes, such as Lake Donald, Lake Ella, Chiwaukum Lake and others of high elevation and high scenic quality. Better public information about this sector of the Alpine Lakes Wilderness would shift some of the excess hiking pressure away from areas south of the Icicle.

Each of these major trail and creek access points have also been starting points for logging operations. Thus it may be that trail head linkages for hikers are of less economic importance than access routes for logging operations and that in the case of the area north of the Icicle, these logging

operations currently reach points just below the crest of the ridge which forms the Wilderness boundary. Linkage to current logging operations is not an insignificant relationship in terms of economies of scale for the logger and in terms of pricing. Not only do these linkages infer that contiguous parcels might receive immediate use given a normal pace of development, but it also means a threat of irreversible damage to the naturalness of the area would provoke bidding for the site by conservation groups even without the existence of ALMA. Such development pressure will become a factor in best use analysis and market comparison analysis in Sections III and IV.

I. Dynamic Attributes

Dynamic attributes have to do with how people perceive a particular property as these qualities are partly in the mind of the beholder in terms of the values attached to the presence of certain attributes. Certainly the dominant public image of the Alpine Wilderness Area is that of unique scenic beauty, and it is important to note here that the survey of hikers, which is provided in full in Appendix D, indicated that many of the hikers were well familiar with other North American and European mountain districts. Nonetheless, these hikers seldom, if ever, rated the Alpines Area as inferior to the northern Cascades, the Glacier Parks, or the Grand Teton range. (See Executive Summary in Appendix D.) The research presented in

Appendix D further indicates that scenic quality can be perceived as various combinations of physical attribute sets. Diversity of physical landscape in the foreground and middleground, with sky and snowcapped mountain peaks in the distant background, can be ranked and developed into a score for scenic quality. Indeed, the Forest Service efforts to implement Congressional mandates for review and ranking of alternative tracts for wilderness standing all involve perceptual or dynamic qualities about the real estate. (See RARE II Implementation Manual in Appendix E.) Therefore, it is necessary to take the data base of physically ascertainable facts and create combinations of that data which can serve as proxies for the perceptual components of wilderness, i.e., natural integrity, apparent naturalness, primitive recreation experience, and scenic quality. The primary link between the physical facts and the presumed perception is the Visitor Employed Photography (VEP) study done specifically in the Alpines Area and forming part of the Niemann-Chenoweth study in Appendix D.

The dynamic attributes for natural integrity - apparent naturalness, opportunity for solitude and opportunity for primitive recreation are explained in Exhibit II-7. Scenic quality scores require somewhat more complex relationships developed more in detail in Appendix C and summarized in

EXHIBIT II-7

The following is a list of the dynamic attributes used in the Pack River Appraisal. It is divided into two parts, those attributes associated with the Wilderness Evaluation System and those attributes associated with the Visual Quality System.

THE WILDERNESS EVALUATION SYSTEM (WES)

- (I) Natural Integrity - Apparent Naturalness* is damaged by presence of:
 - 1) paved road
 - 2) clear-cut, logging operation
 - 3) buildings
 - 4) trails, fences

- (II) Opportunity for Solitude is aided and abetted by data factors reflecting:
 - 1) view from
 - 2) view to
 - 3) vegetative screening (stocking class)
 - 4) distance perimeter to core

- (III) Opportunity for a Primitive Recreation Experience is increased by each additional element in diversity reflected in data factors which impute challenge or diversity:
 - 1) Challenge
 - a) Rockform present
 - 1) avalanche chute (snow or rock)
 - 2) talus slope or boulder field
 - 3) rock outcrop
 - 4) cliff
 - 5) pinnacle
 - 6) cirque
 - 7) permanent snow field
 - 8) glacier
 - b) vegetative overstory
 - c) percent slope
 - 2) Diversity (see VQS)
 - a) physiography
 - b) rockform
 - c) vegetation
 - d) waterform

*These two elements are separate categories in RARE II; given the fact that comparables were presumed to be wilderness candidates, a perfect wilderness score of 10 is presumed and adjusted downward for items listed. Apparent naturalness is recognized indirectly in the descending penalty score which reflects curability and observability from a distance. All areas were subject to fire control and fire histories were not available, so this factor in apparent naturalness was ignored. (See Appendix C, Sean Ahearn tab, for further details.)

Exhibit II-8. With these elements, the computer is capable of generating a summary report (Exhibit II-9) as to the dynamic attributes of both the subject property clusters and comparable sales elements, a report that forms a significant component of Appendix A; the same comparable summary sheet can be produced for any specified cell or cluster of cells from the data base described previously.

The scores for each attribute are based on the 1-10 scale which is an ordinal ranking, and thus these scores do not in themselves permit comparison or combination of variables unless they are further defined in terms of a common denominator measurement, which was taken to be 100 percent in this case. Each score of 10 can then be recalibrated in terms of a percentage of the whole or certain attributes could receive more weight than others. Since the Forest Service RARE II system avoids any relative weighting per se, it was decided to be neutral for purposes of the appraisal even though scenic quality was the predominant benefit which visitors perceived, photographed, and enjoyed when hiking and camping. Therefore, as in Exhibit II-8, each of the four major elements of RARE II wilderness were weighted 25 percent. (See Executive Summary in Appendix D and the final survey questionnaire technique on "Slice-of-the-pie" test devised by the surveyors, Niemann-Chenoweth.) As they point out, beauty, which is a

EXHIBIT II-8

THE SCENIC QUALITY SYSTEM (SQS)**

(I) Physiography

- 1) Sharp dissected uneven slopes
- 2) Moderately dissected slopes
- 3) Irregular landscape
- 4) Ridged landscape
- 5) Peak

(II) Rockform

- 1) Avalanche chute (rock)
- 2) Avalanche chute (snow)
- 3) Talus slope or boulder field
- 4) Rock outcrop < 2 acres
- 5) Rock outcrop 2 - 5 acres
- 6) Rock outcrop 5+ acres
- 7) Cliff
- 8) Pinnacle
- 9) Cirque
- 10) Permanent snow field
- 11) Glacier
- 12) Rock dome

(III) Vegetation

- 1) Stocking 10 to 39%
- 2) Stocking 49 to 69%
- 3) Stocking 70%+
- 4) Large old growth timber
- 5) Dry meadow
- 6) Wet meadow

(IV) Waterform

- 1) Unusual shoreline configuration (Lakes)
- 2) Falls
- 3) Rapids
- 4) Meander

**These factors reflect elements of diversity revealed by VEP study (Appendix D) to be prominent in scenic quality ratings of people who make the effort to enter the area on foot and selected for the fact that data could be gathered from air photos. Each data point implies smaller subsystems, such as flowers in the dry meadow, color patterns in rock outcrops, or distant views which include a mountain peak. See Sean Ahearn tab in Appendix C.

EXHIBIT II-9

COMPARABLE SUMMARY SHEET

I. WILDERNESS (.25)

.25	1.	Natural Integrity (Apparent Naturalness)	x.xxx	x.xxx
-----	----	---------------------------------------------	-------	-------

II. SOLITUDE (.25)

.0625	1.	Distance to Perimeter	x.xxx	
.0625	2.	View FROM Cell (Rev.)	x.xxx	
.0625	3.	View TO Cell (Rev.)	x.xxx	
.0625	4.	Vegetation Screening	x.xxx	x.xxx

III. PRIMITIVE RECREATION EXPERIENCE (.25)

.083	1.	Challenge (Physical Feature)	x.xxx	
.083	2.	Diversity - % Slope	x.xxx	
.083	3.	Diversity - Terrain	x.xxx	x.xxx

IV. SCENIC QUALITY (.25)

.20	1.	Scenic Quality	x.xxx	
.05	2.	View from Cell	x.xxx	x.xxx

AVERAGE ATTRIBUTE SCORE PER CELL x.xxx

ADJUSTED PURCHASE PRICE xxx,xxx.

TOTAL CELLS IN COMP	xx.xx
TOTAL ACRES IN COMP	xx.xx
TOTAL ATTRIBUTE POINTS	xxx.xx

AVERAGE PRICE PER POINT PER CELL xxx.xx

AVERAGE PRICE PER ACRE PER CELL xxx.xx

dynamic attribute in terms of perception in the appraisal lexicon, actually consists of two components, the physical elements to be seen and the values of the perceiver. The data base provides the first element -- a representative set of elements and ecological sub-systems (such as the category "wet meadow") of what might be seen. The consumer research study in Appendix D provides insights into the perceiver's point of view with Visitor Employed Photography (VEP), survey research, and simple graphic responses to certain survey questions. It is precisely this link between physical fact and user benefit which was the subject under discussion in Section I in terms of the necessity of recognizing intangible values (aesthetics) in the presence of certain combinations of physical attributes. These intangible values combined in a matrix with conventional attributes may suggest that the best use is wilderness rather than more traditional forms of development. The opportunity costs of economic development may very well exceed the producer's surplus of pursuing traditional avenues of economic exploitation, thus negating apparent economic values for timber or mines or commercial recreation.

Environmental Attributes

Environmental attributes in terms of appraisal analysis is limited to off-site impacts which could be reasonably anticipated from economic development of the subject property. For the most part, the subject property is in a checkerboard relationship to lands primarily owned by the federal government. Indeed, logging operations would proceed on both federal and Pack River timberlands only as a result of considerable joint cooperation in development of a road under the existing agreement and cooperative selection of stands to be cut in order to strike an appropriate compromise between clear cutting for maximum return and selective cutting for conservation of slope stability, seeding stock, and some minimal degree of visual quality. Nevertheless, the Niemann-Chenoweth study suggested that a clear-cut or a major road were probably two of the more devastating man-made encroachments on the enjoyment of wilderness land, particularly the views from high mountain country, because the scars were visible from long distances. Therefore, analysis of alternative uses needs to consider the off-site damage to parcels having a view of said properties as well as off-site parcels impacted by the joint road program. These elements are provided from the data base developed by the VIEWIT program,

~~Pack River, Inc.~~

some results of which are displayed in Exhibit II-10 and for which additional information and operating detail are provided in Appendix C by William Gates.

In short, logging operations on Pack River land would do significant, if not directly measurable, damage to adjacent government lands where the Pack River property was in the view-shed, or the necessary road was on lands otherwise "untrammelled by man." The reverse of that same argument is that the acquisition of Pack River lands by the government would provide incremental value or plottage value to the government position since the view-shed which makes these lands attractive in valuable recreation would be protected. For example, if a particular acre of Pack River land is worth \$4,000 for timber but can be seen by ten other publicly owned acres, it is possible that logging could destroy \$400 worth of value for each parcel owned by the government. The result would be society had no net economic surplus at all, which is counter to the concept of highest and best use. It might be argued that if cutting the timber on 50 percent of the Pack River "acre" would ruin the wilderness quality for ten other government acres that the wilderness attribute which depended on the survival of all the trees was twice as valuable as the timber. The negative values associated with off-site costs must be internalized in the selection process of best use in Section III.

EXHIBIT 11-10a

MEAN SCORE OF TIMES SEEN FROM
PUBLIC VIEWING PLATFORMS

MAPPING PROGRAM INFORMATION

<u>LEVEL</u>	<u>SYMBOL</u>	
1.	'	EXAMPLE:
2.	.	A = 50
3.	!	B = 10
4.	/	Cell Value = 40
5.	=	
6.	*	1. 40 - 10 = 30
7.	I	2. 30/50 = .60
8.	%	3. .60 x 10 = 6
9.	W	4. 6 + 1 = 7
10.	#	5. 7 = "I"

SYMBOL DETERMINATION

1. User Input (scaling ranges)
A = Maximum Allowed Value
B = Minimum Allowed Value
2. Symbol = (((Cell Value - B)/A) x 10) + 1

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The image shows a grid of 51 rows and 7 columns of characters. The grid is divided into several large rectangular sections by red lines. The top-left section (rows 1-16, columns 1-4) and the top-right section (rows 1-16, columns 5-7) are shaded green. The middle section (rows 17-24, columns 1-4) is also shaded green. The bottom section (rows 25-51, columns 1-7) is shaded green, with a white rectangular area in the middle (rows 25-32, columns 5-7). The characters are a mix of symbols like '!', '=', '/', and 'X', arranged in a pattern that suggests a message or code. The characters are often repeated or used in sequences.

88-		!!	!!!	!!	!!!	!!
89-		!!!	!!!	!!!	!!!	!!!
90-		!!!	!!!	!!!	!!!	!!!
91-		!!!	!!!	!!!	!!!	!!!
92-		!!!	!!!	!!!	!!!	!!!
93-	!/=		!!..		!.1777.	!!' /!
94-			!!		.=///	.!!!!.
95-			!!		///	!!!!/!
96-			/		/=//	!==//..'
97-			/!		*=!.	// !!..'
98-			! !'		=II	/.!// ..
99-			!!!		*II*	/=!!!!..'
100-			..!		* /	*!!!!!!'
101-					===.	*II=X***/'
102-					*II!	ZXIXII+/'.
103-					IX/	ZIIXI*=/'!
104-					I!	Z*****='/'
105-					I	I= !! ///'..
106-						...!/=//!!!
107-						*==*****='//='!
108-						IIII***='//.../.
109-						I II***='///'..
110-						I***='//='..
111-						I*I*='//='..!
112-						I*! = /!.
113-						*!
114-						I='
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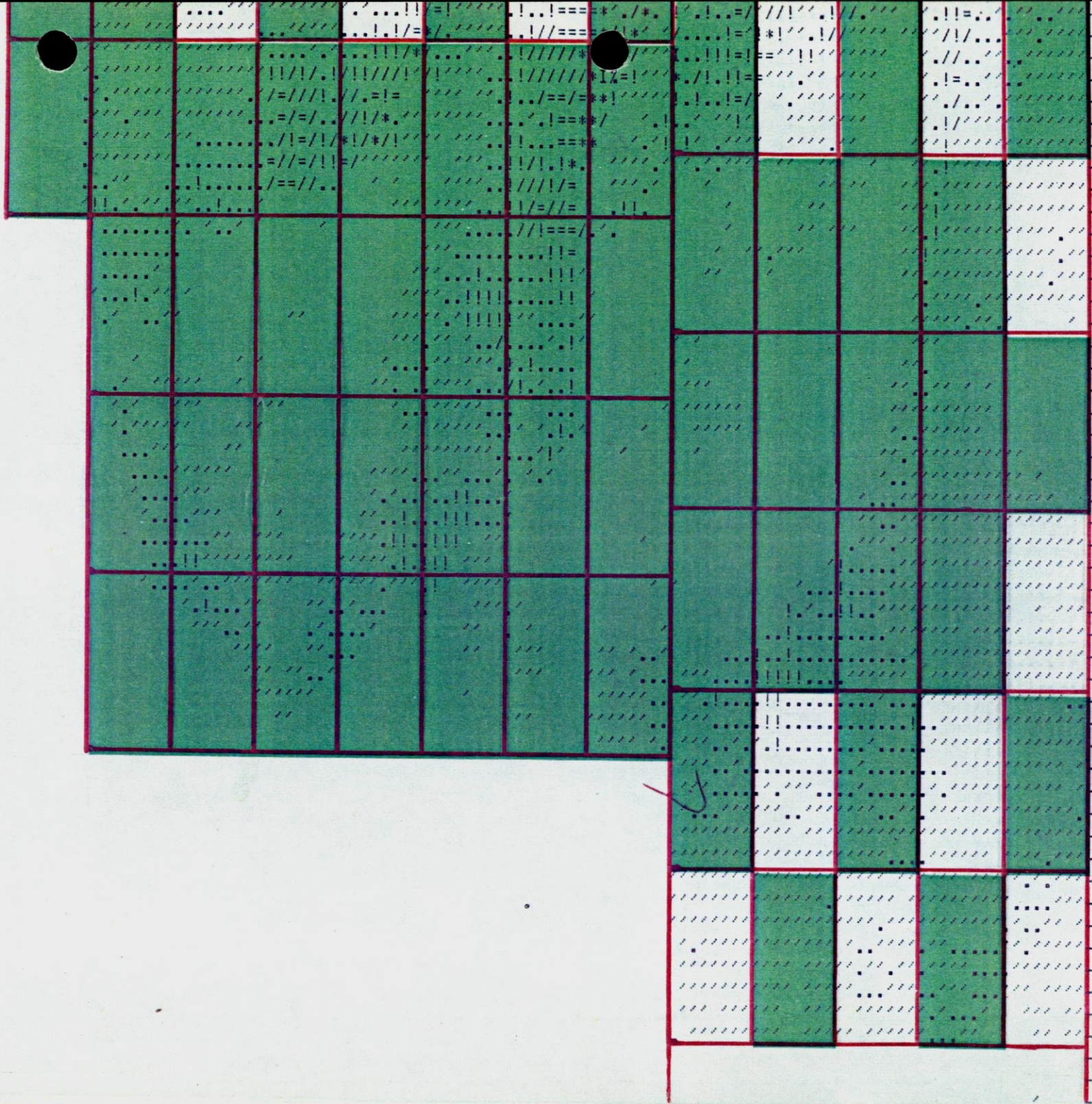
EXHIBIT 11-10b

MEAN SCORE OF TIMES SEEN FROM
PACK RIVER VIEWING PLATFORMS

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K. The Economic Context

The subject property to be sold is not only enmeshed in a physical environment which lends itself to a spatial data base, but is also existing in an economic environment which must have some impact on a pricing model. With a tentative date of appraisal of January 1, 1981, there is at least some time focus to economic trends, but it should be noted that appraisal presumes a reasonable period of time for disposal of the property. Logically this must be the period prior to the date of sale. Even though 1981 may evolve into a new economic climate due to tax laws which might depress charitable donations to buyers of wilderness, due to increasing demands for timber to support new capital investment, or due to an improved GNP, these variables are not relevant. Economic conditions extant during 1979 and 1980 would be the prevailing trends to be considered in a pricing model. These trends cannot be directly linked to any price model for wilderness land in Chelan County, for at least two reasons. (1) National economic theory has not been able to establish any valid coefficients that would link specific wilderness land prices to national economic movements, aside from the confusion introduced by the fact that local and regional economies may not be in synchronization with the national scene. Uses for the subject

property, such as recreation for hikers or even second home sites have little to do with prosperity levels nationally. (2) Timber pricing for purposes of wilderness acquisition under the ALMA ACT is specifically tied to whatever the best price was since the passage of the Act in disregard of any blight, natural disaster, or fire damage to the trees.

Thus, the only important national phenomena for the time period involved is the distortion on dollar values over time caused by inflation or devaluation of the currency. This force has been specifically recognized by adjusting all comparable sales prices by the Implicit Price Deflator for Gross National Product Indices, 1972 = 100 Base, which will be summarized in Section IV, Exhibit IV-3, and detailed in Appendix E.

More relevant to pressure on the subject site for recreation and timber is the status of the economy for the State of Washington. 1979 capped a three-year surge of growth for the State. The economic base underlying the State's brisk economic growth includes agriculture, food processing, and fishing, about 25 percent; aerospace, roughly 20 percent; manufacturing and mining, over 35 percent; and forest products just under 19 percent. Rates of growth and other relevant statistics are summarized in Exhibit II-11. By 1980, troubles in the housing industry were being felt in lumber production, as revealed in the lumber index in Exhibit II-12. Nevertheless,

EXHIBIT 11-11

WASHINGTON STATE EMPLOYMENT AND INCOME

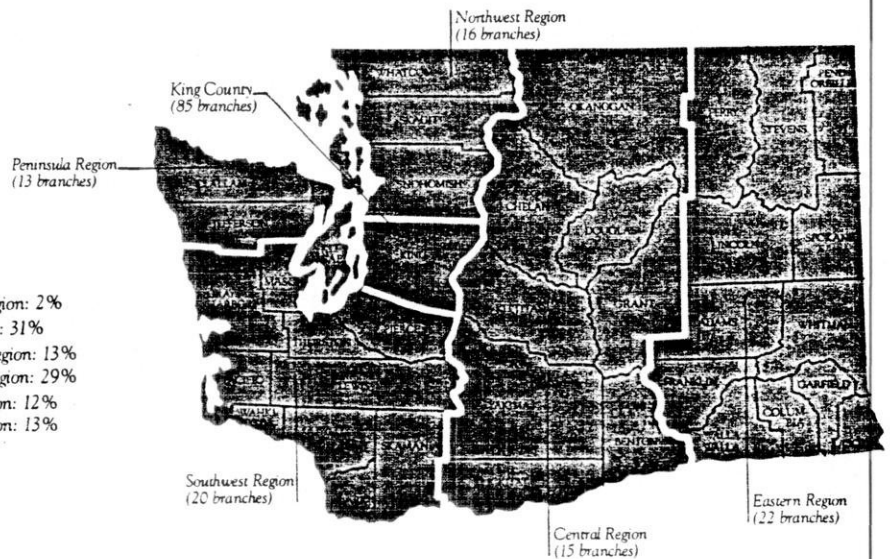
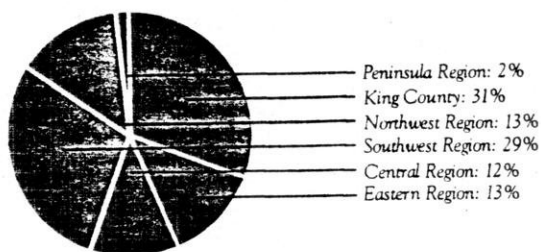
Washington State 1979	Level	Percent Change 79/78	5-Year Compound Growth Rate 79/74
Thousands of persons			
Population (April 1)	3,911.2	3.4	2.2
Total Employment (Avg.)	1,720.0	5.3	4.2
Non-farm payroll employment (Avg.)	1,605.4	7.3	6.0
Manufacturing	309.8	8.5	4.1
Nonmanufacturing	1,295.6	6.9	6.5
Millions of Dollars			
Personal Income (Total)	36,710	14.5	13.2
Constant dollars income *	16,882	3.0	4.8

*Deflated by U.S. Consumer Price Index

Source: Seafirst Corporation 1979 Annual Report, p. 5

Distribution Of Population

Washington, 1979, by SFNB
Administrative Regions
Percent of Total



Source: Seafirst Corporation 1979 Annual Report, p. 7

CONSTRUCTION AND HOUSING STATISTICS

	CURRENT			YEAR-TO-DATE	
	Latest Month Available	% Change From		Latest Period Available	% Change From
	Jan. '80	Dec. '79	Jan. '79	1 mo. '80	1 mo. '79
Value of all NEW CONSTRUCTION	(Millions of Dollars)				
Put in Place	16,244	-12.8	+16.0	16,244	+16.0
Private	12,883	-13.8	+15.2	12,883	+15.2
Residential	6,551	-10.7	+ 7.4	6,551	+ 7.4
Nonresidential & Other	6,332	-16.8	+24.5	6,332	+24.5
Public	3,362	- 8.7	+19.2	3,362	+19.2
	Feb. '80	Jan. '80	Feb. '79	2 mos. '80	2 mos. '79
NEW HOUSING UNITS STARTED	(Thousands of Units)				
Total Private & Public Starts	80.9	+10.1	- 4.5	154.4	-10.8
New Private Starts	80.2	+ 9.6	- 5.1	153.4	-11.2
Seasonally Adjusted Annual Rates	1,334	- 6.3	- 9.2		
One-Family Housing Starts	49.4	- 0.4	-16.7	99.0	-15.2
(Proportion of Total Starts)	61.1			64.1	
	Jan. '80	Dec. '79	Jan. '79	1 mo. '80	1 mo. '79
BUILDING PERMITS AUTHORIZED	(Millions of Dollars)				
All Private Construction	Data Not Available				
New Housing Units	Data Not Available				
New Nonresidential	Data Not Available				
Additions and alterations	Data Not Available				
	(Number of Units)				
Shipments of MOBILE HOMES	18,100	+24.0	- 5.7	18,100	- 5.7

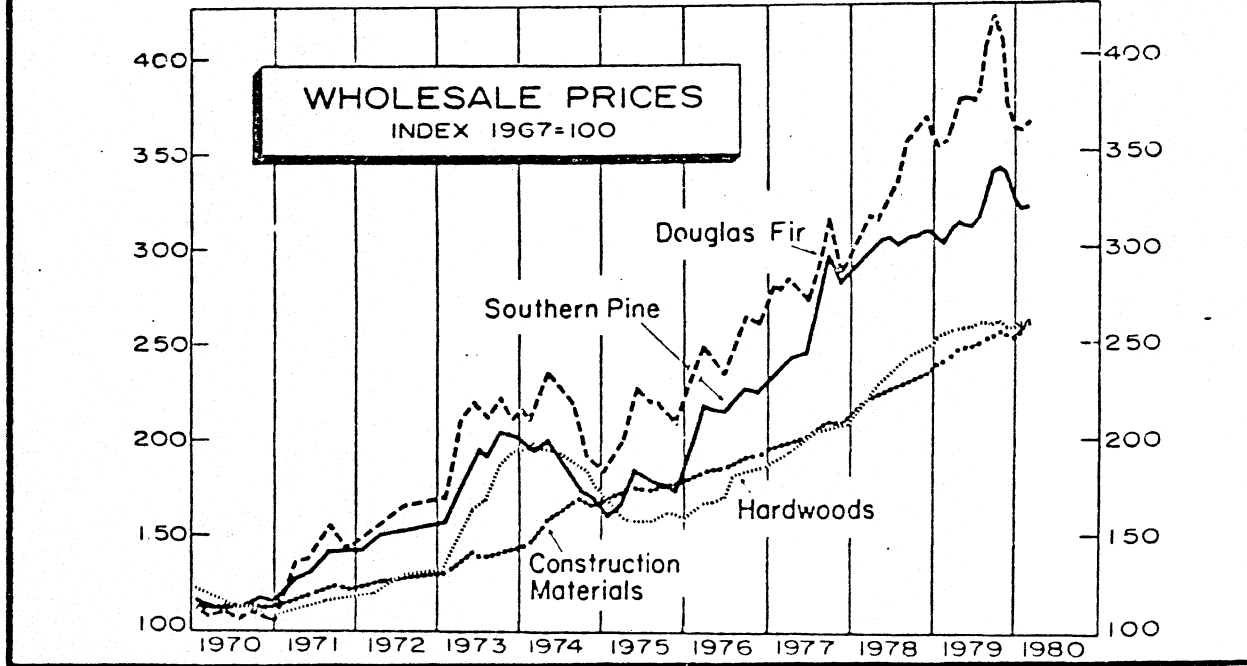


EXHIBIT 11-12 (Continued)

ECONOMIC INDICATORS

U. S. LUMBER CONSUMPTION	CURRENT			YEAR - TO - DATE	
	Latest Period Available	% Change From		Latest Period Available	% Change From
	QIV '79	QIII '79	QIV '78	12 mos. '79	12 mos. '78
	(Million Board Feet)				
Total	10,627	-12.5	-10.8	45,937	- 4.8
Softwoods	8,981	-13.4	-11.6	39,009	- 5.9
Hardwoods	1,646	- 7.1	- 6.1	6,928	+ 1.9

Total EMPLOYMENT - (Seasonally Adjusted)	Feb. '80	% Change From	
		Jan. '80	Feb. '79
	(Thousands of Employees)		
All Industries	90,731	+ 0.2	+ 2.3
All Manufacturing Industries	20,900	+ 0.1	- 0.6
Lumber and Wood Products	727	- 0.7	- 5.3
Furniture and Fixtures	480	- 0.8	- 3.2

WHOLESALE PRICES	Feb. '80	% Change From	
		Jan. '80	Feb. '79
	(Index - 1967 = 100)		
All Commodities	259.8	+ 2.0	+15.9
All Construction Materials	262.2	+ 1.2	+ 7.4
Lumber and Wood Products	294.8	+ 1.7	+ 0.3
All Lumber	341.5	+ 1.5	+ 0.5
Softwood Lumber	363.0	+ 2.1	+ 0.3
Douglas Fir Lumber	367.4	+ 1.1	+ 2.0
Southern Pine Lumber	322.2	+ 0.1	+ 5.2
Other Softwood Lumber	374.9	+ 3.6	- 2.6
Hardwood Lumber	259.9	- 0.5	+ 1.0
Millwork	258.0	+ 1.5	+ 2.6
Softwood Plywood	300.8	+ 4.2	-11.5
Hardwood Plywood	174.8	0.0	+ 9.1
Wood Household Furniture	213.2	+ 1.1	+11.5
Pulp, Paper and Allied Products	238.9	+ 0.6	+14.4
Steel Mill Products	294.2	+ 0.2	+ 8.2
Aluminum Shapes	257.0	0.0	+ 5.9
Concrete Products	266.2	+ 0.5	+12.6
Structural Clay Products	231.1	+ 0.7	+ 9.7

Economic data on the state of the Lumber and Wood Products Industry is compiled by MacKay-Shields Economics, a division of MacKay-Shields Financial Corporation and issued monthly by:

NATIONAL FOREST PRODUCTS ASSOCIATION
 1619 Massachusetts Avenue, N.W.
 Washington, D. C. 20036

buyers of large timber tracts realize it would take five to ten years to extract the marketable timber on parcels of the size and terrain of the subject property; such buyers are not only concerned with sustaining timber related enterprises in the near term but with long-term, world-wide commodity pricing which has continually outperformed inflation and inflation-adjusted growth rates in the last decade. Therefore, even timber prices suitable for long-term operation have only a dampened response to topical upsets in the home-building industry within the United States. Logs from privately owned resources are eligible for the lucrative export market while logs cut on federal lands are not.

The subject property is also the beneficiary of the increasing population in the Seattle/Tacoma/Bellingham Corridor, people who would tend to look eastward for skiing and recreational hiking and camping along Routes 2 and 90. In short, the State of Washington enjoyed prosperity somewhat better than that of a nation as a whole and that is reflected with increasing utilization of the Snoqualmie and Wenatchee Forest areas. Consider Exhibit II-13 which reports visitor days by fiscal year for 1979 and the use of national forest units within the National Wilderness Preservation System. The Alpine Lakes area in the State of Washington had more visitor days than any other Western forest area, with the exception of

EXHIBIT 11-13

USE OF NATIONAL FOREST UNITS
 NATIONAL WILDERNESS PRESERVATION SYSTEM
 FISCAL YEAR 1979
 (10/1/78 - 9/30/79)

<u>Wilderness</u>	<u>Visitor-Days</u>	<u>Primitive</u> ¹	<u>Visitor-Days</u>
<u>CALIFORNIA</u>			
Aqua Tibia	3,700		
Caribou	11,900		
Cucamonga	24,000		
Desolation	307,200		
Dome Land	12,500		
Emigrant	209,200		
Golden Trout	72,700		
Hoover	67,400		
John Muir	827,400		
Kaiser	24,400		
Marble Mountain	89,400		
Minarets	192,700		
Mokelumne	36,800		
Santa Lucia ²	-0-		
San Gabriel	73,500		
San Gorgonio	260,100		
San Jacinto	116,900		
San Rafael	42,500		
South Warner	14,300		
Thousand Lakes	12,100		
Yolla Bolly-Middle Eel	42,100	High Sierra	1,200
Ventana	66,300	Salmon Trinity Alps	<u>122,700</u>
Subtotal	2,507,100	Subtotal	123,900
<u>COLORADO</u>			
Eagle Nest	70,100		
Flat Tops	111,200		
Hunter-Fryingpan	16,600		
Indian Peaks	299,700	Uncompahgre	54,600
La Garita	25,400	Wilson Mountains	<u>19,200</u>
Maroon Bells Snowmass	118,000		
Mt. Zirkel	26,400		
Rawah	22,600		
Weminuche	314,700		
West Elk	27,300		
Subtotal	1,032,000	Subtotal	73,800
<u>IDAHO</u>			
Gospel Hump ³	29,200	Idaho	179,400
Hells Canyon ³	22,900	Salmon River Breaks	<u>38,500</u>
Sawtooth	63,100		
Selway-Bitterroot ⁴	<u>130,400</u>		
Subtotal	245,600	Subtotal	217,900

EXHIBIT 11-13 (Continued)

MONTANA

Absaroka-Beartooth	270,600		
Anaconda-Pintlar	42,300	Spanish Peaks	<u>15,900</u>
Bob Marshall	156,200		
Cabinet Mountains	29,300		
Gates of the Mountains	3,600		
Great Bear	22,100		
Mission Mountains	19,300		
Scapegoat	36,300		
Selway-Bitterroot ⁴	71,600		
Welcome Creek	<u>1,600</u>		
Subtotal	652,900	Subtotal	15,900

NEW MEXICO

Chama River Canyon	2,400	Black Range	9,300
Gila	140,500	Blue Range ⁵	1,500
Manzano Mountain	11,100	Gila	21,400
Pecos	143,600		
Sandia Mountain	34,200		
San Pedro Parks	55,000		
Wheeler Peak	11,500		
White Mountain	<u>31,200</u>		
Subtotal	429,500	Subtotal	32,200

WASHINGTON

Glacier Peak	106,300
Goat Rocks	65,500
Alpine Lakes	311,200
Mount Adams	50,200
Pasayten	51,500
Wenaha-Tucannon ⁶	<u>47,300</u>
Subtotal	632,000

WYOMING

Bridger	518,500	Cloud Peak	73,600
North Absaroka	40,800	Glacier	5,200
Savage Run	2,000	Popo Agie	<u>34,900</u>
Teton	46,600		
Washakie	56,900		
Fitzpatrick	<u>41,800</u>		
Subtotal	706,600	Subtotal	113,700

TOTAL - ALL STATES 6,205,700

TOTAL - ALL STATES 577,400

EXHIBIT 11-13 (Continued)

FOOTNOTES:

- ¹ Actually not yet within Wilderness System
- ² Use not reported pending boundary location in reporting system.
- ³ Hells Canyon located in Oregon & Idaho - total area use 40,100
- ⁴ Selway-Bitterroot located in Idaho and Montana - total area use 202,000
- ⁵ Blue Range located in Arizona and New Mexico - total area use 34,300
- ⁶ Wenaha-Tucannon located in Oregon and Washington - total area use 71,100

Bridger National Park in Wyoming and the John Muir Park outside of San Francisco and Weminuche in Colorado. Indeed, it accounted for virtually 5 percent of the visitor days reported for these seven Western States (311,200/6,205,700). Percent of household trips taken for outdoor recreation within the U.S. in 1977, placed Washington third only to Colorado and New Mexico where skiing plays such a dominant role in the winter lifestyle of the tourist (Exhibit II-14).

The Chelan County economic base has little real relevance to the pricing model of the wilderness tracts in question, although its subdivision ordinance will be shown to have some impact on recreational land development possibilities in the discussions of alternative uses.

In general, the appraiser has no credentials for making national economic forecasts. Instead he must simply identify the general economic environment within which any transaction would be negotiated. For purposes of this appraisal: IT IS ASSUMED THAT THE STATE OF WASHINGTON IN 1979 AND 1980 WAS PROSPEROUS, IN A GROWTH CYCLE, AND ITS RESIDENTS PUSHING INTO FURTHER EXPLOITATION OF RECREATIONAL RESOURCES IN THE CASCADE MOUNTAINS AT AN ACCELERATING RATE. IT IS ASSUMED FURTHER THAT EXPORT CONDITIONS FAVORED THE NEAR-TERM PROSPECTS FOR TIMBER PRICES AND THAT THE LONGER TERM INFLATION PROSPECTS WOULD CONTINUE TO PUSH INVESTORS TOWARD BIGGER INVESTMENTS IN NATURAL

EXHIBIT 11-14

1977 TRANSPORTATION CENSUS
 TRIPS TAKEN FOR OUTDOOR RECREATION
 WITHIN THE U.S. IN 1977

<u>State Where Travel Took Place</u>	<u>Household Trips</u>	<u>Person Trips</u>	<u>% of Total HH Trips in 7 States</u>	<u>% of Total Person Trips</u>
Idaho	423	950	8.88	10.35
Nevada	724	1,261	15.19	13.74
Washington	738	1,341	15.48	14.62
Wyoming	446	924	9.36	10.07
Colorado	1,273	2,365	26.71	25.78
Montana	351	667	7.36	7.27
New Mexico	<u>811</u>	<u>1,667</u>	<u>17.02</u>	<u>18.17</u>
Total	4,766	9,175	100.00	100.00

Source: 1977 Transportation Census, U.S. Bureau of the Census, Dept. of
 Commerce, Washington, D.C.

RESOURCES SUCH AS TIMBER AND EVEN SMALL SCALE HYDRO-ELECTRIC POTENTIAL. THESE TRENDS, WHICH WOULD INEVITABLY LEAD TO SERIOUS ENCROACHMENTS ON THE REMAINING WILDERNESS AREAS IN PRIVATE OWNERSHIP IN THE EASTERN CASCADES, COULD ALSO BE EXPECTED TO GENERATE A SIGNIFICANT COUNTER THRUST BY PRESERVATIONISTS WHO WOULD COMPETE FOR THE PURCHASE OF PRIME WILDERNESS TRACTS. THERE IS NO REASON TO BELIEVE THAT IN 1979/80 THAT SUCH GROUPS ANTICIPATED ANY REDUCTION OF CASH SUPPORT FROM THEIR MEMBERSHIPS OR IN LONGER TERM BAILOUTS OF THEIR TEMPORARY COMMITMENTS BY STATE AND FEDERAL GOVERNMENT ACQUISITION PROGRAMS. It seems unnecessary to smother the reader with additional economic statistics, but additional data has been placed in Appendix F, that bears on this general statement of economic conditions, which may influence pricing of the physical attributes of the subject property and others like it.

L. Conclusion

The combination of thousands of acres and dozens of attributes is overwhelming to the reader, and the value of such a data base is not best comprehended until the data itself is organized into subsets related to possible alternative uses from which a best use determination can be made. The reader is advised to move through the entire process at the summary level represented by this appraisal report to maintain an overview while assimilating the overall logic and thrust of argument. After the first reading, it would be most appropriate to search


into the detail of the Appendices. To do otherwise may create a second wilderness of information in which to wander without shedding any light on the wilderness valuation at hand.

PICTURES AND MAPS

This portion of the appraisal contains U.S. Geological Survey Quadrangle Maps covering the subject properties, computer output "Comp Summary Sheets" for each section of land, and photographs of each section of land. Everything is in Appraisal Cluster order (as defined in Section I, page 28), with Cluster I being first, Cluster II second, and so on. (See Exhibit 6 in Section I for a map showing the Appraisal Clusters.)

It should be noted that Robbins' "Comp Summary Sheets", each of which precedes any picture or pictures relating to that particular section of land, have the section's numerical coordinates (See Exhibit II-1) at the top. However, instead of having them in X-Y order, each "Comp Summary Sheet" has the Y, or vertical axis, coordinate first and the X, or horizontal axis, coordinate second. This was done to facilitate looking at the properties from the upper left (or Northwest) corner of the map, with North being at the top, and then moving from left to right (or West to East), just as you are reading this page. This Y-X sequencing provided for the logical left to right, top to bottom, orientation.

The section numbers under the pictures themselves also follow this Y-X coordinate ordering. The letter and number

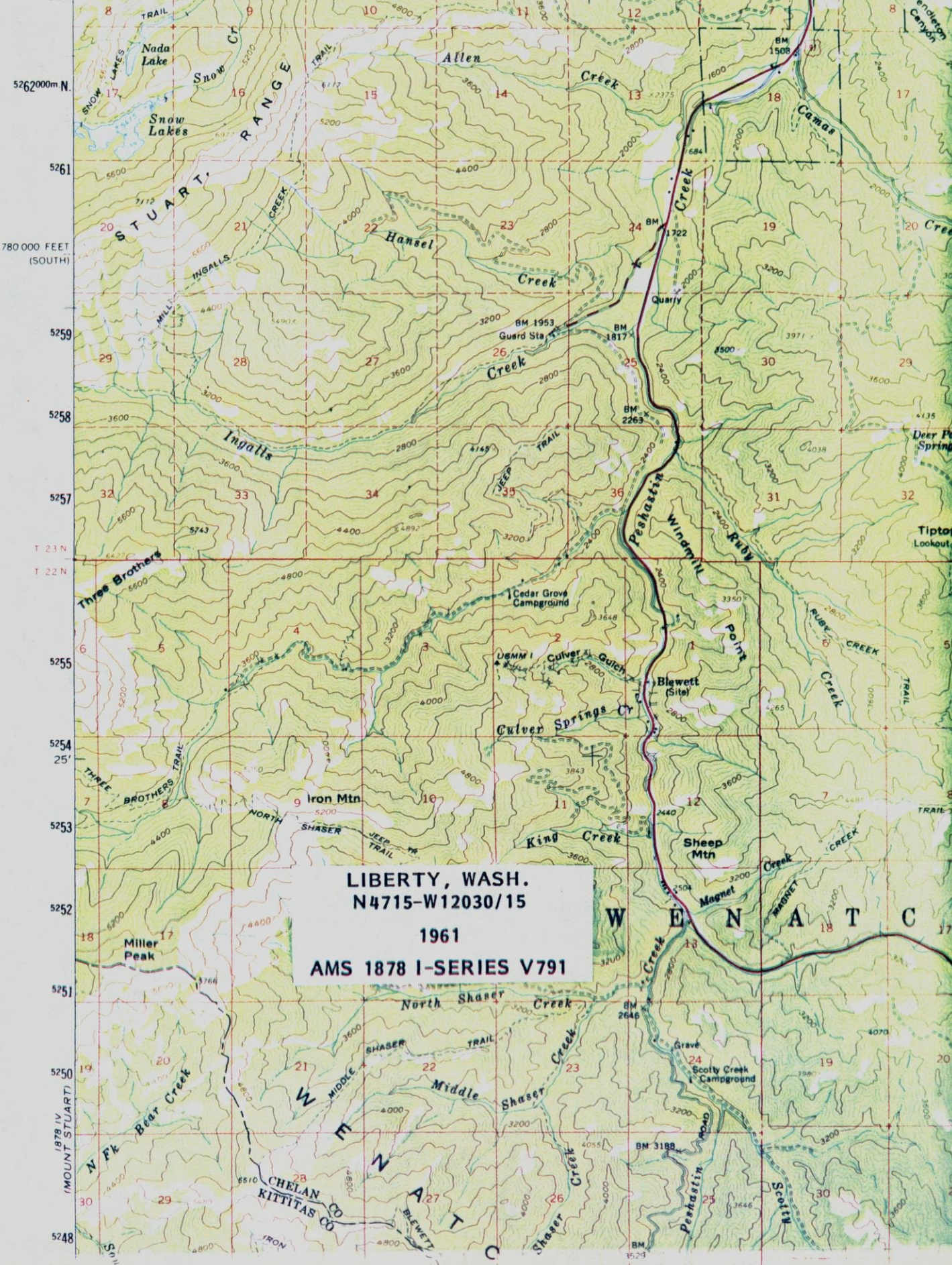


within parentheses refers to another method of identifying each section used by Kiefer. Kiefer's coding system is further explained in Appendix B.

1879 II (CHWALKUM)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

120° 45' 47' 30" 671000m E. 672 1950 000 FEET (SOUTH) R 17 E 40' WENATCHEE 24 MI. CASHMERE 11 MI. 1879 II (LEAVENWORTH)

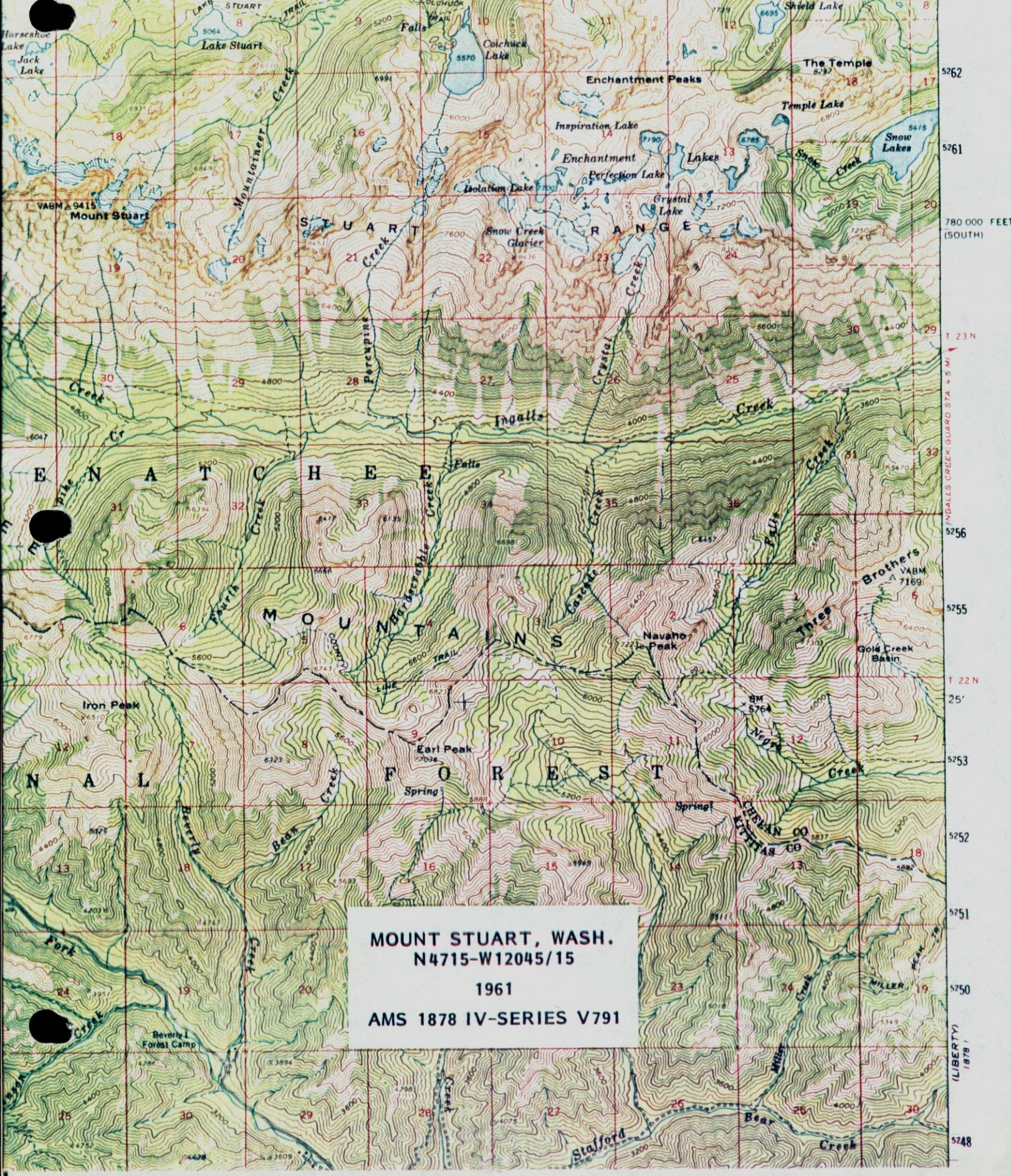


LIBERTY, WASH.
N4715-W12030/15
1961
AMS 1878 I-SERIES V791

MOUNT STUART QUADRANGLE
WASHINGTON
15 MINUTE SERIES (TOPOGRAPHIC)

1879
LEAVENWORTH

1879 III (CHIWAUKUM MTS.) 661 EIGHTMILE FORKS CAMP 4.3 MI 50' 664 665 1 930 000 FEET (SOUTH) R 16 E R 17 E 668 120° 45' 47° 30'



MOUNT STUART, WASH.
N4715-W12045/15
1961
AMS 1878 IV-SERIES V791

(LIBERTY)
1878

SUBJECT SUMMARY SHEET FOR - 21

10

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.4609

II. SOLITUDE

1. DISTANCE TO PERIMETER .315
2. VIEW FROM CELL .504518
3. VIEW TO CELL .425669
4. VEGETATION SCREENING .388206

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .465227
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .296946
3. DIVERSITY - TERRAIN .178741

IV. SCENIC QUALITY --- 1.19531

1. VIEW FROM CELL .107707

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 399.239

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.33823

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

21-10 = 1.19531



Section 21 10 (G29): Looking West - Ingalls Creek



Section 21 10 (G29): Looking North at South Face of Slope

SUBJECT SUMMARY SHEET FOR - 21

12

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.52685

II. SOLITUDE

1. DISTANCE TO PERIMETER .00525
2. VIEW FROM CELL .609743
3. VIEW TO CELL .569369
4. VEGETATION SCREENING .29312

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .38817
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .349399
3. DIVERSITY - TERRAIN .258896

IV. SCENIC QUALITY --- .803255

1. VIEW FROM CELL .245451E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 343.378

TOTAL CELLS IN SECT. 60

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.8286

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

21-12 = .803255



Section 21 12 (G27): Looking East Down Ingalls Creek

SUBJECT SUMMARY SHEET FOR - 22

9

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.50628

II. SOLITUDE

1. DISTANCE TO PERIMETER .820312E-4
2. VIEW FROM CELL .480944
3. VIEW TO CELL .516834
4. VEGETATION SCREENING .250674

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .453487
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .360803
3. DIVERSITY - TERRAIN .228405

IV. SCENIC QUALITY --- .978176

1. VIEW FROM CELL .126243

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 371.895

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.90193

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

22-9 = .978176



Section 22 9 (G31): Looking South Up Falls Creek

SUBJECT SUMMARY SHEET FOR - 22

11

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.51924

II. SOLITUDE

1. DISTANCE TO PERIMETER .128174E-5
2. VIEW FROM CELL .408352
3. VIEW TO CELL .512764
4. VEGETATION SCREENING .443932

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .253492
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .32856
3. DIVERSITY - TERRAIN .278506

IV. SCENIC QUALITY --- .874659

1. VIEW FROM CELL .183848

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 365.513

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.80335

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

22-11 = .874659



Section 22 11 (G33): Looking South at Northeast Slope



Section 22 11 (G33): Looking South Up Ravine on East Side of Section

SUBJECT SUMMARY SHEET FOR - 22

13

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.67995

II. SOLITUDE

1. DISTANCE TO PERIMETER .915527E-7
2. VIEW FROM CELL .572318
3. VIEW TO CELL .449276
4. VEGETATION SCREENING .66171

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .181066E-1
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .39104
3. DIVERSITY - TERRAIN .198933E-1

IV. SCENIC QUALITY --- .262476

1. VIEW FROM CELL .820605E-1

ADJUSTED PURCHASE PRICE xx,xxx.

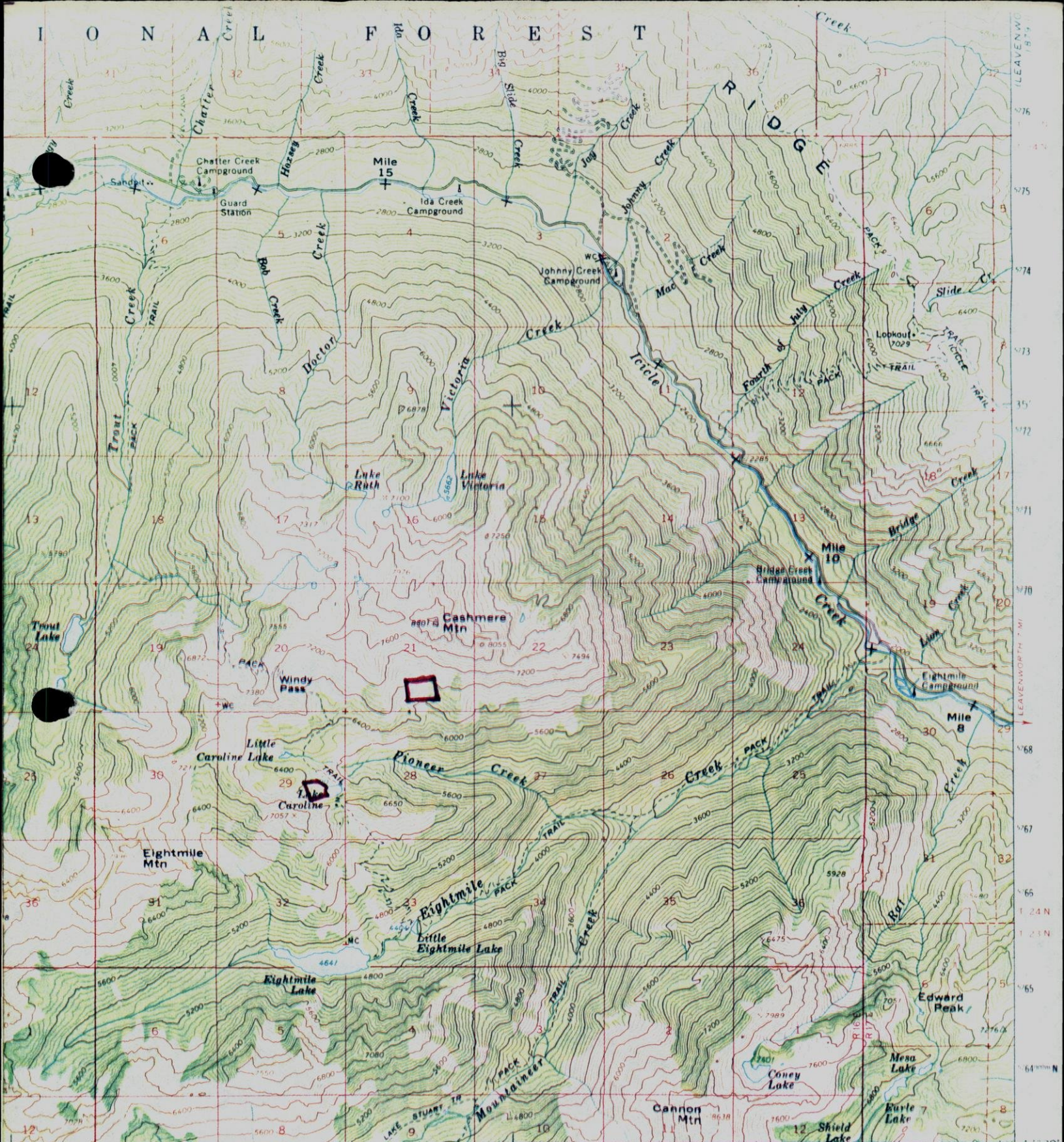
TOTAL POINTS 66.1122

TOTAL CELLS IN SECT. 14

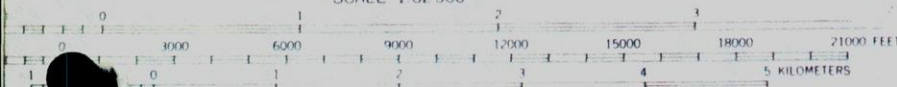
AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.13683

I O N A L F O R E S T



59 (MOUNT STUART)
1878 IV
SCALE 1:62,500



CONTOUR INTERVAL 80 FEET
DATUM IS MEAN SEA LEVEL



ROAD CLASSIFICATION

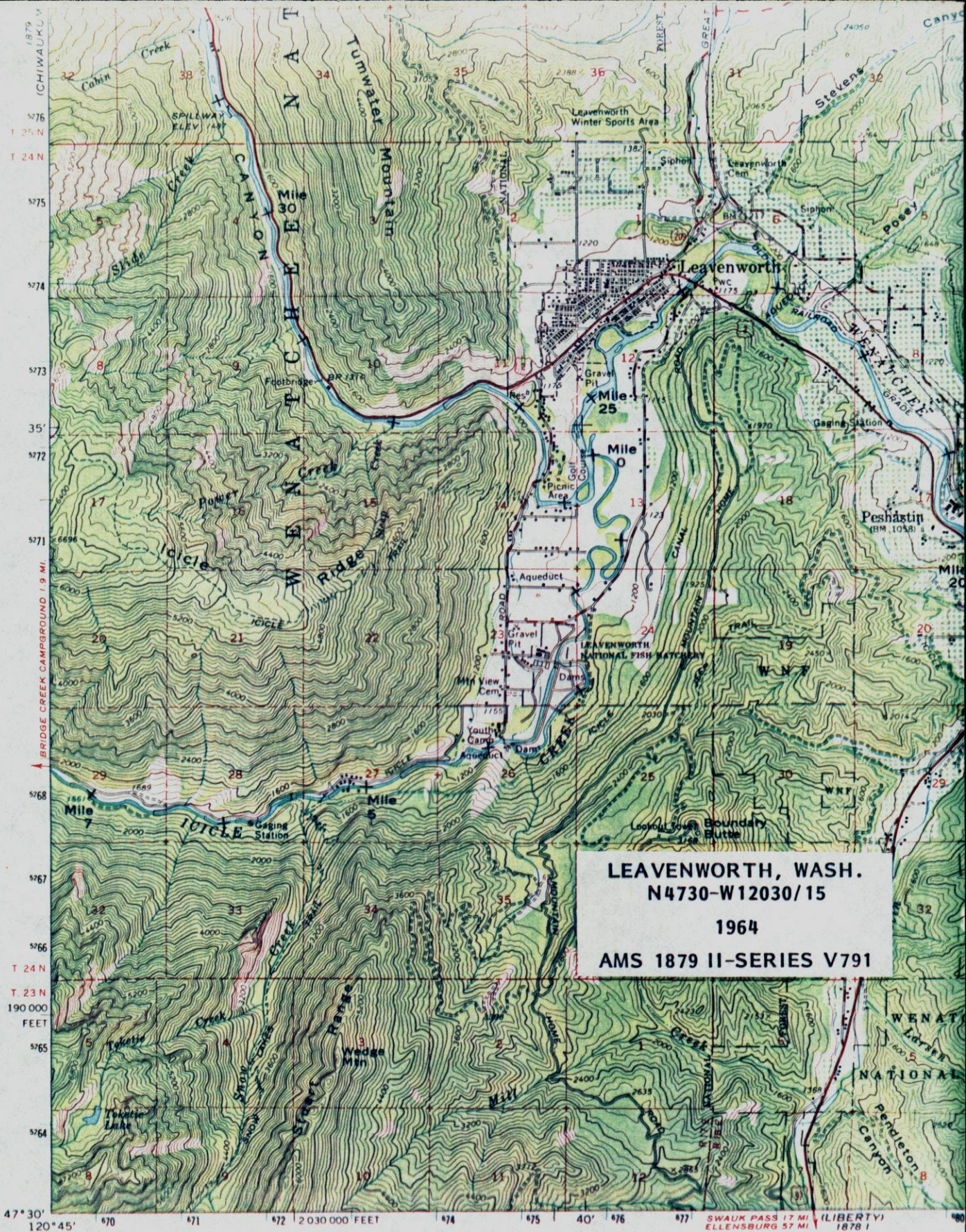
Light duty ——— Unimproved dirt

CHIWAUKUM MTS., WASH.
N4730—W12045/15

1965

AMS 1879 III—SERIES V791

SALE BY U S GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D C 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



LEAVENWORTH, WASH.
N4730-W12030/15
1964
AMS 1879 II-SERIES V791

47° 30' 120° 45'

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

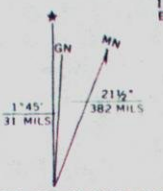
Topography by photogrammetric methods from aerial photographs taken 1963. Field checked 1964

Polyconic projection. 1927 North American datum

10,000-foot grid based on Washington coordinate system, north zone

1000 meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

1878 IV
 (MT STUART)



UTM GRID AND 1964 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



SCALE 1:62,500

CONTOUR INTERVAL 80 FEET
 DOTTED LINES REPRESENT 40 FOOT CONTOUR
 DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 802
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS

SUBJECT SUMMARY SHEET FOR - 16

11

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.54405

II. SOLITUDE

1. DISTANCE TO PERIMETER .391928E-3
2. VIEW FROM CELL .621923
3. VIEW TO CELL .496256
4. VEGETATION SCREENING .365278

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .43663
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .258435
3. DIVERSITY - TERRAIN .216006

IV. SCENIC QUALITY --- .910431

1. VIEW FROM CELL .252421E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 153.591

TOTAL CELLS IN SECT. 27

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.87464

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

16-11 = .910431



Section 16 11 (F33): Looking West



Section 16 11 (F33): Looking West, Close-up of Rock Outcrop



Section 16 11 (F33): Looking Northeast

SUBJECT SUMMARY SHEET FOR - 17

10

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS)

2.53975

II. SOLITUDE

1. DISTANCE TO PERIMETER
2. VIEW FROM CELL
3. VIEW TO CELL
4. VEGETATION SCREENING

.612387E-5
.622589
.527209
.225223

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE
3. DIVERSITY - TERRAIN

.577448
.433304
.284797

IV. SCENIC QUALITY --- .995476

1. VIEW FROM CELL

.139882E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 392.192

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.21979

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

17-10 = .995476



Section 17 10 (G5): Looking North Up Icicle Creek



Section 17 10 (G5): Looking South to Peak 7276



Section 17 10 (G5): Looking West, Close-up of Section

SUBJECT SUMMARY SHEET FOR - 17

12

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.59768

II. SOLITUDE

1. DISTANCE TO PERIMETER .235534E-6
2. VIEW FROM CELL .606454
3. VIEW TO CELL .32922
4. VEGETATION SCREENING .149201

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .724517
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .578512
3. DIVERSITY - TERRAIN .483415

IV. SCENIC QUALITY --- .899826

1. VIEW FROM CELL .382303E-1

ADJUSTED PURCHASE PRICE xx,xxx.

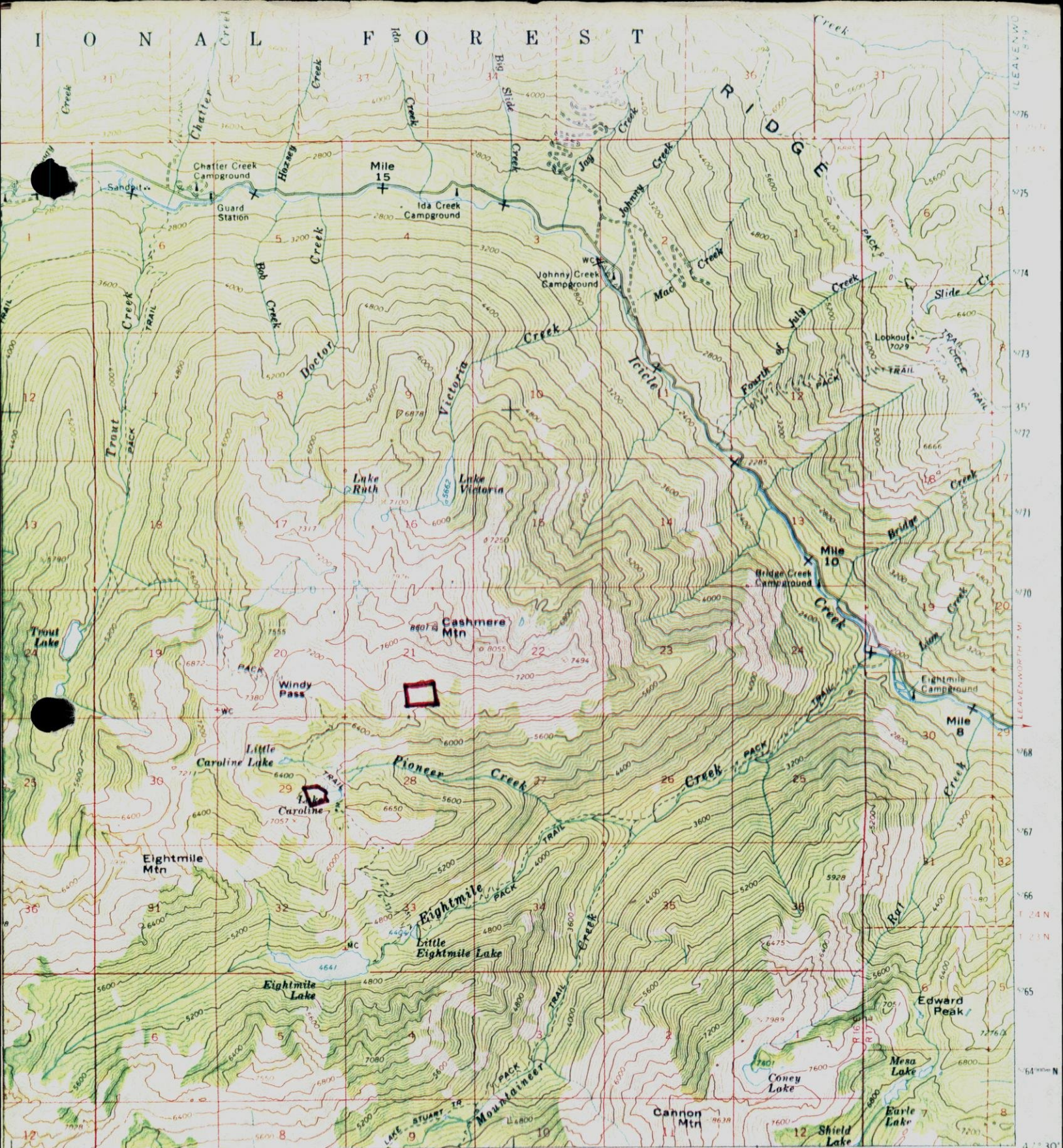
TOTAL POINTS 160.364

TOTAL CELLS IN SECT. 26

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

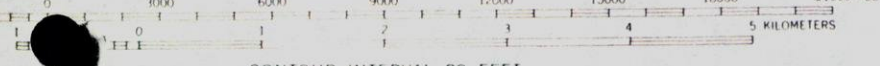
AVERAGE SCORE PER CELL = 6.40706

IONA L F O R E S T



55' R 15 E R 16 E 659 (MOUNT STUART) 1878 IV 661 662 663 50' 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

SCALE 1:62,500



CONTOUR INTERVAL 80 FEET
DATUM IS MEAN SEA LEVEL



ROAD CLASSIFICATION
Light duty ——— Unimproved dirt - - - - -

CHIAUKUM MTS., WASH.
N4730—W12045/15

1965

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SUBJECT SUMMARY SHEET FOR - 13

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.52719

II. SOLITUDE

1. DISTANCE TO PERIMETER .39227E-15
2. VIEW FROM CELL .630767
3. VIEW TO CELL .5059
4. VEGETATION SCREENING .114737

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .513774
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .32775
3. DIVERSITY - TERRAIN .199654

IV. SCENIC QUALITY --- 1.00183

1. VIEW FROM CELL .777051E-2

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 366.822

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.82937

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

13-4 = 1.00183



Section 13 4 (E17): Looking Northwest from the Lake
in the Southeast $\frac{1}{4}$ of Section



Section 13 4 (E17): Southeast Corner of Section 13 4 (E17)
Looking at Northwest Corner of Section 14 5 (E21)



Section 13 4 (E17): Northern Part of Section

SUBJECT SUMMARY SHEET FOR - 14

3

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.51957

II. SOLITUDE

1. DISTANCE TO PERIMETER .315
2. VIEW FROM CELL .536792
3. VIEW TO CELL .525587
4. VEGETATION SCREENING .378808

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .118262
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .233371
3. DIVERSITY - TERRAIN .101682

IV. SCENIC QUALITY --- .525029

1. VIEW FROM CELL .819183E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 335.676

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.33602

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

14-3 = .525029



Section 14 3 (E19): Looking West at the North Slope



Section 14 3 (E19): Close-up, Ground Photo



Section 14 3 (E19): Looking East at West Slope of Section

SUBJECT SUMMARY SHEET FOR - 14

5

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53999

II. SOLITUDE

1. DISTANCE TO PERIMETER .005
2. VIEW FROM CELL .60432
3. VIEW TO CELL .503442
4. VEGETATION SCREENING .750128E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .430052
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .313308
3. DIVERSITY - TERRAIN .183423

IV. SCENIC QUALITY --- .868651

1. VIEW FROM CELL .284431E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 344.418

TOTAL CELLS IN SECT. 63

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.55165

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

14-5 = .868651



Section 14 5 (E21): Back Side of Mount Cashmere
Looking Southwest



Section 14 5 (E21): Looking North at Mount Cashmere



Section 14 5 (E21): West Ridge of Mount Cashmere Looking North

SUBJECT SUMMARY SHEET FOR - 15

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS)

2.4932

II. SOLITUDE

1. DISTANCE TO PERIMETER
2. VIEW FROM CELL
3. VIEW TO CELL
4. VEGETATION SCREENING

.315078
.521416
.520135
.171469

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE
3. DIVERSITY - TERRAIN

.324454
.224067
.126069

IV. SCENIC QUALITY --- .835448

1. VIEW FROM CELL

.941163E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 354.478

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.62546

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

15-4 = .835448



Section 15 4 (E29): From Peak 7057 to
Mount Stuart and The Enchantments



Section 15 4 (E29): Looking at Eightmile Mountain
in Section 16 3 (E31) from Peak 7057 in Section 15 4 (E29)



Section 15 4 (E29): Looking Southwest at
Lake Caroline and Peak 7057

SUBJECT SUMMARY SHEET FOR - 16

3

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53896

II. SOLITUDE

1. DISTANCE TO PERIMETER .634923
2. VIEW FROM CELL .523763
3. VIEW TO CELL .551896
4. VEGETATION SCREENING .538667E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .595148
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .42758
3. DIVERSITY - TERRAIN .16797

IV. SCENIC QUALITY --- .897429

1. VIEW FROM CELL .922518E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 409.337

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.48378

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

16-3 = .897429



Section 16 3 (E31): Looking Southwest
at Eightmile Mountain



Section 16 3 (E31): Looking Southwest
from Eightmile Mountain Peak



Section 16 3 (E31): Looking Northeast from North Ridge

SUBJECT SUMMARY SHEET FOR - 16

5

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.4644

II. SOLITUDE

1. DISTANCE TO PERIMETER .105821E-1
2. VIEW FROM CELL .47493
3. VIEW TO CELL .502803
4. VEGETATION SCREENING .412498

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .169002
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .254743
3. DIVERSITY - TERRAIN .221662E-1

IV. SCENIC QUALITY --- .581624

1. VIEW FROM CELL .131538

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 294.973

TOTAL CELLS IN SECT. 60

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.02429



LEAVENWORTH, WASH.
 N4730-W12030/15
 1964
 AMS 1879 II-SERIES V791

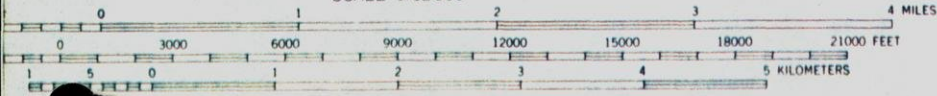
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SCALE 1:62500



CONTOUR INTERVAL 80 FEET
 DOTTED LINES REPRESENT 40 FOOT CONTOURS
 DATUM IS MEAN SEA LEVEL



ROAD CLASSIFICATION
 Heavy duty ——— Light duty ———
 Medium duty - - - - - Unimproved dirt - - - - -
 U.S. Route (red box) State Route (red circle)

WENATCHEE LAKE, WASH.
 N4745—W12045/15

1965

AMS 1879 IV—SERIES V791

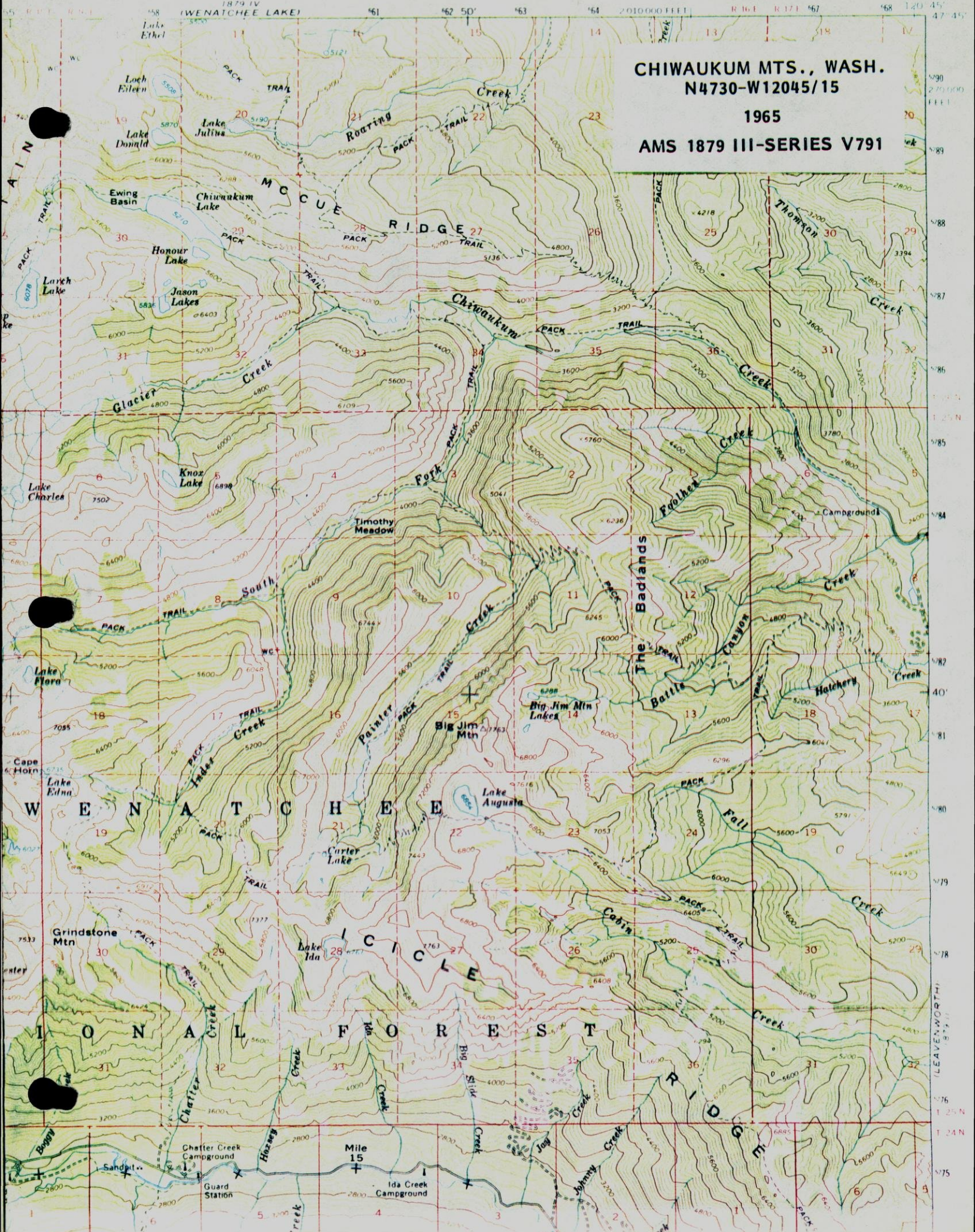
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 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

1879 IV
(WENATCHEE LAKE)

CHIWAUKUM MTS., WASH.
N4730-W12045/15

1965

AMS 1879 III-SERIES V791



SUBJECT SUMMARY SHEET FOR - 1

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.5

II. SOLITUDE

1. DISTANCE TO PERIMETER 0
2. VIEW FROM CELL .622125
3. VIEW TO CELL .600863
4. VEGETATION SCREENING .39375

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .155625
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .155625
3. DIVERSITY - TERRAIN .18675

IV. SCENIC QUALITY --- .8

1. VIEW FROM CELL .00625

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 43.3679

TOTAL CELLS IN SECT. 8

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.42099

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

1-4 = .80



Section 1 4 (A17): Looking North - Lake Ethel

SUBJECT SUMMARY SHEET FOR - 2

3

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53906

II. SOLITUDE

1. DISTANCE TO PERIMETER .315
2. VIEW FROM CELL .521005
3. VIEW TO CELL .557488
4. VEGETATION SCREENING .750586E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .482276
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .234572
3. DIVERSITY - TERRAIN .211715

IV. SCENIC QUALITY --- 1.13125

1. VIEW FROM CELL .943164E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 388.931

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx,xx

AVERAGE SCORE PER CELL = 6.16174

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

2-3 = 1.13125



Section 2 3 (A19): Loch Eileen Looking North



Section 2 3 (A19): Southwest Corner of Section



Section 2 3 (A19): South Slope of Section

SUBJECT SUMMARY SHEET FOR - 3

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.43342

II. SOLITUDE

1. DISTANCE TO PERIMETER .492187E-2
2. VIEW FROM CELL .551417
3. VIEW TO CELL .54234
4. VEGETATION SCREENING .220688

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .234489
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .222837
3. DIVERSITY - TERRAIN .112246

IV. SCENIC QUALITY --- .855176

1. VIEW FROM CELL .703018E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 329.7

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.24784

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

3-4 = .855176



Section 3 4 (A29): Chiwaukum Lake Looking Southeast

SUBJECT SUMMARY SHEET FOR - 3 -

6

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.42443

II. SOLITUDE

1. DISTANCE TO PERIMETER .16972E-3
2. VIEW FROM CELL .512804
3. VIEW TO CELL .465133
4. VEGETATION SCREENING .166196

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .451707
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .259546
3. DIVERSITY - TERRAIN .023905

IV. SCENIC QUALITY --- .926041

1. VIEW FROM CELL .110528

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 149.625

TOTAL CELLS IN SECT. 29

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.34046

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

3-6 = .926041



Section 3 6 (A27): Looking West - South Facing Slope

SUBJECT SUMMARY SHEET FOR - 4

3

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53788

II. SOLITUDE

1. DISTANCE TO PERIMETER .630003
2. VIEW FROM CELL .477855
3. VIEW TO CELL .482819
4. VEGETATION SCREENING .132534

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .447996
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .339946
3. DIVERSITY - TERRAIN .141733

IV. SCENIC QUALITY --- 1.20822

1. VIEW FROM CELL .128836

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 412.44

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.52782

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

4-3 = 1.20822



Section 4 3 (A31): Glacier Creek, Looking West



Section 4 3 (A31): Glacier Creek, Looking East



Section 4 3 (A31): Jason Lake Looking South



Section 4 3 (A31): Glacier Creek Close-up

SUBJECT SUMMARY SHEET FOR - 4

5

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.46661

II. SOLITUDE

1. DISTANCE TO PERIMETER .324844
2. VIEW FROM CELL .551924
3. VIEW TO CELL .481422
4. VEGETATION SCREENING .410586

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .266375
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .294515
3. DIVERSITY - TERRAIN .683552E-1

IV. SCENIC QUALITY --- .768879

1. VIEW FROM CELL .699037E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 358.491

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.70341

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

4-5 = .768879



Section 4 5 (A33): Looking Southeast Down Chiwaukum Creek

SUBJECT SUMMARY SHEET FOR - 4

9

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.54766

II. SOLITUDE

1. DISTANCE TO PERIMETER .932794
2. VIEW FROM CELL .510705
3. VIEW TO CELL .479409
4. VEGETATION SCREENING .344023

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .226455
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .277381
3. DIVERSITY - TERRAIN .135534

IV. SCENIC QUALITY --- .662755

1. VIEW FROM CELL .114996

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 150.09

TOTAL CELLS IN SECT. 25

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.23172

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

4-9 = .662755



Section 4 9 (B31): Looking Northeast - Southwest Slope

SUBJECT SUMMARY SHEET FOR - 5

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53981

II. SOLITUDE

1. DISTANCE TO PERIMETER .644575
2. VIEW FROM CELL .505877
3. VIEW TO CELL .493772
4. VEGETATION SCREENING .792035E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .463929
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .322069
3. DIVERSITY - TERRAIN .239446

IV. SCENIC QUALITY --- 1.08223

1. VIEW FROM CELL .106641

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 408.332

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.47755

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

5-4 = 1.08223



Section 5 4 (C5): Looking Southeast -
Knox Lake in Foreground

SUBJECT SUMMARY SHEET FOR - 5

6

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.46

II. SOLITUDE

1. DISTANCE TO PERIMETER .325071
2. VIEW FROM CELL .495761
3. VIEW TO CELL .419184
4. VEGETATION SCREENING .309347

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .525999
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .359079
3. DIVERSITY - TERRAIN .198273

IV. SCENIC QUALITY --- 1.22316

1. VIEW FROM CELL .114479

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 405.065

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.43035

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

5-6 = 1.22316



Section 5 6 (C3): Looking Up the Mouth of Painter Creek



Section 5 6 (C3): Looking Northeast Down South Fork



Section 5 6 (C3): Looking East

SUBJECT SUMMARY SHEET FOR - 5

8

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53844

II. SOLITUDE

1. DISTANCE TO PERIMETER .507924E-2
2. VIEW FROM CELL .609199
3. VIEW TO CELL .510648
4. VEGETATION SCREENING .39563

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .332438
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .290923
3. DIVERSITY - TERRAIN .156129

IV. SCENIC QUALITY --- .781612

1. VIEW FROM CELL .024445

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 354.82

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.64454

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

5-8 = .781612



Section 5 8 (C1): Looking Southwest -
Overview of Section

SUBJECT SUMMARY SHEET FOR - 6

3

I. WILDERNESS

1. NATURAL INTEGRITY (APPARENT NATURALNESS) 2.48654

II. SOLITUDE

1. DISTANCE TO PERIMETER .630079
2. VIEW FROM CELL .443431
3. VIEW TO CELL .469454
4. VEGETATION SCREENING .233572

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE (PHYSICAL FEATURE) .251601
2. DIVERSITY - % SLOPE .275593
3. DIVERSITY - TERRAIN .145096

IV. SCENIC QUALITY --- .930963

1. VIEW FROM CELL .156007

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 379.785

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.02233

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

6-3 = .930963



Section 6 3 (C7): South Fork Looking West

SUBJECT SUMMARY SHEET FOR - 6

5

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.48573

II. SOLITUDE

1. DISTANCE TO PERIMETER .639845
2. VIEW FROM CELL .454524
3. VIEW TO CELL .446957
4. VEGETATION SCREENING .232024

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .464322
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .329822
3. DIVERSITY - TERRAIN .143626

IV. SCENIC QUALITY --- .889546

1. VIEW FROM CELL .147203

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 392.928

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.2336

SUBJECT SUMMARY SHEET FOR - 6

7

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.43923

II. SOLITUDE

1. DISTANCE TO PERIMETER .639998
2. VIEW FROM CELL .560419
3. VIEW TO CELL .544944
4. VEGETATION SCREENING .512547

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .526457E-1
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .176341
3. DIVERSITY - TERRAIN .670879E-1

IV. SCENIC QUALITY --- .479524

1. VIEW FROM CELL .631594E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 348.064

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.5359

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

6-7 = .479524



Section 6 7 (C11): Looking Northeast

SUBJECT SUMMARY SHEET FOR - 6

9

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.46507

II. SOLITUDE

1. DISTANCE TO PERIMETER .999996E-2
2. VIEW FROM CELL .615328
3. VIEW TO CELL .54431
4. VEGETATION SCREENING .410618

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .273166
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .372365
3. DIVERSITY - TERRAIN .106095

IV. SCENIC QUALITY --- .785618

1. VIEW FROM CELL .195806E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 353.001

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.60215

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

6-9 = .785618



Section 6 9 (D7): Looking West Up Battle Canyon Creek

SUBJECT SUMMARY SHEET FOR - 7

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.47875

II. SOLITUDE

1. DISTANCE TO PERIMETER .630156
2. VIEW FROM CELL .54413
3. VIEW TO CELL .497149
4. VEGETATION SCREENING .274166

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .146924
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .311881
3. DIVERSITY - TERRAIN .846578E-1

IV. SCENIC QUALITY --- .7904

1. VIEW FROM CELL .760872E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 367.793

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.8343

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

$$7-4 = .7904$$



Section 7 4 (C17): Index Creek Looking Southwest



Section 7 4 (C17): Index Creek Close-up

SUBJECT SUMMARY SHEET FOR - 7

6

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.51217

II. SOLITUDE

1. DISTANCE TO PERIMETER .639846
2. VIEW FROM CELL .485333
3. VIEW TO CELL .477315
4. VEGETATION SCREENING .101737

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .702609
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .392639
3. DIVERSITY - TERRAIN .377416

IV. SCENIC QUALITY --- 1.2061

1. VIEW FROM CELL .122751

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 443.312

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 7.01791

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

7-6 = 1.2061



Section 7 6 (C15): Northwest Slope of Section

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

7-8 = .46572



Section 7 8 (C13): Looking East

SUBJECT SUMMARY SHEET FOR - 7

8

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.47949

II. SOLITUDE

1. DISTANCE TO PERIMETER .99976E-2
2. VIEW FROM CELL .637583
3. VIEW TO CELL .55792
4. VEGETATION SCREENING .495746

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .14715
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .155276
3. DIVERSITY - TERRAIN .038319

IV. SCENIC QUALITY --- .46572

1. VIEW FROM CELL .191799E-2

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 312.286

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 4.98912

SUBJECT SUMMARY SHEET FOR - 8

3

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.42585

II. SOLITUDE

1. DISTANCE TO PERIMETER .630156
2. VIEW FROM CELL .506087
3. VIEW TO CELL .493128
4. VEGETATION SCREENING .894492E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .546987
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .302004
3. DIVERSITY - TERRAIN .335192

IV. SCENIC QUALITY --- 1.16978

1. VIEW FROM CELL .10628

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 417.725

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.60491

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

8-3 = 1.16978



Section 8 3 (C19): Looking North



Section 8 3 (C19): Looking West at West Ridge



Section 8 3 (C19): Lake Edna

SUBJECT SUMMARY SHEET FOR - 8

5

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.43829

II. SOLITUDE

1. DISTANCE TO PERIMETER .324846
2. VIEW FROM CELL .439753
3. VIEW TO CELL .510327
4. VEGETATION SCREENING .150038

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .170656
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .238156
3. DIVERSITY - TERRAIN .176425

IV. SCENIC QUALITY --- 1.10578

1. VIEW FROM CELL .158926

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 359.04

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.7132

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

8-5 = 1.10578



Section 8 5 (C21): Looking North - Carter Lake in Foreground



Section 8 5 (C21): Close-up of Painter Creek Valley Bottom

SUBJECT SUMMARY SHEET FOR - 8

7

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.47169

II. SOLITUDE

1. DISTANCE TO PERIMETER .320076
2. VIEW FROM CELL .607143
3. VIEW TO CELL .574482
4. VEGETATION SCREENING .159844

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .281495
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .22808
3. DIVERSITY - TERRAIN .242678

IV. SCENIC QUALITY --- .992278

1. VIEW FROM CELL .026077

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 372.133

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.90385

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

8-7 = .992278



Section 8 7 (C23): Southeast Slope of Section

SUBJECT SUMMARY SHEET FOR - 8

9

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.55373

II. SOLITUDE

1. DISTANCE TO PERIMETER .695817E-2
2. VIEW FROM CELL .643198
3. VIEW TO CELL .600306
4. VEGETATION SCREENING .475975

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .159489
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .735235E-1
3. DIVERSITY - TERRAIN .113536

IV. SCENIC QUALITY --- .699832

1. VIEW FROM CELL .566891E-3

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 239.144

TOTAL CELLS IN SECT. 46

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.32712

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

8-9 = .699832



Section 8 9 (D19): Looking West Towards Big Jim Mountain

SUBJECT SUMMARY SHEET FOR - 9

4

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.5399

II. SOLITUDE

1. DISTANCE TO PERIMETER .108721E-3
2. VIEW FROM CELL .492886
3. VIEW TO CELL .498614
4. VEGETATION SCREENING .664996E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .553664
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .339633
3. DIVERSITY - TERRAIN .22743

IV. SCENIC QUALITY --- .904685

1. VIEW FROM CELL .116806

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 362.047

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.74023

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

9-4 = .904685



Section 9 4 (C29): Looking Southeast - Peak 7377

SUBJECT SUMMARY SHEET FOR - 9

6

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.5635

II. SOLITUDE

1. DISTANCE TO PERIMETER .271803E-5
2. VIEW FROM CELL .586252
3. VIEW TO CELL .559778
4. VEGETATION SCREENING .189875E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .563717
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .267866
3. DIVERSITY - TERRAIN .289961

IV. SCENIC QUALITY --- .872617

1. VIEW FROM CELL .474201E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 225.064

TOTAL CELLS IN SECT. 40

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.7701

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

9-6 = .872617



Section 9 6 (C27): Central Ridge of Section

Central Ridge of Section

SUBJECT SUMMARY SHEET FOR - 9

8

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.41388

II. SOLITUDE

1. DISTANCE TO PERIMETER .424693E-7
2. VIEW FROM CELL .597127
3. VIEW TO CELL .518062
4. VEGETATION SCREENING .284781

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .14498
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .206498
3. DIVERSITY - TERRAIN .073265

IV. SCENIC QUALITY --- .776134

1. VIEW FROM CELL .341003E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 317.355

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.04883

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

9-8 = .776134



Section 9 8 (C 25): Cabin Creek Looking Northwest

Continued

SUBJECT SUMMARY SHEET FOR - 9

10

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.57543

II. SOLITUDE

1. DISTANCE TO PERIMETER .132717E-8
2. VIEW FROM CELL .644723
3. VIEW TO CELL .574921
4. VEGETATION SCREENING .410524

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .199062
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .164672
3. DIVERSITY - TERRAIN .437895E-1

IV. SCENIC QUALITY --- .524254

1. VIEW FROM CELL .419064E-2

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 159.481

TOTAL CELLS IN SECT. 32

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 5.14157

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

9-10 = .524254



Section 9 10 (D29): Looking Northwest Up Fall Creek,
Section 9 10 (D29) Foreground



Section 9 10 (D29): Looking West, Drury Falls in Center

SUBJECT SUMMARY SHEET FOR - 10

3

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.54365

II. SOLITUDE

1. DISTANCE TO PERIMETER .224943E-10
2. VIEW FROM CELL .386258
3. VIEW TO CELL .44626
4. VEGETATION SCREENING .11267

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .601256
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .445927
3. DIVERSITY - TERRAIN .511403

IV. SCENIC QUALITY --- 1.31397

1. VIEW FROM CELL .20219

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 382.11

TOTAL CELLS IN SECT. 59

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.56358

AVERAGE SCENIC BEAUTY SCORE
(for entire section)

10-3 = 1.31397



Section 10 3 (C31): Looking Up Boggy Creek



Section 10 3 (C31): South Face of Section

SUBJECT SUMMARY SHEET FOR - 10

9

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.53974

II. SOLITUDE

1. DISTANCE TO PERIMETER .351474E-12
2. VIEW FROM CELL .58662
3. VIEW TO CELL .543556
4. VEGETATION SCREENING .239979

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .521661
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .341561
3. DIVERSITY - TERRAIN .19085

IV. SCENIC QUALITY --- 1.03616

1. VIEW FROM CELL .042378

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 380.157

TOTAL CELLS IN SECT. 64

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.0425

SUBJECT SUMMARY SHEET FOR - 11

8

I. WILDERNESS

1. NATURAL INTEGRITY
(APPARENT NATURALNESS) 2.59034

II. SOLITUDE

1. DISTANCE TO PERIMETER .251053E-13
2. VIEW FROM CELL .660202
3. VIEW TO CELL .631925
4. VEGETATION SCREENING .981414E-1

III. PRIMITIVE RECREATION EXPERIENCE

1. CHALLENGE .511547
(PHYSICAL FEATURE)
2. DIVERSITY - % SLOPE .308969
3. DIVERSITY - TERRAIN .327846

IV. SCENIC QUALITY --- 1.11687

1. VIEW FROM CELL .123127E-1

ADJUSTED PURCHASE PRICE xx,xxx.

TOTAL POINTS 81.5716

TOTAL CELLS IN SECT. 14

AVERAGE PRICE PER POINT PER CELL x,xxx.xx

AVERAGE SCORE PER CELL = 6.25815

III. DETERMINATION OF HIGHEST AND BEST USE

A. Introduction

As discussed in more detail in Section I, the fundamental premise of an appraisal which structures and edits the valuation process is the determination of highest and best use for the subject property to be valued. While the final selection can never be made with definite exactness and must represent the opinion of the appraiser, the best use must be legal, technically possible, supported by effective demand, financially profitable, as well as compatible with public goals and plans. These screens imply that legality considers the bias of political administration in the law of land use; that technically feasible is at the preliminary level of review; that effective demand is also regarded from a preliminary knowledge of demographics; and that financial success and physical impact be considered at the broadest budgeting level. In this case, the appraiser has examined alternative use scenarios for recreational development, logging, logging plus recreational lot development, commercial recreational use, and wilderness as defined in Section I.

B. Recreational Lot Potential

One potential use of the lands within the properties to be appraised would be the sale of recreational home sites.

Typically such development has followed construction of a joint agreement road for logging purposes, where the road has been improved to a standard better than a logging road on private lands only, and where the government, under the terms of the joint agreement will provide road maintenance. This possibility is quickly tested by means of the data base described in Section II. Reference to Exhibit III-1 demonstrates by cluster that less than one-third of the total number of ten acre cells in each cluster have predominant slopes of 45 percent or less and face other than northward. Slopes greater than 45 percent are presumed unsuitable from both a technical and public viewpoint. Since the data base contains only the dominant slope, it is assumed there may be some flatter homesites within cells of less than 45 percent slope. Slopes facing northwest, north, and northeast were eliminated as undesirable exposures since in the high country sun is at a premium for passive energy and vacationer vitality.

If the suitable area is further required to be convenient to the proposed joint road program (the Sawyer Lumber Company Agreement assigned to Pack River as mapped in the data base), very few cells would qualify. However, a tentative subdivision potential plan for the subject property had been blocked out by Pack River (Exhibit III-2) in 1977, along sections of the proposed joint road so this larger set of cells was taken as a

United Road, Inc.

EXHIBIT III-2

SUB-DIVISION AND ROAD MAPS

6/20/90 gw

15E

16E






17E


18E



26N

CHELAN CO., WASHINGTON

-  Pack River Lands
-  Proposed Roads
-  Existing Roads
-  Existing WILDERNESS Boundary
-  Intended WILDERNESS Boundary

 Preliminary Pack River Subdivision Plan

25N

24N

23N

22N

7/1/90 gw

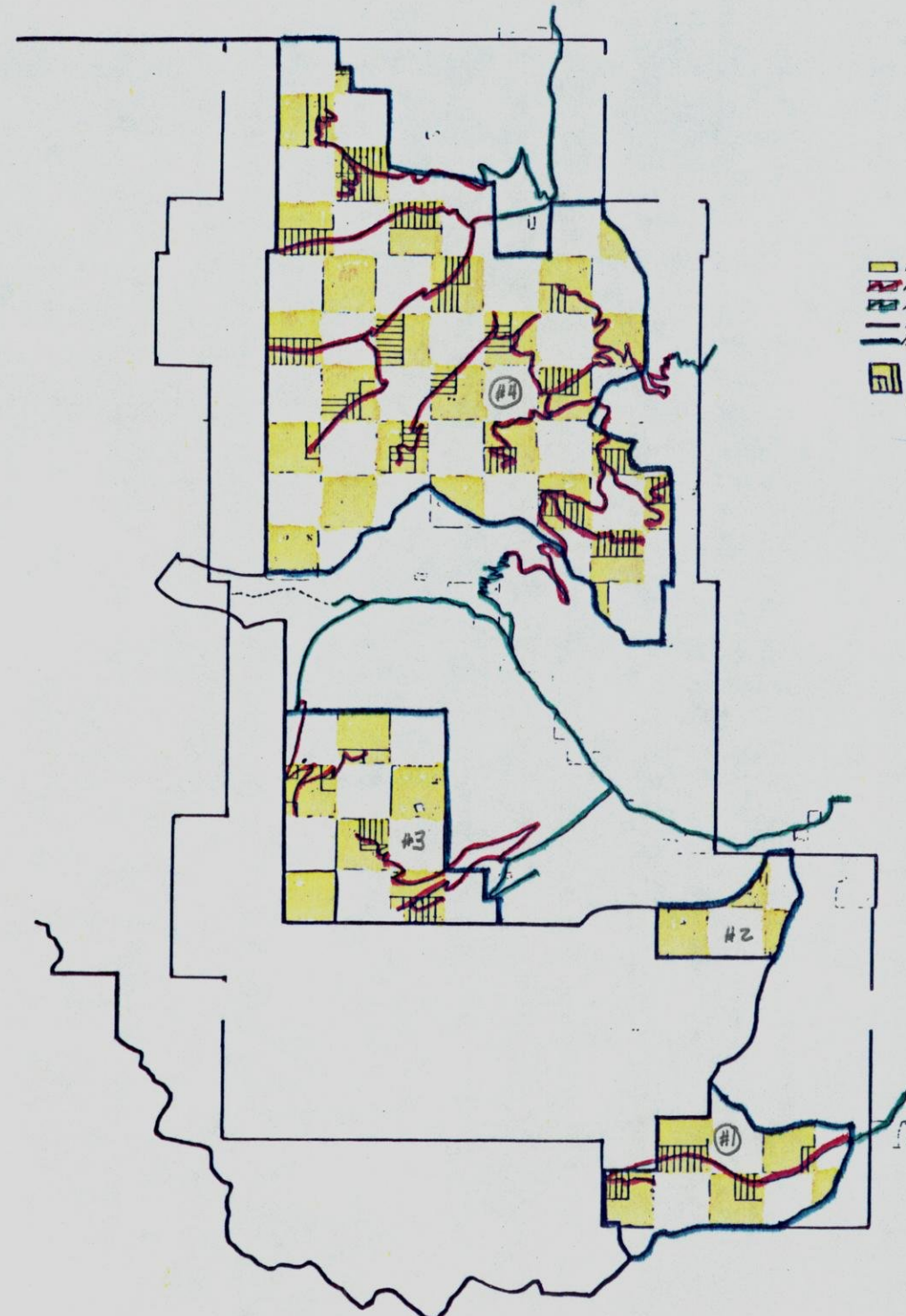


EXHIBIT III-1

Total No. of Lots Per Cluster with Potential Suitability
for Low Density Recreational Residential Development

	<u>Cluster</u> <u>1</u>	<u>Cluster</u> <u>2</u>	<u>Cluster</u> <u>3</u>	<u>Cluster</u> <u>4</u>
Total No. of cells	320	192	384	1792
Cells of 45% slope or less without north-facing slopes (slope aspect 3 to 7)	82	38	162	520
Qualified cells remaining within Pack River Subdivision Plan*	17	0	35	153
Potential No. of 20-acre lots**	9	0	18	77

*Plan provided by William Clairehen and John Lyngstad of Pack River Company. It presumed development following selective logging on joint road with Forest Service, 20- to 40-acre lots, and some soils on each lot suitable for septic field. Soil data recorded in data base is too generalized to determine if each site would qualify for septic.

**General sales pattern in area has favored lots closer to 40 acres in order that some pad sufficiently level for a residence can be found on a site with a dominant slope of 45% or less.

constraint to anticipate some cul-de-sacs, and the fact that 20 to 40 acre lots need only one 10 acre cell which would touch the road at some point. When these remaining cells are divided in half to suggest the potential number of 20 acre lots, Cluster No. 1 has a potential of nine lots out of 3,200 acres; Cluster No. 2 has no potential sites out of 1,920 acres. Cluster No. 3 has modest development potential with 18 sites out of 3,840, acres and Cluster No. 4 has some commercial possibilities with 77 possible sites surviving the first two screens. (See Exhibit III-1.) This level of development presumes that somewhere on each site a small patch of soil adequate for septic tank permits could be found, a problem which is generally the owners' responsibility. The appraisal data base does include soil types but the maps of this area are too generalized so that to use soil as an additional screen, as is generally done in urban areas, would unfairly eliminate many, if not most, of the cells suitable for development.

These lots are physically possible and could be compatible with the Chelan County Subdivision Ordinance (Article III Short Plats and Subdivisions, Chelan County Subdivision Regulations, adopted August 15, 1977). Political resistance to any home sites in Cluster No. 1, which would encroach on the public perception of the Enchanted Area, would make the total cost of development for nine to ten lots prohibitive so that even

~~James R. ...~~
though there would be demand for such sites, it is reasonable to conclude that lot development as a potential use for Cluster No. 1 or Cluster No 2 is neither financially viable nor politically practicable.

Relative to Clusters No. 3 and No. 4, some distinction can be made. The views from Cluster No. 3 across the Enchanted Area toward Mt. Stuart, as well as locations on the shoulders of Mt. Cashmere, would make the sites highly desirable. Cluster No. 3 could be accessible from the western end of the road along the Icicle with a modest extension of the existing logging road through a single federal section to the cluster. These premier sites could sell for as much as \$100,000 each, for an average 25 acre site. With 18 or 20 such sites there might be a retail value of \$1.8 to \$2 million but the wholesale value to a developer would be barely 25 to 30 percent of that, or \$600,000. Such use affects only 35 to 40 cells, perhaps 10 percent of the total cells in the cluster, so that it is unreasonable to expect a purchase motivated by the potential for residential lot development. Any such development which did occur would be peripheral to selective logging.

In regard to Cluster No. 4, there may be sufficient number of potential residential lots (77) to justify commercial development efforts at securing plat approval, filing of a master plan subject to quality control covenants, and

positioning a sales office in Seattle as well as on site. A retail value of \$35,000 to \$40,000 per lot would indicate a raw land potential value of \$750,000 to \$1 million. Such a development might be tied to development of skiing potentials on the north slopes of Big Jim Mountain or provision for winter access to the Lake Donald Basin on the northwest. Such development would have access to Route 2. The market demand for such facilities may have already been anticipated by Aspen Skiing Corporation which has been acquiring lands at the foot of government owned mountain slopes just to the north of Route 2. (See Appendix E.) Nevertheless, should these speculations prove feasible, they would utilize only a limited number of acres, say 10 to 20 percent of the total 17,000 plus acres in the tract called Cluster No. 4. Clearly purchasers would have to contemplate some other use, probably selective logging, prior to development.

C. Analysis of Logging Potential

Landmark Research, Inc., is not qualified for timber cruises and the valuation of timber so that this discussion must rely entirely on information provided by International Forestry Consultants, Inc., (IFC, Inc.) of Seattle, Washington, and is abstracted from their correspondence found in Appendix E. The four clusters were originally purchased by the Pack

River Group from the Sawyer Trust in part for timber reserves to support their Pechastin sawmill operation. Before reviewing board foot potentials and species, it may be useful to refer to Exhibit II-5, Vegetation Variable, Items 1-4 which reports the number of cells which enjoy some level of timber stocking, i.e., 10 to 39 percent, 40 to 69 percent, 70 percent plus, or large old growth timber, as measured as a vertical projection of crown cover to the ground from aerial photography. Clusters No. 2 and No. 3 have no significant old growth timber. Cluster No. 1 has approximately 250 acres while the vast areas of Cluster No. 4 contain 470 acres more or less. If stocking from 40 percent and above broadly suggest timber potential, then Cluster No. 1 has some potential on 58 percent of its acreage, Cluster No. 2 on 33 percent, Cluster No. 3 on 31 percent, and Cluster No. 4 on 43 percent of its ten acre cells.

Reference to Exhibit III-3 provides board foot estimates by cluster furnished by International Forestry Consultants, Inc., in comparison to data base cell distribution. With 8 percent of the area and 3 percent of potential board foot volume, Cluster No. 2 is not a strong candidate for efficient timber operation. This is confirmed by conversations with Mr. Biel of Forestry Consultants, Inc., who stated that all operations would require helicopter lifting of logs at a cost which would wash out the commercial value of the timber.

EXHIBIT III-3

AN ESTIMATE OF BOARD FOOT VOLUME ASSUMING CONVENTIONAL
AND SKYLINE LOGGING ALLOCATED BY FOUR CLUSTER GROUPINGS^a

	Based on Total "Cruised" Acres*			Based on Acres in Intended Wilderness Only*			% Data Base Cells**
	Net	Gross	%	Net	Gross	%	
<u>Cluster No. 1</u>							
Sections in Ingalls Creek area	26,949*	28,446	14%	26,949	28,446	14%	13%
<u>Cluster No. 2</u>							
Sections in Snow Creek area	6,121	6,575	3%	6,121	6,575	3%	8%
<u>Cluster No. 3</u>							
Sections in Mt. Cashmere area	22,265	23,460	11%	22,265	23,460	12%	14%
<u>Cluster No. 4</u>							
Sections North of Icicle Creek	<u>140,095</u>	<u>149,104</u>	<u>72%</u>	<u>132,274</u>	<u>140,890</u>	<u>71%</u>	<u>65%</u>
TOTALS	195,430	207,585	100%	187,609	199,371	100%	100%

^aSources: Data is taken from letter in Timber Cruise of Pack River Company Lands in Alpine Lakes Wilderness Area by Kenneth E. Beil of International Forestry Consultants, Inc., dated August 27, 1981, and letter from Kenneth E. Beil of August 31, 1981. Complete correspondence in Appendix E.

*000 omitted

**For comparison data base cell percentages are provided from Exhibit II-5.

Reference to Exhibit III-4 provides a conversion of board foot volumes to rough market value estimates based on bids and stumpage prices for the State of Washington and the eastern Cascades. These figures provided by IFC, Inc., were not intended to be a full appraisal but rather to provide some order-of-magnitude numbers that are appropriate for decisions of highest and best use. Preliminary value estimates did reflect a weighted valuation in which ponderosa pine represented approximately 8.1 percent, white pine .6 percent, lodgepole pine 5.8 percent, spruce 17.7 percent, and a balance of less desirable commercial grades about 67.8 percent of the total mix. A review of IFC, Inc., correspondence will also show they considered several levels of intensity of logging beyond conventional and skyline methods. However, these methods quickly became so costly as to wash out the incremental sale income; moreover, they would have been inconsistent with the former Pack River management pattern of selective cutting in cooperation with the Forest Service to protect some view sheds and erodible slopes. In terms of pricing assumptions in these estimates, the February 12, 1981, letter from Kenneth Biel suggests:

Timber sale data, volume sold and average stumpage rate for all species, is listed for all public agencies and for the State of Washington (DNR), by quarters for the years 1976 through 1980, in the publication "Production, Prices, Employment and Trade" published by

EXHIBIT III - 4

PRELIMINARY ESTIMATE OF HARVESTABLE TIMBER VALUES
BY CONVENTIONAL AND SKYLINE LOGGING

Provided by
International Forestry Consultants, Inc.

(1) Landmark Number	(2) IFC Title	(3) MBF Based on Acres in Intended Wilderness Only			(4) Preliminary Estimate IFC Letter Feb. 12 Amended	(5) Rough Estimate of Land Development Raw Acreage Value (III-B)	(6) Lumber & Land Development Values Combined (III-b)
		Net	Gross	%			
Cluster 4	Sections North of Icicle Creek	132,274	140,890	71%	\$13,163,400	\$1,000,000	\$14,160,000
Cluster 3	Sections in Mt. Cashmere Area	22,265	23,460	12%	2,224,800	600,000	2,825,000
Cluster 2	Sections in Snow Creek Area	6,121	6,575	3%	556,200	-0-	556,000
Cluster 1	Sections in Ingalls Creek Area	<u>26,949</u>	<u>28,446</u>	<u>14%</u>	<u>2,595,600</u>	<u>100,000</u>	<u>2,700,000</u>
	TOTALS	187,609 ^a	199,371 ^a	100%	\$18,540,000 ^b	\$1,700,000	\$20,241,000

^a000 omitted in board foot estimate.

^bConversion of board foot volume to dollars by IFC based on quarterly data for State of Washington (DNR) for last quarter of 1980 (See Appendix E, Section IFC, letter to Ed Parry dated February 12, 1981).

Source: Correspondence of International Forestry Consultants, Inc. provided in Appendix E.

the Pacific Northwest Forest and Range Experiment Station. DNR data is also included in the all public agencies listing. DNR sales, however, of all public agencies are no doubt the closest to private sales in regards to restrictions and requirements, e.g., logs from DNR sales are exportable. Therefore, it is suggested that the DNR data is most comparable to the Pack River lands in the Alpine Lakes Wilderness. A listing of this data (pencil copy), by quarters for the years 1976 through 1980, is appended to this letter. An average stumpage rate, weighted by volume for each quarter, has been calculated for each year and for all five years. In reference to the language of the Wilderness Act in regards to the time of appraisal, it would seem that the last quarter of 1980, representing the date of acquisition, would be most appropriate considering the data available at this time. The figure for the last quarter of 1980, \$252.07 per MBF, needs to be adjusted for Alpine Lakes conditions. In general, based on a few DNR sales prospectus we have in hand, it would seem that DNR sales have better quality timber and lower logging costs. The appraisal estimate is:

Conventional and skyline logging	92,695 MBF - \$18,540,00
Conventional, skyline and helicopter logging	135,555 MBF - 17,622,00

D. Combined Timber and Development Values

When the timber values in Column 4 are compiled with the raw land values of land suitable for development (Column 5), after selective timbering (the two uses are consistent with one another rather than mutually exclusive), the result is a minimum estimate of lumber and development numbers combined in Column 6. The total of Column 6, \$20,000,000, assigns no value to any of the land which is not timbered or developed for lots; in addition, those who would purchase it for these uses in

these suggested price ranges anticipate time horizons for realization of the timber and land revenues over a five to ten year period, depending on individual purchaser needs. Thus, these values have included sharp discounts for the time value of money, the present value of future benefits. It would follow that uses which were immediate, used all the land, and benefitted from all the timber rather than only the timber accessible to conventional and skyline logging should have a value in excess of \$20,000,000.

E. Wilderness as Best Use

Selection of best use for a jewel of a site is comparable to the irreversible plan for cutting a gem stone to maximize its potential value by highlighting its natural facets and crystal characteristics. It seldom makes sense to reduce a rare 22-carat raw stone to a 7-carat diamond leaving 15 carates of shreds whose crystalline structure has been indelibly marred. That would be inconsistent with maximizing value.

Commercial development of timber and recreational lots affects only 7,000 to 9,000 acres of the subject property, leaving 13,000 acres of waterfall, craggy ridges, and mountain meadows, snow fields and water forms. These shreds and remainders have lost that elusive attribute of scope, expansiveness, and natural view shed. These elements are intermixed with similar public lands. If Pack River and public

lands were combined into a single roadless area, the total intangible value would be greatly magnified, an increment in real estate where the sum of the whole can be greater than its part, called plottage value. Alternatively, the value of these private and public parcels, as rare landscapes of great size would both be diminished by encroachment such as roads, clear-cuts, and recreational homes where the value could be enhanced if the view shed remained a totality. Therefore, a use which optimized the value of the total area rather than the 7,000 to 9,000 acres with timber and road in a fashion consistent with "community plans and goals" would be closer to the current definition of highest and best use than combined timber and development.

Recall the definition of best use from the APPRAISAL TERMINOLOGY HANDBOOK of 1981 quoted in Section 1, page 34:

It is to be recognized that in cases where a site has existing improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, however, unless and until land value in its highest and best use exceeds the total value of the property in its existing use. See Interim use. . . .

Implied within these definitions is recognition of the contribution of that specific use to community environment or to community development goals in addition to wealth maximization of individual property owners. Also implied is that the determination of highest and best use results from the appraiser's judgment and analytical skill, i.e., that the use determined from analysis represents an opinion, not a fact to be found.

Groups and individuals buy wilderness at prices sometimes greater than the \$900 per acre price suggested for the entire property through commercial development. The problem for the appraiser is to establish some relationship between degree of wilderness, relative degrees of scenic quality, relative degrees of recreational challenge, and solitude, in order to establish a pricing model for wilderness as best use. Certainly the subject tract meets the size, roadless, naturalistic, recreational, and solitude requirements of RARE II wilderness doctrine. Logically, when wilderness is a commodity, price per acre should reflect quality, just as diamonds of the same carat weight have different prices for color and quality.

Even without plans for the Alpine Wilderness, contribution of the subject property to public recreational resources is well established for at least three of the four clusters. With that in mind, alternative uses might be summarized as in Exhibit III-5. Moreover, it would be safe to say that with growing use of the national park system in the State of Washington in a year when gasoline issues reduced park pressure elsewhere (Exhibit III-6), with excess use of the Alpine Enchanteds' area prompting a permit system to reduce pressure, and with the scarcity of roadless areas the size of the subject area, the consumer surplus would be served best by preservation and be of a magnitude to virtually negate the producer's

Exhibit III-5

ALTERNATIVE USE COMPARISONS
BY PROPERTY CLUSTER FOR
PACK RIVER PROPERTIES

	Timber Potential	Lot Potential	Park Potential	Damage Potent- ial to Other Alpine Areas Views & Eco- Systems	Wilderness/ Public Access Route Poten- tial	Acres Allocated to Trail- head corri- dor	Acres Allocated to Wilder- ness
Public Benefits	Long term damage	Permanent damage	Long term damage	--	Long term benefits	--	--
Cluster 1	Modest	Insignifi- cant	Good	Serious	Established	640	1,909
Cluster 2	Insignificant	None	Modest	Modest	Firmly Established	1,028	00
Cluster 3	Fair	Modest	Excellent lakes, mt. peaks, high scenic quality scores	Serious	Established	640	3,057
Cluster 4	Good East half only	Good	Excellent west half, lakes mt. peaks, high scenic quality scores, good east half	Serious	Potential alternative to overcrowded Enchanted area; less hiker pressure currently	1,280	13,903
						<u>3,588</u>	<u>18,869</u>
							<u><u>22,457</u></u>
					Total Subject Property Acres		

111-17

Public Road Use

EXHIBIT III-6

1978 NATIONAL PARK STATISTICAL ABSTRACT

	Park Code	Recreational Visits <u>1977</u>	Visits <u>1978</u>	Overnights <u>1977</u>	Stays <u>1978</u>	Backcountry Permits 1978	%permits to '78 O/N stays
<u>Colorado</u>							
Bent's Old Fort	NHS	100.5	91.8	0.0	0.0		
Black Canyon OTG	NM	310.5	271.9	28.7	31.4	1.8	6.0
Colorado	NM	553.2	561.4	26.8	26.5	.9	3.0
Curecanti	NRA	865.9	729.3	102.9	108.8	.3	less than 0.1
Dinosaur (majority lies in UT)	NM	399.7	415.5	76.8	77.2	29.3	38.0
Florissant Fossil Beds	NM	63.3	63.3	0.0	0.0		
Great Sand Dunes	NM	227.9	227.6	40.7	37.9	.3	1.0
Hovenweep (majority lies in UT)	NM	16.4	17.5	4.3	3.6	0.0	
Mesa Verde	NP	663.7	653.1	224.1	217.6	0.0	
Rocky Mountain	NP	2,882.1	3,024.9	333.3	319.8	54.5	27.0
Shadows Mountain	NRA	<u>168.5</u>	<u>168.7</u>	<u>101.6</u>	<u>95.2</u>	<u>0.0</u>	
Totals		6,251.7	6,275.0	939.2	918.0	87.1	
<u>Idaho</u>							
Craters of the Moon	NM	258.4	152.4	19.9	6.2	.1	2.0
Nez Perce	NHP	<u>154.2</u>	<u>127.2</u>	<u>0.0</u>	<u>0.0</u>		
Totals		412.6	279.6	19.9	6.2	.1	
<u>Montana</u>							
Big Hole	NB	51.6	53.0	0.0	0.0		
Custer Battlefield	NM	328.8	270.3	0.0	0.0		
Fort Union Trad. Post (majority lies in NP)	NHS	5.6	6.5	0.0	0.0		
Glacier	NP	<u>1,654.5</u>	<u>1,582.6</u>	<u>461.6</u>	<u>391.9</u>	<u>24.4</u>	6.0
Totals		2,040.5	1,912.4	461.6	391.9	24.4	

11-18

Sedimentary Research, Inc.

	Park Code	Recreational Visits 1977	Recreational Visits 1978	Overnight Stays 1977	Overnight Stays 1978	Backcountry Permits 1978	% permits to '78 O/N stays
<u>Washington</u>							
Coulee Dam	NRA	676.8	712.5	131.2	137.0	.7	1.0
Fort Vancouver	NHS	216.1	168.1	0.0	0.0		
Mount Rainier ¹	NP	1,819.6	1,607.0	154.4	143.2	35.8	25.0
North Cascade	NP	682.3	917.6	97.9	130.3	19.0	15.0
Olympic	NP	2,293.9	2,534.7	536.0	465.9	81.4	17.0
San Juan Island	NHP	61.7	76.4	0.0	0.0		
Whitman Mission	NHS	119.5	105.0	0.0	0.0		
Totals		5,869.9	6,121.3	919.5	876.4	136.9	
<u>Wyoming</u>							
Bighorn Canyon (includes portion in MT)	NRA	348.6	277.9	12.1	19.8	.6	3.0
Devils Tower	NM	153.9	271.2	18.0	20.9	0.0	
Fort Laramie	NHS	115.9	112.4	0.0	0.0		
Fossil Butte	NM	12.0	14.4	0.0	0.0		
Grand Teton	NHP	3,258.0	3,160.0	605.5	555.5	22.7	4.0
John D. Rockefeller	NPS	1,861.7	1,866.9	120.0	101.6	.2	Less than 0.1
Yellowstone (includes portion in MT, ID)	NP	2,481.9	2,618.4	1,472.6	1,486.1	52.7	4.0
Totals		8,232.0	8,321.2	2,228.2	2,183.9	76.2	
<u>Park Code</u>	<u>Class of Area</u>	<u>Park Code</u>	<u>Class of Area</u>				
NB	National Battlefields	NP	National Parks				
NHS	National Historic Sites	NPK	National Parkways				
NHP	National Historical Parks	NRA	National Recreation Areas				
NM	National Monuments						

Sawtooth Research, Inc.

111-19

¹Data for North Cascades NP, Ross Lake NRA, and Lake Chelan NRA are shown combined, no breakdown available.

surplus of timber and development. In short, if costs to the public were internalized as a charge against timber and development, those uses would have a net present value approaching zero; on the other hand, public uses would unquestionably be greater than zero so that public uses would best meet the definition of highest and best use above. It must be conceded that the cost-benefit measures required to make this conclusion do not lend themselves to precise arithmetic, but best use decisions are not expected to be quantitative decisions. Note that the definition of best use states, "...the determination of highest and best use results from the appraiser's judgment and analytical skill, i.e., that the use determined from analysis represents an opinion, not a fact to be found."

To that end, the appraiser has indicated what portion of each cluster would be allocated to best use as trail-head and access corridor, as a linkage from public roads to the basins and mountain plateaus which characterize the high-mountain, back country. The balance of the land has been allocated to general wilderness for public purposes as best use as shown in Exhibit III-5.

THE APPRAISER HAS DETERMINED IN HIS OPINION THAT HIGHEST AND BEST USE OF EACH CLUSTER SHALL BE ALLOCATED BETWEEN CERTAIN ACRES APPROPRIATE AS TRAILHEAD AND PUBLIC CORRIDOR TO THE BACK COUNTRY AND CERTAIN ACRES SHALL BE ALLOCATED AS WILDERNESS FOR PUBLIC PURPOSES AS THESE USES HAVE NOT ONLY IMMEDIATE AND HIGHER PRESENT VALUE THAN ALTERNATIVES BUT ARE IN ADDITION MOST COMPATIBLE WITH COMMUNITY ENVIRONMENT AND DEVELOPMENT GOALS. THESE USES PRESUME A PROBABLE BUYER OR BUYERS MOTIVATED TO PRESERVE HIGH PRIORITY WILDERNESS TRACTS AND REPRESENTING COLLECTIVE PRIVATE CITIZENS FINANCING.

IV. MARKET COMPARISON APPROACH TO VALUE

A. Basic Methodology

The basic concept of the market comparison approach is to search for properties which might have served the same uses as that ascribed as best use for the subject property to be appraised on the principle that buyers will tend to pay as top price only as much as they would have had to pay for reasonable substitutes--a presumption about behavior often referred to in the textbooks as the principle of substitution. There are three major conditions for executing this otherwise plausible task:

1. There is an orderly market for parcels of singular scenic quality and other wilderness attributes producing transactions at arms length without recourse to eminent domain.
2. There is adequate information to adjust sale prices of transactions meeting the first condition for external factors such as time of sale, financial terms and custom conditions short of a cash sale in fee simple, and that the appraiser can exercise judgement in the application of reasonable adjustments for differences in location or imbalances in the market to the degree that these differences are unique to only some of the comparables.
3. There is a common denominator for comparison of sales once adjusted for condition two that will

overcome differences in both size and quality or suitability for the use presumed.

This section of the appraisal details the procedures, properties, and final valuation benchmarks developed for valuation of the subject property in Clusters I-IV.

B. Definition of Acceptable Arms-Length Transactions

There are markets where each purchase represents the effective demand of a single party at interest, such as the market for detached single-family homes or commercial facilities purchased for a single proprietorship. However the scale and increasing cost of real estate has led to increasing use of group purchase mechanisms to effect the market requirements of each member of the group, whether it be real estate syndications, corporations, municipal economic development groups, or local and national conservancy groups which raise money to buy, hold, or gift landmarks and open space to the public interest.

As discussed in Section I, E.3., groups like the Nature Conservancy represent customers in the market for wilderness. Since they are eligible to receive cash donations and donations of land as tax-deductible gifts, it has been argued by some that their acquisitions and transfers to government are not arms-length transactions. However, this appraiser has assumed,

on the basis of discussions with grantors and grantees, that properties acquired through some combination of trade, gift, and cash and reported as a cash price on the deed is equal to or slightly less than fair market value of the property if there is evidence of hard negotiation to accomplish acquisition. Where discount from appraisal value is known, an adjustment can be made for possible cash savings on taxes as a result of charitable donation. Many such sales contemplate eventual acquisition by government, and in particular acquisitions by the Forest Service and the Bureau of Land Management, as well as the states, have been at fair market value or slightly less not only to avoid exposure to political criticism, but for two other basic reasons. First, the appraisal price must withstand the scrutiny of the Internal Revenue Service to the degree that any part of that price is to qualify for a charitable donation on the part of the seller. A conspiracy of every IRS district office to wink at federal and state acquisition prices is absurd. Secondly, the conservancy groups utilize any reduction in the acquisition price to mark up the price to the acquiring government agency sufficiently to recover their costs of acquisition, interest on funds tied down while waiting for government funding of an agreed purchase price, and administrative costs of the fund. While the government may gain access to the property, at some benefit of

a bargain (less than appraised price), in many, if not most cases, the bargain is in the form of avoiding the costs of eminent domain action or inflationary increases in market prices during the intolerable delays in government procedures to approve and fund acquisitions at the market price. In a Report to Congress of the United States by the Comptroller General in May of 1980, relative to federal land acquisitions by condemnation, the major conclusions were digested as follows:

The Federal Government has a backlog of over 20,000 court cases in which it seeks to acquire by condemnation private lands for public use. At the close of fiscal year 1978, the land in question was appraised at \$481 million. Actual acquisition costs probably will be much higher because of administrative costs, awards, or settlements in excess of Government appraisals, and long delays in court.

The large caseload arises from the many sizable land acquisition programs for such public purposes as recreation, environmental and wildlife protection, civil and military public works, and various other programs authorized by the Congress. One large National Park Service land preservation project alone accounted for over 10,000 cases pending in September 1979. Condemnation action is generally needed when a landowner is unwilling to sell at the Government's offered price or when the Government cannot acquire clear title without judicial determination.

Sharply rising real estate prices and administrative expenses make it particularly desirable to expedite acquisitions, although the condemnation of real property is a complex process that cannot be easily simplified.

This same report indicated that only about 10 percent of all properties to be acquired are acquired by eminent domain

and that condemnation action is only required when the owner is so unwilling to sell or so aggrieved at the Government's offering price that he is willing to endure years of delay and risk of considerable expense for a judicial determination.

Indeed the report states:

Condemnation action is generally needed when a landowner is unwilling to sell at the Government's offered price or when the Government cannot acquire clear title to the property without judicial determination. Acquisition by condemnation is a means of last resort. To avoid litigation and relieve congestion in the courts, Federal agencies are required by law (Public Law 91-646 (42 U.S.C., 4651)), to the greatest extent practicable, to make every reasonable effort to acquire expeditiously real property by negotiation.

Since conservancy group acquisitions and congressionally mandated wilderness purchases represent a significant proportion of the market for wilderness attributes as best use of certain parcels, this appraiser has decided to recognize as arms-length transactions government purchase of wilderness tracts directly from the owner when it was accomplished through extended negotiations. In some cases, state or federal government have been acquiring parcels to complete wilderness areas or remove development threats to areas of solitude by negotiated purchase even though the agencies involved had not been given specific powers of eminent domain for such projects, as for example federal acquisitions in the Idaho primitive area. In other cases, the threat of implied eminent domain is

not in the interest of either party in terms of financial advantage. Moreover, this appraiser will assume that after careful investigation of transactions for outright gifts (which would disqualify transactions), transfers of properties from conservancy groups to the government, or from individuals to conservancy groups, are at fair market value, or at least never greater than fair market value, so that their use as comparable sales is not to the disadvantage of the government. To do otherwise is to argue that there is no common denominator among transactions to acquire wilderness lands for wilderness purposes. We believe that it can be demonstrated (later in this section of the report) that there is a strong correlation and inference that wilderness acquisition prices have some relationship to wilderness and scenic qualities too strong to be coincidental.

THEREFORE THE DEFINITION OF ARMS-LENGTH TRANSACTIONS IS EXTENDED TO INCLUDE FEDERAL ACQUISITIONS WHERE THREAT OF EMINENT DOMAIN WAS UNAVAILABLE OR, FOR PRACTICAL PURPOSES UNWORKABLE, AND CONSERVANCY GROUP ACQUISITIONS WHERE COMPLEX NEGOTIATION, CASH PAYMENTS AND TAX SHELTER MAY HAVE BEEN A FACTOR IN BRINGING THE BARGAIN PRICE PLUS AGENCY MARKUP CLOSE TO MARKET VALUE AS RECORDED FOR THE TRANSACTION.

With the exception above and with the discussion in Section I of consumer demand for wilderness, it is concluded that there is an orderly market with a reasonable number of transactions for parcels of rare scenic quality and wilderness scale at arms length so that Condition 1 of the market comparison approach is satisfied.

C. Basic Data Screens and Initial Data Sweep

The general search for sales transactions is first constrained by determination of highest and best use as a mountainous wilderness tract featuring lake and stream waterforms, some commercial forest cover of the type found in generally dry, non-coastal altitudes, and relatively similar opportunities for challenging wilderness recreation, naturalness, solitude, and diversity of scenic elements. Coastal rainfalls led the appraiser to rule out properties in the Western Cascades of Washington and Oregon and in the forests of northern California. Snowcapped mountain ranges were considered in Colorado, Wyoming, Washington, Idaho and western Montana. The search was further narrowed to emphasize the northern and eastern Cascades in Chelan, Skagit, and Snohomish Counties in Washington, the Idaho Primitive Areas in the general vicinity of the Salmon, Big Creek, Monumental Creek Districts, and in the Spanish Peaks Primitive Areas of Gallatin and Lewis and Clark counties of Montana. These latter two areas

were somewhat drier but otherwise more similar in elevation and terrain than lands to the south. What is high country along the northern border at 8,000 to 10,000 feet is barely the end of the timberline in the southern latitudes of Teton Valley, Wyoming or the Colorado Rockies. Within these still broad parameters, the methods of sale transaction search reflected the emphasis placed on proximity to the eastern Cascades, similarity of terrain, latitude, and altitude, and as far as possible, a motivation on the part of the buyer to conserve the property in its natural state.

The title company searched Chelan County for land transactions, contact with Washington appraisers uncovered some additional sales in Skagit and Snohomish counties, and correspondence with appraisers in other states, government agencies, conservancy groups, as well as review of various public reports on acquisition programs identified many other candidates in the five state area. The Pack River Group had collected a large collection of sales with little editorial control and continued to send the appraiser such transactions as came to their attention. Ultimately, a list of 40 sales became the focus of analysis, and these were quickly reduced to 15 when sites for home construction along the Icicle, Chelan acreage for timber cutting, recreational development, and commercial outfitting were eliminated, or conversations with

federal officials or the grantor indicated that buyer motivation and economic purposes were not compatible with the concept of best use and a scoring of wilderness in terms of its wilderness quality.

Many properties which seemed appropriate in terms of purpose of acquisition and locale were determined to be inappropriate after visual inspection by helicopter by the appraiser and his photographer during the Summers of 1979 and 1980, and in one case, Spring of 1981. Of more than 40 candidates, 15 remained and form the basis for Appendix A, where property details, legal descriptions, and supporting documents have all been assembled. A basic identification is provided in Exhibit IV-1. At this point, sales have been selected because of their size, representative character of a mountain region or high country, buyer motivation, and broad visual similarity but prior to detailed analysis in terms of the elements specified in Section II.

These a priori selections must then be equalized for external differences in regard to terms of sale, regional locale, degree of improvement, and differences in terms of sale and purchasing power at the time of sale. Only after adjustment can sale prices be matched to wilderness attributes purchased and at that point statistical data management may suggest a further ex post rejection of one or more comparables. A summary

SUMMARY OF SELECTED COMPARABLE SALES
AND ADJUSTED PRICES FOR PACK RIVER APPRAISAL

<u>Landmark Comparable Number</u>	<u>Property Name</u>	<u>Grantor- Grantee</u>	<u>Size in Acres</u>	<u>Date of Sale</u>	<u>Total Adj. Price</u>	<u>Adj. Price Per Acre</u>
1	Crescent Marble	Crescent Marble Mining Co.- USA	120.00	11-14-73	\$501,000	\$4,172
2	Phelps Creek	Smith-Two Rivers, Inc.	357.00	7-15-79	287,000	804
6	Bench-Caroline Lake	Pack River-Cashmere Mt.	41.70	1- -76	42,000	1,000
9	Sunset Lakes	Clausing & Work (Index Mining Co.)-Seattle Water Dept.	320.00	5-19-76	136,000	425
16	Bettis (Idaho Primitive)	Bettis & Jager-USA	160.00	7-01-79	497,000	3,106
17	Lanham (Idaho Primitive)	Lanham-USA	620.00	10-01-74	1,499,000	2,417
18	Matteson	Matteson-USA	81.83	10-01-75	281,000	3,435
19	Taylor (Taylor Ranch- Big Creek)	Taylor-University of Idaho	64.84	2- -69	132,000	2,036
22	Wolfinbarger	Wolfinbarger-USA	87.70	1-02-76	351,000	4,003
30	Sloan-Kettering	Sloan-Kettering-USA	462.82	8-09-76	937,000	2,024
35	Nature Conservancy (35 miles SSW of Bozeman)	The Nature Conservancy- USFS	3,677.00	4-12-77	958,000	260
36	Lone Peak, Inc.-Ankeny (25 miles S of Bozeman)	Lone Peak, Inc.-Ankeny	1,760.00	4-05-79	671,000	381
37	Markley (30 miles SW of Bozeman)	Markley-USA (USFS)	120.65	1-02-79	337,000	2,795
39	National Wildlife	Babcock-National Wildlife Federation	336.00	9-10-79	159,000	473
40	Mueller Ranch	The Nature Conservancy- State of Colorado DNR	640.00	10- -78	501,000	782

Sawtooth Ranch, Inc.

EXHIBIT IV - 1

IV-10

adjustment sheet of the preliminary set of comparable sales and the basis for adjustments are outlined in the following exhibits, as well as in Appendix A, and significant totals of acreage and adjusted price, by state and private or government grantees, are also provided as a basis for discussion in the next sub-section, D.

D. Adjustment of Comparable Sale
Prices for Externalities

To equalize comparative sales for terms of sale, regional locale, improvements included with land, differences in development or market pressures, and price change over time due to dollar devaluation, it is useful to set up some rules for adjusting sales prices to a common date (January 1, 1981), a common bundle of rights (sans mineral rights values, if any), terms of sale, and market context. While many of these adjustments are subjective judgments on the part of the appraiser, they must be carried through with consistency in application to each comparable. A Landmark comparable number, name, and basic data are provided in summary form in Exhibit IV-1, but the reader is reminded the bulk of material is in Appendix A. The adjustment rules and formulas are provided in Exhibit IV-2, 3, and 4, and the Chart of Individual Sales Adjustments of Comparable Properties is provided in Exhibit IV-5, including footnotes.

EXHIBIT IV-2

PACK RIVER
COMPARABLE SALES CHART
Assumptions and Explanations

COLUMN

- 1 The number in this column identifies comparable sales by a Landmark number for easier reference.
- 2 The property is identified by its common name, buyer and/or seller's name, or area.
- 3 The first name is the grantor and the second is the grantee.
- 4 Acreage of the property is shown here.
- 5 Total price is shown here.
- 6 & 7 Special terms and benefits identifies such items as financing, any rights reserved by the seller or any special rights given to the buyer. Column 7 makes the adjustment for column 6 by percentage, with dollar amount shown also.

Financing adjustments are as follows:

If financing was involved and:

1. Down payment less than 10%; -25% adjustment
 2. Down payment greater than 10% but less than 25%; -15% adjustment
 3. Down payment greater than 25% but less than 40%; -5% adjustment
 4. If the interest rate was normal (less than 8%); -5% adjustment (if adjusted for down payment, adjustment was not made for interest rate and vice versa).
- 8 Deductions are made here for improvements, etc., as shown.
 - 9 This is the total price for raw land only = column 5 - column 7 - column 8.
 - 10 Raw land price per acre = column 9/column 4.

11 & 12 The type or types of access into the property are shown and column 12 makes the adjustment for column 11, according to the following schedule:

1. Roadless; no adjustment
2. Jeep Trail; -5% (= .95)
3. Forest Road; - 10% (= .90)
4. Paved Highway; -20% (= .80)

13 The number in this column reidentifies comparable sales by the Landmark number for easier reference.

14 The name of the county in which comparable is located.

15 Column 15 adjusts raw land for the county in which the property is located for distance to a primary market as follows:

1. No adjustment if it's within 125 miles of an SMSA of 400,000 or more persons.
2. +7.5% (=1.075) if it's within 125 miles of an SMSA of less than 400,000 persons.
3. +10% (=1.10) if it's more than 125 miles from an SMSA of 100,000 or more persons.

16 The appraiser recognized that national public recognition and demand for recreation in the Aspen area of Colorado or the Teton Valley area of Wyoming is an influence on land prices, particularly areas where supply is limited and the area is close to major population centers.

STANDARD METROPOLITAN STATISTICAL AREAS
(SMSA)

1977 population estimate from Statistical Abstract of the
United States 1979

<u>SMSA</u>	<u>Population</u>
Billings, Montana	101,000
Boise City, Idaho	145,000
Denver - Boulder, Colorado	1,466,000
Great Falls, Montana	85,000
Seattle - Everett, Washington	1,436,000
Spokane, Washington	312,000

16 The index for national recognition was determined by using visitor-days information from the USDA Forest Service as follows:

USE OF NATIONAL FOREST UNITS (By Visitor Days)
 NATIONAL WILDERNESS PRESERVATION SYSTEM
 FISCAL YEAR 1979 (10-1-78 to 9-30-79)

<u>State</u>	<u>Wilderness + Primitive = Total</u>			<u>Total/ Wash. Total</u>	<u>Adjustment</u>
Colorado	1,032,000	73,800	1,105,800	1.75	-37.5% (=.625)
Idaho	245,600	217,900	463,500	.73	+12.5% (=1.125)
Montana	652,900	15,900	668,800	1.06	-5% (=.95)
Wash.	632,000		632,000	1.00	- 0 - - 0 -
Wyoming	706,600	113,700	820,300	1.30	-15% (=.85)

Therefore, approximately 1% adjustment was made for each 2% of difference from that state's visitor days usage to the norm (Washington's visitor days).

17 & 18 Column 17 shows the particular wilderness or primitive area, if applicable, and column 18 adjusts for the area, with the scale being based on visitor days (see explanation of column 16) as follows:

	<u>Visitor-Days</u>	<u>Visitor-Days/ Alpine Lakes</u>	<u>Adjustment</u>
Idaho			
-Selway-Bitterroot Wilderness	130,400*	.42	+5% (=1.05)
-Idaho Primitive	179,400	.58	+4% (=1.04)
Montana			
-Selway-Bitterroot Wilderness	71,600*	.23	+7% (=1.07)
-Spanish Peaks Primitive	15,900	.05	+9% (=1.09)
Washington			
-Alpine Lakes	311,200	1.00	- 0 -

*Selway-Bitterroot located in Idaho and Montana; total area use = 202,000

Here a 10% differential in visitor days was determined to give a 1% value differential, with Washington's Alpine Lakes being the base. No specific utilization adjustments were made for Colorado or Wyoming.

- 19 This column adjusts for development pressure or limited supply. A 10% adjustment was made if there was development pressure or a commercial use in place (= .90). A 50% adjustment was made if there was a limited supply adjustment (completion of assemblage for total control, much like purchasing the last item in a collector's set. (= .50).
- 20 The total percent adjustment results from a multiplication of all percentage adjustments from columns 12, 15, 16, 18 and 19.
- 21 The adjusted raw land price per acre results from applying the percentage adjustment in column 20 to the raw land price per acre in column 10 (= column 20 x column 10).
- 22 This column gives the date of sale for each of the comparable sales.

23 The adjusted raw land price per acre must then be adjusted for time to the appraisal date of January 1, 1981. Alternative methods would be match sales, expert opinion from a government agency, or an index reflecting changes -- in dollar purchasing power only. After review summarized as Items 1 and 2 below, it was decided to take an adjustment only for changes in dollar value. The source is the Implicit Price Deflator Index, survey of current business published by the Bureau of Economic Analysis (See Exhibit IV-3).

1. Rate of appreciation in wilderness lands has been increasing at an increasing rate for the past ten years; moreover, the rate has varied erratically and with volatility in some areas depending on recreational pressure, public perception of the limited supply after government purchases, or rate of devaluation of the dollar. For example, the Lanham ranch sale, (Landmark No. 17) in 1974 and the Bettis-Jager sale in 1979 (Landmark No. 16) are only a few miles apart in the same creek basin, both were dude ranches, both depended on airstrips, and both were surrounded by the vast Idaho Primitive area. The first sale at \$2,000 an acre compared to the second sale at \$5,500 an acre suggests a compound rate of return over six years of 18.36% per year.
2. A report by the Comptroller General which drew on the Department of Justice's Land and Natural Resources Division quoted Justice as estimating that each year's delay in processing condemnation cases through the courts would cost the government an additional \$31 million because of escalating land value on tracts valued by the government at \$332 million, an estimated inflationary rate of 10%. The land owners were claiming \$1.2 billion in the same actions.
3. Price deflator presumes a constant level of demand. as in alternative prices were inflated at a simple 6 percent per annum and at 6 percent until 1974, and 10 percent thereafter. The deflator proved an excellent compromise.

Report to the Congress of the United States by the
Comptroller General, CED-80-54, May 14, 1980, pp. 6-7.

- 24 The total time adjusted raw land price results from multiplication of the January 1, 1981, adjusted raw land price per acre by the number of acres (- column 23 x column 4).
- 25 The amount in this column is the amount in Column 24 rounded to the nearest thousand.

EXHIBIT IV-3

IMPLICIT PRICE DEFLATORS FOR GROSS NATIONAL PRODUCT

Year	Quarter Index Numbers, 1958 = 100				Quarter Index Numbers, 1972 = 100			
	I	II	III	IV	I	II	III	IV
1969	125.55	127.24	129.14	130.88				
1970	132.91	134.41	135.77	137.88				
1971	139.47	141.13	142.03	142.70				
1972	144.62	145.31	146.50	147.96				101.44
1973	149.95	152.61	155.67	158.93	102.89	104.65	106.57	109.05
1974					111.28	114.34	117.52	121.06
1975					124.16	125.95	128.19	130.14
1976					131.40	132.92	134.39	136.28
1977					138.27	140.86	142.63	144.56
1978					147.05	150.82	153.45	156.68
1979					160.22	163.81	167.20	167.47
1980					171.23	175.28	179.18	183.81
1981					188.25 ^r			

r = revised

Source: Survey of Current Business, U.S. Department of Commerce, Bureau of Economic Analysis. The following issues were used: (See Appendix E)

- July 1973, Volume 53, Number 7
- July 1974, Volume 54, Number 7
- July 1976, Volume 56, Number 7
- July 1977, Volume 57, Number 7
- July 1978, Volume 58, Number 7
- August 1979, Volume 59, Number 8
- July 1980, Volume 60, Number 7
- May 1981, Volume 61, Number 5

EXHIBIT IV-4

SUMMARY OF RESULTS OF THREE ALTERNATIVES CONSIDERED
 FOR UPDATING ADJUSTED SALES PRICE FOR APPRECIATION AND INFLATION
 FROM DATE OF SALE TO JANUARY 1, 1981
 (IMPLICIT PRICE DEFLATOR WAS USED)

<u>Comparable Sale Number</u>	<u>6% annual Compounding*</u>	<u>6% to 1-1-74; 10% 1-1-74 to 1-1-81**</u>	<u>Implicit Price Deflator</u>
1 Marble Creek	\$ 443,000	\$ 574,000	\$ 501,000
2 Phelps Creek	278,000	294,000	287,000
6 Bench-Caroline	39,000	47,000	42,000
9 Sunset Lake	125,000	147,000	136,000
16 Bettis	482,000	509,000	497,000
17 Lanham	1,347,000	1,697,000	1,499,000
18 Matteson	264,000	321,000	281,000
19 Taylor Ranch	121,000	157,000	132,000
22 Wolfinbarger	328,000	395,000	351,000
30 Sloan-Kettering	869,000	1,027,000	937,000
35 Nature Conservancy	892,000	1,025,000	958,000
36 Ankeny	647,000	690,000	671,000
37 Markley	323,000	347,000	337,000
39 National Wildlife	152,000	159,000	159,000
40 Mueller Ranch	475,000	516,000	501,000
	<hr/>	<hr/>	<hr/>
	\$6,785,000/ 8849.54 Acres	\$7,905,000/ 8849.54 Acres	\$7,289,000/ 8849.54 Acres
	=	=	=
	\$766.71/Acre	\$893.27/Acre	\$823.66/Acre

UPDATING ADJUSTED SALES PRICE FOR APPRECIATION AND INFLATION FROM
DATE OF SALE TO JANUARY 1, 1981 AT SIX PERCENT (6%) ANNUAL COMPOUNDING

Land- mark No.	Date of Sale	Nearest (1/4) (1-1,4-1,7-1 or 10-1)	Adj. Raw Land Price Per Acre	Years to 1-1-81	Adj. to 1-1-81 Price Per Acre	Size in Acres	Adj. Total Land Price 1-1-81	Previous Column Rounded to Nearest Thousand
1	11-14-73	10-1-73	\$2,417	7.25	\$3,687.60	120	\$442,512	\$443,000
2	7-15-79	7-1-79	714	1.5	779.21	357	278,178	278,000
6	1- -76	1-1-76	698	5.0	934.08	41.7	38,951	39,000
9	5-19-76	7-1-76	300	4.5	389.94	320	124,781	125,000
16	8-12-79	7-1-79	2,759	1.5	3,011.00	160	481,760	482,000
17	8-20-74	10-1-74	1,509	6.25	2,171.96	620	1,346,612	1,347,000
18	11-5-75	10-1-75	2,375	5.25	3,224.92	81.83	263,895	264,000
19	2- -69	1-1-69	931	12.0	1,873.35	64.84	121,468	121,000
22	1-2-76	1-1-76	2,794	5.0	3,739.00	87.7	327,910	328,000
30	8-9-76	7-1-76	1,445	4.5	1,878.21	462.82	869,273	869,000
35	4-12-77	4-1-77	195	3.75	242.62	3,677	892,114	892,000
36	4-5-79	4-1-79	332	1.75	367.64	1,760	647,047	647,000
37	1-2-79	1-1-79	2,379	2.0	2,673.04	120.65	322,503	323,000
39	9-10-79	10-1-79	420	1.25	451.73	336	151,781	152,000
40	10- -78	10-1-78	651	2.25	742.20	<u>640</u>	<u>475,006</u>	<u>475,000</u>
						<u>8,849.54</u>	<u>\$6,783,791</u>	<u>\$6,785,000</u>

IV-21

EXHIBIT IV - 4a

Schwabach Research, Inc.

Soudanick Research, Inc.

UPDATING ADJUSTED SALES PRICE FOR APPRECIATION AND INFLATION FROM DATE OF SALE TO
 JANUARY 1, 1981 AT SIX PERCENT (6%) ANNUAL COMPOUNDING TO JANUARY 1, 1974, AND TEN
 PERCENT (10%) ANNUAL COMPOUNDING FROM JANUARY 1, 1974, TO JANUARY 1, 1981

Comparable Sale Number	Date of Sale	Nearest (1/4) (1-1, 4-1, 7-1, or 10-1)	Adjusted Raw Land Price Per Acre	Years to 1-1-74	Adjusted to 1-1-74 Price Per Acre	Years to 1-1-81	Adjusted to 1-1-81 Price Per Acre	Size in Acres	Adjusted Total Land Price 1-1-81	Previous Column Rounded to Nearest 1,000
1	11-14-73	10-1-73	\$2,417	.25	\$2,452.47	7.0	\$4,779.16	120	\$573,500	\$574,000
2	7-15-79	7-1-79	714	--	--	1.5	823.73	357	294,072	294,000
6	1- -76	1-1-76	698	--	--	5.0	1,124.14	41.7	46,877	47,000
9	5-19-76	7-1-76	300	--	--	4.5	460.67	320	147,414	147,000
16	8-12-79	7-1-79	2,759	--	--	1.5	3,183.03	160	509,285	509,000
17	8-20-74	10-1-74	1,509	--	--	6.25	2,737.75	620	1,697,405	1,697,000
18	11-5-75	10-1-75	2,375	--	--	5.25	3,917.20	81.83	320,544	321,000
19	2- -69	1-1-69	931	5.0	1,245.89	7.0	2,427.88	64.84	157,424	157,000
22	1-2-76	1-1-76	2,794	--	--	5.0	4,499.76	87.7	394,629	395,000
30	8-9-76	7-1-76	1,445	--	--	4.5	2,218.89	462.82	1,026,947	1,027,000
35	4-12-77	4-1-77	195	--	--	3.75	278.78	3,677	1,025,074	1,025,000
36	4-5-79	4-1-79	332	--	--	1.75	392.26	1,760	690,378	690,000
37	1-2-79	1-1-79	2,379	--	--	2.0	2,878.59	120.65	347,302	347,000
39	9-10-79	10-1-79	420	--	--	1.25	473.14	336	158,975	159,000
40	10- -78	10-1-78	651	--	--	2.25	806.70	<u>640</u>	<u>516,288</u>	<u>516,000</u>
								<u>8,849.54</u>	<u>\$7,906,114</u>	<u>\$7,905,000</u>

IV-22

EXHIBIT IV - 4b

UPDATING ADJUSTED SALES PRICE FOR APPRECIATION AND INFLATION FROM DATE OF SALE
TO JANUARY 1, 1981, USING THE IMPLICIT PRICE DEFLATOR FOR GROSS NATIONAL PRODUCT

Comparable Sale Number	Date of Sale	In Quarter (I, II, III, IV) & Year	Adjusted Raw Land Price Per Acre	Implicit Price Deflator for Quarter of Sale Date 1972 = 100	Adjusted to 1-1-81 Price/Acre*	Size in Acres	Adjusted Total Land Price 1-1-81	Previous Column Rounded to Nearest Thousand
1	11-14-73	IV '73	\$2,417	109.05	\$4,172.40	120	\$500,688	\$501,000
2	7-15-79	III '79	714	167.20	803.89	357	286,989	287,000
6	1- -76	I '76	698	131.40	999.99	41.7	41,700	42,000
9	5-19-76	II '76	300	132.92	424.88	320	135,962	136,000
16	8-12-79	III '79	2,759	167.20	3,106.35	160	497,016	497,000
17	8-20-74	III '74	1,509	117.52	2,417.20	620	1,498,664	1,499,000
18	11-5-75	IV '75	2,375	130.14	3,435.48	81.83	281,125	281,000
19	2- -69	I '69	931	86.07**	2,036.12	64.84	132,022	132,000
22	1-2-79	I '76	2,794	131.40	4,002.82	87.7	351,047	351,000
30	8-9-76	III '76	1,445	134.39	2,024.12	462.82	936,803	937,000
35	4-12-77	II '77	195	140.86	260.60	3,677	958,226	958,000
36	4-5-79	II '79	332	163.81	381.53	1,760	671,493	671,000
37	1-2-79	I '79	2,379	160.22	2,795.20	120.65	337,241	337,000
39	9-10-79	III '79	420	167.20	472.88	336	158,888	159,000
40	10- -78	IV '78	651	156.68	782.17	640	500,589	501,000
						<u>8,849.54</u>	<u>\$7,288,453</u>	<u>\$7,289,000</u>

*Formula Used:
$$\frac{I '81 = 188.25 (1972 = 100 \text{ Base})}{(188.25)(\text{Adj. Raw Land Price Per Acre})}$$

1-1-81 Price Per Acre = (Implicit Price Deflator for Quarter of Sale Date)

**1958 = 100 Base I '69 = 125.55 to IV '72 = 101.44
1972 = 100 Base IV '72 = 147.96
Conversion to 1972 = 100 Base: $\frac{101.44}{147.96} = \frac{x}{125.55}$

x = 86.07

IV-23

EXHIBIT IV - 4c

Standard Research, Inc.

COMPARABLE SALES - WASHINGTON

1	2	3	4	5	6	7	8	9	10	11	12
Land-mark No.	Property Name	Grantor-Grantee	Size in Acres	Total Price	Special Terms & Benefits	Adj. for Previous Column	Deductions for Improvements	Land Price	Raw Land Price Per Acre	Access	Adj. for Access
1	Crescent Marble	Crescent Marble Mining Co.-USA	120	290,000	Inc. mineral rts Affidavit = 0	--	--	290,000	2,417	Foot trail	--
2	Phelps Creek	Smith-Two Rivers, Inc.	357	350,000	Inc. mineral rts value = 20%*	-20% -70,000	-25,000	255,000	714	Dirt rd-1 pol Foot-3 pcls	--
6	Bench-Caroline Lake	Pack River Co. - Mt. Cashmere, Inc.	41.7	34,025	Buyer can use 2 adj. sections	-5% = -1,700	--	32,325	775	Helicopter	--
9	Sunset Lakes	Clausing & Work (Index Mining Co.)-Seattle Water Dept.	320	92,500	Tax Advantage	+3,500	--	96,000	300	Trail-foot	--
			<u>838.7</u>								

COMPARABLE SALES - WASHINGTON (Continued)

13	14	15	16	17	18	19	20	21	22	23	24	25
Land-mark No.	Location-County	Adj. for Previous Column	Index for National Recognition	Wilderness or Primitive Area	Index for Specific Utilization	Development Pressure or Ltd. Supply	Total \$ Adj.	Adj. Raw Land Price Per Acre	Date of Sale	1-1-81 Raw Land Price/Acre	1-1-81 Adj. Total Land Price	Col. 24 Rounded to Nearest Thousand
1	Skagit <125	--	--		--	--	--	2,417	11-14-73	4,172.40	500,688	501,000
2	Chelan <125	--	--		--	--	--	714	7-15-79	803.89	286,989	287,000
6	Chelan <125	--	--		--	.90	.90	698	1-1-76	999.99	41,700	42,000
9	Snohomish <125	--	--		--	--	--	300	5-19-76	424.88	135,962	136,000
										<u>965,339/838.7=</u>	<u>966,000/838.7=</u>	
										\$1,150.99/Acre	\$1,151.78/Acre	

*No adjustment for reasonable financing and reservation of mineral royalty

IV-24

EXHIBIT IV - 5a

Stadman Research, Inc.

Sawtooth Ranch, Inc.

COMPARABLE SALES - IDAHO

1	2	3	4	5	6	7	8	9	10	11	12
Land-mark No.	Property Name	Grantor-Grantee	Size in Acres	Total Price	Special Terms & Benefits	Adj. for Previous Column	Deductions for Improvements	Land Price	Raw Land Price Per Acre	Access	Adj. for Access
16	Bettis	Bettis & Jager - USA	160	880,000	--	--	100,000 ²	780,000	4,875	Trail	--
17	Lanham - (Flying W Ranch)	Lanham - USA	620	1,450,000	--	--	210,000	1,240,000	2,000	Trail, plane	--
18	Matteson	Matteson - USA	81.83	327,320	Seller ret. bldgs. buyer rt. to use some retained land	-15% = -49,098	-- ³	278,222	3,400	Air, foot	--
19	Taylor (Taylor Ranch-Big Creek)	Taylor-University of Idaho	64.84	100,000	--	--	20,000	80,000	1,234	Plane, trail	--
22	Wolfenbarger	Wolfenbarger - USA	87.7	350,800	--	--	--	350,800	4,000	Air, horse, foot	--
			1,014.37								

EXHIBIT IV - 5b

IV-25

13	14	15	16	17	18	19	20	21	22	23	24	25
Land-mark No.	Location-County	Adj. for Previous Column	Index for National Recognition	Wilderness or Primitive Area	Index for Specific Utilization	Development Pressure or Ltd. Supply	Total % Adj.	Adj. Raw Land Price Per Acre	Date of Sale	1-1-81 Raw Land Price/Acre	1-1-81 Adj. Total Land Price	Col. 24 Rounded to Nearest Thousand
16	Valley	1.075	1.125	Idaho Primitive	1.04	.45	.56599	2,759	8-12-79	3,106.35	497,016	497,000
17	Valley	1.075	1.125	Idaho Primitive	1.04	.60	.75465	1,509	8-20-74	2,417.20	1,498,664	1,499,000
18	Idaho	1.075	1.125	Selway-Bitter-root Wilderness	1.05	.55	.69841	2,375	11-5-75	3,435.48	281,125	281,000
19	Valley	1.075	1.125	Idaho Primitive	1.04	.60	.75465	931	2- -69	2,036.12	132,022	132,000
22	Idaho	1.075	1.125	Selway-Bitter-root Wilderness	1.05	.55	.69841	2,794	1-2-76	4,002.82	351,047	351,000
											2,759,874/	2,760,000/
											1,014.37 =	1,014.37 =
											2,720.78/acre	2,720.90/acre

Sandwich Ranch, Inc.

COMPARABLE SALES - COLORADO

1	2	3	4	5	6	7	8	9	10	11	12
Land-mark No.	Property Name	Grantor-Grantee	Size in Acres	Total Price	Special Terms & Benefits	Adj. for Previous Column	Deductions for Improvements	Land Price	Raw Land Price Per Acre	Access	Adj. for Access
40	Mueller Ranch	The Nature Conservancy-State of Colorado DNR	640	360,000	Assumption of R.E. tax plus charitable tax advantage	+154,480	--	514,480	804	Forest road	.90

COMPARABLE SALES - COLORADO (Continued)

13	14	15	16	17	18	19	20	21	22	23	24	25
Land-mark No.	Location-County	Adj. for Previous Column	Index for National Recognition	Wilderness or Primitive Area	Index for Specific Utilization	Development Pressure or Ltd. Supply	Total % Adj.	Adj. Raw Land Price Per Acre	Date of Sale	1-1-81 Raw Land Price/Acre	1-1-81 Adj. Total Land Price	Col. 24 Rounded to Nearest Thousand
40	Teller	--	--4		--	.90	.81	651	10- -78	782.17	500,589	501,000/ 640 = \$782.81/Acre

*50% income tax gift advantage on \$280,000 + \$14,480 in unpaid real estate taxes assumed by buyer

IV-26

EXHIBIT IV - 5C

COMPARABLE SALES - WYOMING

1	2	3	4	5	6	7	8	9	10	11	12
Land-mark No.	Property Name	Grantor-Grantee	Size in Acres	Total Price	Special Terms & Benefits	Adj. for Previous Column	Deductions for Improvements	Land Price	Raw Land Price Per Acre	Access	Adj. for Access
30	Sloan-Kettering	Sloan-Kettering-USA	462.82	1,300,000	--	--	--	1,300,000	2,809	Foot	--

13	14	15	16	17	18	19	20	21	22	23	24	25
Land-mark No.	Location-County	Adj. for Previous Column	Index for National Recognition	Wilderness or Primitive Area	Index for Specific Utilization	Development Pressure or Ltd. Supply	Total % Adj.	Adj. Raw Land Price Per Acre	Date of Sale	1-1-81 Adj. Raw Land Price/Acre	1-1-81 Adj. Total Land Price	Col. 24 Rounded to Nearest Thousand
30	Teton	1.10	.85		--	.55	.51425	1,445	8-9-76	2,024.12	936,803	937,000/ 462.82 = \$2,024.55/Acre

FOOTNOTES TO PACK RIVER COMPARABLES

¹A \$10,000 adjustment was made for reservation of a residential building and a foundation site. An additional \$10,000 adjustment was made for the generator building, machine shed, and three residential structures, all in poor condition. All adjustments made by James A. Graaskamp.

²James A. Graaskamp estimated \$100,000 for improvements.

³Seller retained buildings and right to use airstrip.

⁴This property should not be adjusted for national recognition at the time of sale per James A. Graaskamp.

IV-27

EXHIBIT IV - 5d

COMPARABLE SALES - MONTANA

1	2	3	4	5	6	7	8	9	10	11	12
Land-mark No.	Property Name	Grantor-Grantee	Size in Acres	Total Price	Special Terms & Benefits	Adj. for Previous Column	Deductions for Improvements	Land Price	Raw Land Price Per Acre	Access	Adj. for Access
35	Nature Conservancy (35 mi. SSW of Bozeman)	The Nature Conservancy - USFS	3,677	950,000	--	--	--	950,000	258	Jeep trail	.95
36	Lone Peak, Inc.-Ankeny (25 mi. S of Bozeman)	Lone Peak, Inc.-Ankeny	1,760	600,000	--	--	--	600,000	341	Rd. to 1 sec. & jeep trail balance	.95
37	Markley (30 mi. SW of Bozeman)	Markley - USA (USFS)	120.65	350,000	--	--	--	350,000	2,901	Federal hwy.	.80
39	National Wildlife	Babcock-National Wildlife Federation	336	400,000	*	-210,000 -55,000	--	135,000	402	Water	--
			<u>5,893.65</u>								

13	14	15	16	17	18	19	20	21	22	23	24	25
Land-mark No.	Location-County	Adj. for Previous Column	Index for National Recognition	Wilderness or Primitive Area	Index for Specific Utilization	Development Pressure or Ltd. Supply	Total % Adj.	Adj. Raw Land Price Per Acre	Date of Sale	1-1-81 Adj. Raw Land Price/Acre	1-1-81 Adj. Total Land Price	Col. 24 Rounded to Nearest Thousand
35	Gallatin	1.10	.95	Spanish Peaks	1.09	.70	.75747	195	4-12-77	260.60	958,226	958,000
36	Gallatin & Madison	1.10	.95	Spanish Peaks	1.09	.90	.9739	332	4-5-79	381.53	671,493	671,000
37	Gallatin	1.10	.95	Spanish Peaks	1.09	.90	.8201	2,379	1-2-79	2,795.20	337,241	337,000
39	Lewis-Clark	1.10	.95		--	--	1.045	420	9-10-79	472.88	158,888	159,000
											<u>2,125,848/</u>	<u>2,125,000/</u>
											<u>5,893.65 =</u>	<u>5,893.65 =</u>
											<u>\$360.70/acre</u>	<u>\$360.56/acre</u>

*Partial loan to facilitate later trade--\$210,000 adjustment and interest \$55,000

IV-28

EXHIBIT IV - 5e

While many of the adjustments are technical in the traditional sequence of adjusting for terms, mineral rights, improvement deductions and location, several adjustments represent significant policy assumptions by the appraiser and should receive special notice:

1. The subject property will be purchased without mineral rights while many of the comparable properties involved title including mineral rights. For example, the Marble Creek acquisition included mineral rights but a letter was received from the seller indicating that after much exploration, the seller had concluded the rights were worthless; on the other hand, a similar comment on the Phelps Creek property was countered by the fact that the buyers perceived mineral opportunities in the one small parcel not tested by the seller and in any event the buyers acquired the hydroelectric rights. Thus, a substantial deduction was taken for potential mineral values and hydroelectric potential in the Pelton wheel. In some Idaho Primitive Area cases, there had never been any serious exploration or motivation for buyers and sellers to regard the mineral rights as significant or relevant so that no adjustment was made. The reader is referred to comments pertaining thereto on each comparable in Appendix A.

2. It was recognized that recreational land purchases are in part priced for their monopoly value, i.e., the degree to which they are protected by and surrounded by government owned wilderness to which the private property owner has relatively unrestricted access. Heavy adjustments were made for such conditions.

3. It was recognized that national and regional public recognition of certain areas such as Teton Valley or Colorado ski areas contribute to the demand for undeveloped roadless lands in those areas, and adjustments were made for visitor day pressures in these areas relative to Alpine Lakes as defined in the footnotes in Exhibit IV-2.

4. A dollar value was attached to improvements as a function of assessed value or as a judgment by the appraiser having inspected same by low level helicopter viewing. The value of dirt landing strips or log buildings built years ago is subjective and in part acceptable only in reference to the general romance of the site.

5. After sales prices had been adjusted to a common denominator, the raw adjusted price still needed correction for time. Although 7 out of 15 sales had occurred since 1978 and 10 since 1975, one excellent comparable went as far back as 1969. During that decade public sensitivity and demand for wilderness had increased and dollar values

had eroded. Dollar values could be adjusted using the Implicit Price Deflator Index provided quarterly by the U.S. Department of Commerce, Bureau of Economic Analysis, Exhibit IV-3 (Source publication is: SURVEY OF CURRENT BUSINESS, found in Appendix E), to adjust for inflation differences among prices. The question remained whether that left significant amounts of appreciation out of the computation. Therefore, two alternative, more arbitrary tests were made. In the opinion of the appraiser, wilderness lands could have appreciated 6 percent per annum until 1974 after which greater public sensitivity might have generated a maximum of 10 percent annual compound increases in price. (There is some scant support for 10 percent from GAO.) The alternative was 6 percent annual compounding, to avoid the impossible determination of just when the rate of increase took place. The aggregate results of all three approaches are provided in Exhibit IV-4, and it will be noted that the price deflator which can be supported by national data produces a price per acre that is a near perfect midpoint between the two alternatives. Therefore, prices were adjusted only for deflation although the appraiser believes that demand pressure may have

justified a somewhat higher adjustment for time. Computations for the deflator adjustment are provided in Exhibit IV-4 a, b, and c.

These sales prices, adjusted for time and other externalities, become the basis with which to appraise the subject property. These adjusted sales prices of wilderness properties, generally purchased with the explicit buyer objective or implicit recognition that the property would largely remain wilderness, meet the second condition of the market comparison approach identified at the beginning of Section IV. The group is summarized by state and by private or public grantee in Exhibit IV-5 a, b, c, d, e, and f with adjusted prices rounded to the nearest thousand. Exhibit IV-6 summarizes the comparables ranked by average wilderness score as explained in the following section.

E. Establishing Comparative Wilderness Scores for Comparables

The key to the market comparison approach is selecting a relevant unit for comparison, a unit that measures the kinds of utility which the buyer thinks he may be purchasing. A Mercedes-Benz and a Ford pick-up cannot be compared on price per pound, but corn land is rated in bushels per acre of production, and grazing land is compared on animal unit months of carrying capacity rather than just acres. Bushels and animal

Sawdust Ranch, Inc.

SUMMARY OF COMPARABLE SALES
 ADJUSTED TO JANUARY 1, 1981, AFTER ADJUSTMENT FOR EXTERNAL MARKET CONDITIONS

State	#Sale Units P=Private F=Federal	PRIVATE			FEDERAL			TOTAL PRIVATE & FEDERAL		
		Adjusted Total Land Price	Total Acres	1-1-81 Price/Acre	Adjusted Total Land Price	Total Acres	1-1-81 Price/Acre	Adjusted Total Land Price	Total Acres	1-1-81 Price/Acre
Washington	3P, 1F	465,000	718.7	647.00	501,000	120	4,175.00	966,000	838.7	1,151.78
Idaho	1P, 4F	132,000	64.84	2,035.78	2,628,000	949.53	2,767.69	2,760,000	1,014.37	2,720.90
Wyoming	--, 1F	--	--	--	937,000	462.82	2,024.55	937,000	462.82	2,024.55
Montana	2P, 2F	830,000	2,096	395.99	1,295,000	3,797.65	341.00	2,125,000	5,893.65	360.56
Colorado	1P, --	501,000	640	782.81	--	--	--	501,000	640	782.81
	7P, 8F = 15 Total	\$1,928,000	3,519.54	<u>\$547.80</u>	\$5,361,000	5,330	<u>\$1,005.82</u>	\$7,289,000	8,849.54	<u>\$823.66</u>

IV-33

EXHIBIT IV - 5f

15 POTENTIAL COMPARABLES RANKED BY AVERAGE WILDERNESS
SCORE PER 10 ACRES TOGETHER WITH OTHER RARE II RANKINGS

	Landmark No.	Name	No. of Acres	Adjusted Price	Price/ Acre	Natural Integrity Score	Solitude	Prime Recrea- tional	Scenic Quality Score	Average Wilderness Per 10 Acres	10 Acre Calls
1	9	Sunset Lakes	320	136,000	425	2.50	1.688	1.903	1.535	7.627	32
2	40	Mueller	640	501,000	782.81	2.50	.894	1.696	1.391	6.481	64
3	2	Phelps Creek	357	287,000	803.92	2.36	.981	1.678	1.369	6.325	42
4	16 G	Bettis	160	497,000	3,106.25	2.075	1.847	1.022	1.262	6.206	16
5	36	Ankeny	1,760	671,000	381.25	2.478	1.394	1.269	1.016	6.158	176
6	30 G	Sloan- Kettering	462.8	937,000	2,024.63	2.385	.764	1.479	1.237	5.864	48
7	39	National Wildlife	336	159,000	473.21	2.50	.518	1.125	1.562	5.668	44
8	18 G	Matteson	81.83	281,000	3,433.95	1.698	1.492	1.045	1.268	5.504	22
9	22 G	Wolfenbarger	87.7	351,000	4,002.28	1.771	1.485	1.001	1.172	5.428	18
10	6	Lake Caroline	41.7	42,000	1,007.19	1.944	1.281	1.411	.689	5.325	9
11	1 G	Marble Creek	120	501,000	4,175	2.322	1.197	1.030	.505	5.054	12
12	19	Taylor	64.84	132,000	2,035.78	1.39	1.572	.932	.948	4.842	17
13	17 G	Lanham	620	1,499,000	2,417.74	1.539	1.26	.859	.898	4.558	64
14	37 G	Markley	120.65	337,000	2,793.20	1.527	.817	.529	1.025	3.899	24
15	35*	Nature Con- servancy	3,677	958,000	260.54	.650	1.547	.459	.701	3.356	368

MEAN (AVERAGE)

1.976

1.249

1.163

1.105

5.486

STANDARD DEVIATION

.543

.3815

.413

.316

1.068

*(Without
Comparable
35)

MEAN (AVERAGE)

2.071

1.228

1.213

1.134

5.639

STANDARD DEVIATION

.4161

.387

.378

.307

.924

unit months are simple point systems which reflect complex combinations of soil, water, climate, and farming methods. Farm appraisal provides another useful analogy. When comparing farm sales it is necessary to reallocate the total purchase price to the different types of land, including tillable acres, meadowland, woodlot, bottomland, and so on in terms of their relative contribution to the farm as an enterprise. Similarly, it would be misleading to buy a complex system like a house on price per square foot, although it may be useful to compare apartments in terms of price per room if the rent structure is based on rent per room. In the same way, wilderness needs a unit per dollar for comparison purposes, and thus the appraisal team has developed a point-scoring system for wilderness attributes. Point systems are not a new idea in appraisal; point scores have been used many years for appraisal of land, office buildings, and even single-family homes. The following discussion explains the establishment of a wilderness score for each ten acre cell of subject property and comparable sale alike.

Section II described the collection and organization of physical attributes of the subject properties, the conversion of physical attributes into proxies for dynamic and environmental attributes such as solitude, challenge, scenic quality and wilderness, as well as linkages and legal

attributes. Section III provided the analysis that the highest and best use of the subject properties was either wilderness or access to recreational wilderness. Now these elements of physical, ascertainable facts must be combined into a scoring system which will permit construction of a land pricing model based on comparable sales relative to their similarities and differences in serving a wilderness use. Since the data is collected in ten acre cells, the object will be to establish a point score for each cell to the degree that it meets wilderness standards and then to assemble four ten acre cells into a forty acre unit which is often the basic unit of transaction in tracts of vacant land, that is, one quarter of a quarter section.

Data was collected on each comparable from the same sources and using the same methodologies as the procedures described in Section II relative to the subject properties, with two significant exceptions. Soil maps were not available for many of the comparable properties and remote areas for which there has been little priority for soil analysis. This omission will have no impact, since it would be relevant as an isolated variable primarily for development purposes and since it is otherwise represented by proxy in terms of expected combinations of vegetation, slope, and terrain. However, the variables for view from and to a cell could not utilize the

VIEWIT system since the centroid altitudes of surrounding terrain were not recorded. It was necessary for the appraiser, working with Sean Ahearn, to estimate manually the view shed of each cell and the intrusion from off-site viewing platforms into the privacy of each cell by using the U.S. Geological Survey Maps enclosed with each comparable package of information in Appendix A. These estimates were made directly to a scale of 10 rather than converted to a scale of 10 from a frequency count generated by VIEWIT. (See Procedures by Gates in Appendix D and Notes by Ahearn in Appendix B.) This manual procedure used 40 acre cells and imputed the same score to each 10 acre cell in the 40. The appraiser and Sean Ahearn were tested on randomly selected subject property quarter sections, and their judgments were found to be an acceptable approximation of VIEWIT scores in terms of "view from" but somewhat less reliable in terms of "view to." The latter variable was therefore given little weight in the final scoring system.

In summary, each comparable was analyzed for wilderness attributes to be comparable to the ten attributes scored for the subject property, specifically:

1. Apparent naturalness
2. Distance to perimeter
3. View from cell-reversed
4. View to cell-reversed
5. Vegetation screening
6. Challenge
7. Diversity - percent slope
8. Diversity - terrain
9. Scenic quality
10. View from cell-normal

Given the compatibility of relevant data for the subject property and computerized comparable data, it was then possible to construct a scoring system reflecting the RARE II attributes of natural and apparent naturalness, solitude, primitive recreation experience, and scenic quality from the 10 attributes above. The elements of this scoring process are summarized in Exhibit IV-7 and converted to proxies of RARE II concepts in Exhibit IV-8, repeating Exhibits II-8 and II-9 for convenience.

Each of the variables included in the Wilderness Evaluation System List and in the Scenic Quality System List were converted to a standard ten score and combined to determine the total score per cell, a natural integrity score, and a scenic quality score. It should be noted that scoring is an ordinal system which does not permit direct comparison between variables without scaling to a common measure. Therefore, scaling to a common denominator is required in order to combine and take a simple mean of cell scores to determine the score for the total parcel. In this case the common denominator is

EXHIBIT IV - 7

COMPARABLE SUMMARY SHEET

I. WILDERNESS (.25)

.25	1.	Natural Integrity (Apparent Naturalness)	x.xxx	x.xxx
-----	----	---------------------------------------------	-------	-------

II. SOLITUDE (.25)

.0625	1.	Distance to Perimeter	x.xxx	
.0625	2.	View FROM Cell (Rev.)	x.xxx	
.0625	3.	View TO Cell (Rev.)	x.xxx	
.0625	4.	Vegetation Screening	x.xxx	x.xxx

III. PRIMITIVE RECREATION EXPERIENCE (.25)

.083	1.	Challenge (Physical Feature)	x.xxx	
.083	2.	Diversity - % Slope	x.xxx	
.083	3.	Diversity - Terrain	x.xxx	x.xxx

IV. SCENIC QUALITY (.25)

.20	1.	Scenic Quality	x.xxx	
.05	2.	View from Cell	x.xxx	x.xxx

AVERAGE ATTRIBUTE SCORE PER CELL x.xxx

ADJUSTED PURCHASE PRICE xxx,xxx.

TOTAL CELLS IN COMP	xx.xx
TOTAL ACRES IN COMP	xx.xx
TOTAL ATTRIBUTE POINTS	xxx.xx

AVERAGE PRICE PER POINT PER CELL xxx.xx

AVERAGE PRICE PER ACRE PER CELL xxx.xx

EXHIBIT IV-8

A List of the Dynamic Attributes Used in the Pack River Appraisal

- Part 1 - Wilderness Evaluation System
- Part 2 - Scenic Quality System (SQS)

Part 1: The Wilderness Evaluation System (WES)

(I) Natural Integrity - Apparent Naturalness^a is damaged by presence of:

- 1) paved road
- 2) clear-cut, logging operation
- 3) buildings
- 4) trails, fences

(II) Opportunity for Solitude is aided and abetted by data factors reflecting:

- 1) view from
- 2) view to
- 3) vegetative screening (stocking class)
- 4) distance perimeter to core

(III) Opportunity for a Primitive Recreation Experience is increased by each additional element in diversity reflected in data factors which impute challenge or diversity:

1) challenge

a) Rockform present

- 1) avalanche chute (snow or rock)
- 2) talus slope or boulder field
- 3) rock outcrop
- 4) cliff
- 5) pinnacle
- 6) cirque
- 7) permanent snow field
- 8) glacier

b) vegetative overstory

c) percent slope

2) Diversity (see VQS)

- a) physiography
- b) rockform
- c) vegetation
- d) waterform

^aThese two elements are separate categories in RARE II; given the fact that comparables were presumed to be wilderness candidates, a perfect wilderness score of 10 is presumed and adjusted downward for items listed. Apparent naturalness is recognized indirectly in the descending penalty score which reflects curability and observability from a distance. All areas were subject to fire control and fire histories were not available so this factor in apparent naturalness was ignored. (See Appendix C, Sean Ahearn tab, for further details.)

EXHIBIT IV-8 (Continued)

Part 2: The Scenic Quality System (SQS)^b

I) Physiography

- 1) Sharp dissected uneven slopes
- 2) Moderately dissected slope
- 3) Irregular landscape
- 4) Ridged landscape
- 5) Peak

II) Rockform

- 1) Avalanche chute (rock)
- 2) Avalanche chute (snow)
- 3) Talus slope or boulder field
- 4) Rock outcrop - 2 acres
- 5) Rock outcrop 2-5 acres
- 6) Rock outcrop 5+ acres
- 7) Cliff
- 8) Pinnacle
- 9) Cirque
- 10) Permanent snow field
- 11) Glacier
- 12) Rock dome

III) Vegetation

- 1) Stocking 10 to 39%
- 2) Stocking 49 to 69%
- 3) Stocking 70%
- 4) Large old growth timber
- 5) Dry meadow
- 6) Wet meadow

IV) Waterform

- 1) Unusual shoreline configuration (Lakes)
- 2) Falls
- 3) Rapids
- 4) Meander

^bThese factors reflect elements of diversity revealed by VEP study (Appendix D) to be prominent in scenic quality ratings of people who make the effort to enter the area on foot and selected for the fact that data could be gathered from air photos. Each data point implies smaller subsystems, such as flowers in the dry meadow, color patterns in rock outcrops, or distant views which include a mountain peak. See Sean Ahearn tab in Appendix C.

100 percent with Wilderness, Solitude, Primitive Recreation, and Scenic Quality each weighted 25 percent. As previously discussed, the RARE II standards recognized the significance of scenic quality or historic elements but failed to provide any standardized system for treating these vectors of RARE II. As explained in Section II, I and J, 25 percent weight on Scenic Quality is supported by findings in Niemann-Chenoweth's surveys and a consensus among congressional drafters and supporters of ALMA that scenic quality was the thrust of preservation objectives, the distinguishing element which made the lands rare, in short supply, and in growing public demand. However, it is conceivable that other types of wilderness, such as salt marsh or desert dunes, would require a different weighting and different data items to meet the viewers' consensus of important attributes. Detailed scores for each of these variables by cell and a summary sheet for each comparable by category, combining points and adjusted purchase price, are included in Appendix A. The format of this summary sheet indicating the weights by category and components is provided in Exhibit IV-7.

F. Analysis of Summary Scores
for Comparables

Critical summary information from the computer data sheets for each comparable in Appendix A is presented in rank order

Sunset Lake, Inc.

form in Exhibit IV-6 as a basis for discussion. Until all the data has been entered, processed by the computer, and related to the adjusted price, there is no way of knowing objectively what the scores in terms of dollars per point for purposes of comparison will be or whether there will in fact be a pattern of consistency which would justify a prediction or inference of price relative to the subject properties. Nevertheless, most observers of the photographs of the comparable properties, even without additional information, would have undoubtedly rated Sunset Lake (No. 1), and the Mueller Ranch Dome Rock (No. 40) as the best properties in terms of model wilderness specimens, natural integrity, and scenic quality.

Phelps Creek (No. 2) has strong wilderness characteristics but solitude and natural integrity are damaged by the road and improvements on two of its lower elevation cells. Recreational challenge is high because of its altitude on upper parcels and scenic quality is enhanced by the presence of an intermittent stream to provide diversity of vegetation and terrain. It is useful to look at Bettis (No. 16 G), Lanham (No. 17 G), and Taylor (No. 19) sales together. The Lanham property was the largest, but only a few cells have the benefit of streams; its diversity score was dampened by averaging the attractive cells with a larger number of cells of dry and wet meadow. The airstrip and ranch buildings together with crisscrossing trails

depress the national integrity score. The Bettis property had a very high scenic quality score primarily because it had more shoreline on Monumental Creek and had a second smaller creek as well so that water forms improved the score significantly. The natural integrity score is overstated, damaged only by the airstrip, since the buildings remain just offsite in control of the seller. The Taylor Ranch was the smallest, had the largest proportion of its area in river-bottom meadow reducing the diversity score, and was fully improved with ranch buildings and airstrip. Because the cells with physical improvements were a larger proportion of the total cells in Taylor, the natural integrity score was very low.

The Sloan-Kettering property has better than average scenic quality, but its natural integrity is damaged by the presence of a trail in a third of its cells and a direct view of the Jackson Hole airport. The Ankeny sale in the Spanish Primitive Area has average scenic beauty, but high natural integrity because the data cells reflect the minimal man-made disturbance that existed before the developer brought in roads and power lines to a major section of his purchase. The government immediately traded for his high-country parcels, which had contributed a major source of strength to the natural integrity score. The appraiser is ambivalent about this sale as motivation was mixed, partly development and partly

conservation at an undisclosed value. However, it is the largest sale of high country.

Contrast the Ankeny sale with that of the Nature Conservancy (No. 35) (Goodrich Ranch) where scenic quality was low due to the lack of physical diversity and clearcut zones. Natural integrity was devastated by over a thousand acres of clearcut and roads. The appraiser decided that its scores for wilderness, natural integrity, and scenic quality disqualified it from further consideration and the appraisal will depend on 14 comparables.

Most surprising however, was the result on the Marble Creek (No. 1 G) property, 120 acres in the Northern Cascades, that visually and geographically had much in common with the subject properties. However, the scenic quality score was extremely low for lack of diversity since timber stocking was more or less constant and the creek and wet meadow characterized only two or three cells of the twelve in the property. The natural integrity score as wilderness was relatively high, except that it was damaged by the presence of a mine shaft and tailings on two cells.

G. Establishing Basis for Market Comparison

To apply the market comparison approach it is then necessary to match physical attributes of the comparable sales to the physical attributes of the subject properties in order

to choose the best comparables for each subject property. Given the great diversity of wilderness attributes in many of the large tracts and the finely detailed attribute descriptions, the matching process requires a smaller unit of comparison as a common denominator, and in this case the appraiser chose 40 acres as the appropriate unit of comparison and pricing because the quarter-quarter section is often a unit of trading in the purchase and sale of recreational/wilderness land. The use of a 40-acre base for comparison is analogous to the comparison of an apartment project in terms of the number of bedrooms because projects have varying numbers of apartments and different mixes of one, two, and three bedroom units; similarly, it is analogous to farm appraisal where a 120-acre purchase, for example, might be compared in units of 40 acres tillable, 40 acres wetland and woodlot, and 40 acres of meadow in order that price comparisons can be more sensitive to differences in both physical attributes and farm sizes (in terms of number of 40-acre units) which are found in the array of comparable sales. To this end, the 10-acre cells of both the subject properties and the comparable sales were regrouped into 40-acre units and given the geo-code or location identifier of the 10-acre cell in the upper left hand corner of the 40-acre unit.

This process created a total of 590 40-acre units for the subject property listed as part of the final valuation in Exhibit IV-9 and 173 40-acre sub-units from 14 comparable sales listed in Exhibit IV-10.

Relative to the comparable sales, the total sales price of the property was reallocated to each 40-acre sub-unit in proportion to the ratio of the total wilderness attribute score of the 40-acre section (the sum of the four 10-acre total scores) to the total point score of all sections in the comparable property. That process too is analogous to farm appraisal where the tillable land is regarded as, say, three times as valuable as meadowland and meadowland is twice as valuable as wetland and woodlot. The weights (or point scores) would be one (1) for woodlot, two (2) for meadowland, and six (6) for tillable land so the tillable land would receive 6/9 of the purchase price for the 120-acre example referred to above. At this point, the comparable sales data is ready for application to pricing of the subject 40's, but the problem remains to establish decision rules and techniques for matching 40-acre sub-units from the comparable sales to each of the 40-acre units of the subject property.

To this end, the appraiser utilized a data processing technique designed specifically for automated market comparison called MKTCOMP, a process developed at the University of

EXHIBIT IV - 10

COMPARABLE SALES DESCRIBED AS 173 40 ACRE SUB-SALE UNITS IDENTIFIED BY
Y AND X COORDINATES, CELL NO. OF NORTHWEST 10 ACRE CELL, AND NO. OF
10 ACRE CELLS IN A 40 ACRE SUB-UNIT
DESCRIPTION OF CODES

A = ID CODE; B = SALE ID; C = ALLOCATED PRICE; D = APPNTL;

E = DISTANCE; F = VIEWFRMR; G = VIEWTOR; H = VEGSCRN; I = CHALLENGE;

J = DIVSLOPE; K = DIVTERRA; L = VIEWTON; M = SCENICQL; N = ADJUSTED AMOUNT

	A	B	C	D	E	F	G	H	I	J
K	L	M	N							
C02 1 9.	2., 2.,	24046.,	10.00,	0.00,	1.56,	0.93,	0.00,	2.49,	1.66,	
	1.66, 0.76,	3.20, 22.27,								
C02 1 11.	1., 2.,	18764.,	10.00,	0.00,	1.56,	0.93,	0.00,	1.66,	1.00,	
	0.66, 0.76,	0.80, 17.38,								
C02 1 17.	4., 2.,	26506.,	10.00,	0.00,	1.69,	1.22,	0.00,	3.32,	1.66,	
	1.99, 0.66,	4.00, 24.54,								
C02 1 19.	2., 2.,	24208.,	10.00,	0.00,	1.69,	1.22,	0.00,	2.49,	1.33,	
	1.83, 0.66,	3.20, 22.42,								
C02 1 33.	4., 2.,	28522.,	10.00,	0.00,	1.82,	1.51,	0.00,	3.32,	1.33,	
	2.08, 0.56,	5.80, 26.41,								
C02 1 35.	2., 2.,	26130.,	10.00,	0.00,	1.82,	1.51,	0.00,	3.32,	1.00,	
	1.99, 0.56,	4.00, 24.20,								
C02 1 50.	2., 2.,	28836.,	9.15,	0.00,	1.82,	1.51,	0.13,	3.32,	1.00,	
	2.82, 0.56,	6.40, 26.70,								
C02 1 51.	2., 2.,	28130.,	10.00,	0.00,	1.82,	1.51,	0.25,	2.49,	1.00,	
	2.82, 0.56,	5.60, 26.05,								
C02 2 58.	1., 2.,	33332.,	10.00,	0.00,	2.02,	1.56,	0.25,	3.32,	2.32,	
	2.99, 0.40,	8.00, 30.86,								
C02 2 59.	1., 2.,	26860.,	10.00,	0.00,	2.02,	1.56,	0.25,	3.32,	1.66,	
	1.66, 0.40,	4.00, 24.87,								
C02 3 2.	2., 2.,	28486.,	10.00,	0.00,	2.02,	1.56,	1.26,	3.32,	1.66,	
	2.16, 0.40,	4.00, 26.38,								
C02 3 3.	2., 2.,	29530.,	10.00,	0.00,	2.02,	1.56,	1.26,	3.32,	1.66,	
	2.32, 0.40,	4.80, 27.34,								
C02 3 18.	3., 2.,	32357.,	10.00,	0.00,	2.02,	1.56,	0.92,	3.32,	1.66,	
	2.88, 0.40,	7.20, 29.96,								
C02 3 19.	2., 2.,	28454.,	10.00,	0.00,	2.02,	1.56,	1.26,	2.49,	1.33,	
	2.49, 0.40,	4.80, 26.35,								
C02 3 33.	4., 2.,	28852.,	7.88,	0.00,	2.02,	1.56,	1.26,	3.32,	1.66,	
	2.82, 0.40,	5.80, 26.72,								
C02 3 35.	2., 2.,	24676.,	5.00,	0.00,	2.02,	1.56,	1.26,	2.49,	0.50,	
	2.82, 0.40,	6.80, 22.85,								
C02 3 49.	4., 2.,	27823.,	10.00,	0.00,	1.89,	1.44,	1.01,	2.08,	1.33,	
	2.32, 0.50,	5.20, 25.76,								
C02 3 51.	2., 2.,	19918.,	8.30,	0.00,	1.89,	1.44,	1.26,	0.83,	0.50,	
	1.33, 0.50,	2.40, 18.44,								
C09 1 3.	4., 9.,	17395.,	10.00,	2.52,	1.76,	1.64,	1.01,	2.91,	3.07,	
	2.32, 0.60,	5.40, 31.23,								
C09 1 19.	4., 9.,	17282.,	10.00,	2.52,	1.89,	1.26,	1.26,	3.32,	3.32,	
	2.16, 0.50,	4.80, 31.03,								
C09 1 5.	4., 9.,	15945.,	10.00,	2.52,	1.76,	1.76,	1.07,	2.08,	2.08,	
	2.16, 0.60,	4.60, 28.63,								
C09 1 7.	4., 9.,	16193.,	10.00,	2.52,	2.02,	1.89,	0.69,	2.91,	2.91,	
	1.74, 0.40,	4.00, 29.07,								
C09 1 21.	4., 9.,	17027.,	10.00,	2.52,	1.76,	1.89,	0.19,	2.91,	1.33,	
	2.57, 0.60,	6.80, 30.57,								
C09 1 23.	4., 9.,	16883.,	10.00,	2.52,	1.76,	1.39,	0.76,	3.32,	2.16,	
	2.41, 0.60,	5.40, 30.31,								
C09 1 49.	4., 9.,	17436.,	10.00,	2.52,	1.76,	1.94,	0.06,	3.32,	2.49,	
	2.41, 0.60,	6.20, 31.30,								
C09 1 51.	4., 9.,	17773.,	10.00,	2.52,	1.76,	1.82,	0.76,	2.49,	1.99,	
	2.57, 0.60,	7.40, 31.91,								

EXHIBIT IV - 10 (Continued)

C40 1 1.	4.,40.,	29534.,	10.00,	0.00,	1.01,	1.26,	0.76,	1.66,	2.24,
	2.32,	1.20,	4.00,	24.45,					
C40 1 3.	4.,40.,	29638.,	10.00,	0.00,	1.76,	1.69,	0.19,	1.25,	2.49,
	2.16,	0.60,	4.40,	24.53,					
C40 1 17.	4.,40.,	29275.,	10.00,	0.00,	0.76,	0.50,	0.50,	2.49,	3.07,
	1.91,	1.40,	3.60,	24.23,					
C40 1 19.	4.,40.,	30631.,	10.00,	0.00,	1.76,	1.64,	0.32,	2.08,	2.49,
	2.08,	0.60,	4.40,	25.36,					
C40 1 5.	4.,40.,	32777.,	10.00,	0.00,	1.76,	1.89,	0.50,	1.25,	2.16,
	2.57,	0.60,	6.40,	27.14,					
C40 1 7.	4.,40.,	36550.,	10.00,	0.00,	1.76,	2.09,	0.25,	2.49,	3.07,
	2.99,	0.60,	7.00,	30.26,					
C40 1 21.	4.,40.,	34170.,	10.00,	0.00,	1.51,	1.76,	1.01,	2.49,	3.07,
	2.24,	0.80,	5.40,	28.29,					
C40 1 23.	4.,40.,	33008.,	10.00,	0.00,	1.51,	1.96,	1.26,	1.66,	3.32,
	2.41,	0.80,	4.40,	27.32,					
C40 1 33.	4.,40.,	28983.,	10.00,	0.00,	1.26,	0.81,	0.19,	2.08,	3.32,
	1.74,	1.00,	3.60,	24.00,					
C40 1 35.	4.,40.,	31285.,	10.00,	0.00,	1.51,	1.56,	0.06,	1.25,	1.66,
	2.66,	0.80,	6.40,	25.90,					
C40 1 49.	4.,40.,	29758.,	10.00,	0.00,	1.76,	1.94,	0.50,	1.66,	2.82,
	1.74,	0.60,	3.60,	24.63,					
C40 1 51.	4.,40.,	32453.,	10.00,	0.00,	1.76,	2.02,	0.44,	1.66,	1.66,
	2.32,	0.60,	6.40,	26.87,					
C40 1 37.	4.,40.,	32801.,	10.00,	0.00,	0.76,	0.50,	0.38,	3.32,	3.07,
	2.32,	1.40,	5.40,	27.15,					
C40 1 39.	4.,40.,	29084.,	10.00,	0.00,	1.39,	1.89,	0.38,	2.08,	3.07,
	1.58,	0.90,	2.80,	24.08,					
C40 1 53.	4.,40.,	29692.,	10.00,	0.00,	1.51,	1.76,	1.26,	0.83,	3.07,
	1.74,	0.80,	3.60,	24.58,					
C40 1 55.	4.,40.,	31444.,	10.00,	0.00,	1.39,	1.51,	1.26,	1.66,	3.07,
	2.24,	0.90,	4.00,	26.03,					
C01 1 17.	4., 1.,	194031.,	10.00,	1.26,	1.56,	1.39,	0.06,	1.66,	3.07,
	1.33,	0.76,	2.40,	23.49,					
C01 1 33.	4., 1.,	131375.,	7.88,	1.26,	1.51,	1.01,	0.13,	0.00,	1.33,
	1.00,	0.80,	1.00,	15.91,					
C01 1 50.	2., 1.,	186000.,	10.00,	1.26,	2.14,	1.51,	2.52,	0.00,	3.32,
	0.66,	0.30,	0.80,	22.52,					
C01 1 51.	2., 1.,	165184.,	10.00,	1.26,	2.14,	1.51,	0.00,	0.00,	3.32,
	0.66,	0.30,	0.80,	20.00,					
C16 1 7.	4.,16.,	151080.,	9.15,	2.52,	2.31,	2.14,	0.25,	2.49,	1.33,
	2.82,	0.17,	7.00,	30.18,					
C16 2 1.	4.,16.,	112107.,	9.15,	2.52,	2.32,	2.14,	0.06,	0.00,	0.66,
	1.58,	0.16,	3.80,	22.39,					
C16 2 3.	4.,16.,	129301.,	9.15,	2.52,	2.27,	2.02,	0.19,	0.00,	1.25,
	2.24,	0.20,	6.00,	25.83,					
C16 2 19.	4.,16.,	104549.,	5.75,	2.52,	2.19,	1.94,	1.64,	0.42,	2.08,
	1.49,	0.26,	2.60,	20.88,					
C17 1 5.	4.,17.,	117020.,	7.50,	2.52,	1.89,	0.76,	0.50,	0.00,	1.91,
	1.99,	0.50,	5.20,	22.77,					
C17 1 21.	4.,17.,	72902.,	2.45,	2.52,	1.39,	0.50,	0.19,	0.00,	1.49,
	1.74,	0.90,	3.00,	14.19,					
C17 1 23.	4.,17.,	90092.,	7.08,	2.52,	2.02,	0.50,	0.13,	0.00,	1.33,
	1.16,	0.40,	2.40,	17.53,					
C17 1 37.	4.,17.,	51698.,	2.45,	2.52,	1.14,	0.50,	0.13,	0.00,	0.91,
	0.91,	1.10,	0.40,	10.06,					
C17 1 39.	4.,17.,	110289.,	9.58,	2.52,	2.02,	0.50,	0.13,	0.00,	1.83,
	1.49,	0.40,	3.00,	21.46,					
C17 1 53.	4.,17.,	55318.,	1.23,	2.52,	1.18,	0.50,	0.00,	0.00,	1.74,
	1.33,	1.06,	1.20,	10.76,					
C17 1 55.	4.,17.,	110408.,	9.15,	2.52,	1.18,	0.50,	0.06,	0.00,	1.91,
	1.49,	1.06,	3.60,	21.48,					

EXHIBIT IV - 10 (Continued)

C17 2 3.	4.,17.,	126068.,	7.50,	2.52,	1.69,	0.50,	0.19,	2.49,	3.07,
	1.91,	0.66,	4.00,	24.53,					
C17 2 17.	4.,17.,	87127.,	5.00,	2.52,	1.64,	1.26,	0.06,	0.00,	0.66,
	1.91,	0.70,	3.20,	16.96,					
C17 2 19.	4.,17.,	70579.,	2.50,	2.52,	1.01,	0.50,	0.25,	0.83,	1.91,
	1.41,	1.20,	1.60,	13.73,					
C17 2 5.	4.,17.,	101254.,	6.23,	2.52,	1.76,	0.50,	0.19,	0.00,	1.99,
	1.91,	0.60,	4.00,	19.70,					
C17 2 21.	4.,17.,	105702.,	10.00,	2.52,	1.56,	0.50,	0.00,	0.00,	1.49,
	1.33,	0.76,	2.40,	20.57,					
C17 2 36.	2.,17.,	36796.,	0.00,	2.52,	1.56,	0.76,	0.00,	0.00,	0.50,
	0.66,	0.76,	0.40,	7.16,					
C17 2 52.	2.,17.,	100458.,	8.30,	2.52,	1.56,	0.76,	0.13,	0.00,	1.33,
	1.00,	0.76,	3.20,	19.55,					
C17 3 23.	4.,17.,	102133.,	5.00,	2.52,	1.64,	1.76,	0.00,	0.00,	1.25,
	2.41,	0.70,	4.60,	19.88,					
C17 3 35.	4.,17.,	102615.,	9.58,	2.52,	1.64,	1.01,	0.25,	0.00,	1.08,
	1.00,	0.70,	2.20,	19.97,					
C17 3 37.	4.,17.,	127185.,	9.15,	2.52,	1.76,	1.26,	1.26,	1.25,	2.82,
	1.33,	0.60,	2.80,	24.75,					
C18 1 26.	1.,18.,	44864.,	8.30,	2.52,	1.76,	1.89,	0.00,	0.00,	1.66,
	1.00,	0.60,	1.60,	19.33,					
C18 1 19.	4.,18.,	62570.,	8.73,	2.52,	1.76,	1.76,	0.13,	1.25,	2.41,
	2.41,	0.60,	5.40,	26.96,					
C18 1 13.	2.,18.,	62514.,	9.15,	2.52,	1.51,	1.39,	0.13,	1.66,	2.82,
	2.16,	0.80,	4.80,	26.94,					
C18 1 15.	1.,18.,	48156.,	8.30,	2.52,	1.01,	1.26,	0.00,	0.00,	0.00,
	1.66,	1.20,	4.80,	20.75,					
C18 1 21.	4.,18.,	39098.,	2.08,	2.52,	1.39,	1.69,	0.13,	0.83,	1.16,
	2.16,	0.90,	4.00,	16.85,					
C18 1 23.	3.,18.,	46811.,	7.17,	2.52,	1.26,	1.26,	0.08,	0.00,	1.22,
	1.66,	1.00,	4.00,	20.17,					
C18 1 33.	4.,18.,	56068.,	8.30,	2.52,	1.89,	1.89,	0.76,	0.83,	1.33,
	1.74,	0.50,	4.40,	24.16,					
C18 1 35.	2.,18.,	56328.,	8.30,	2.52,	1.76,	1.51,	0.25,	0.00,	1.33,
	1.99,	0.60,	6.00,	24.27,					
C18 1 37.	1.,18.,	22060.,	0.00,	2.52,	1.51,	2.02,	0.00,	0.00,	1.66,
	1.00,	0.80,	0.00,	9.50,					
C19 1 17.	4.,19.,	32788.,	6.23,	2.52,	1.70,	2.05,	0.19,	0.83,	2.08,
	1.41,	0.65,	2.80,	20.46,					
C19 1 27.	2.,19.,	21792.,	0.00,	2.52,	1.51,	1.99,	0.25,	0.00,	1.33,
	1.99,	0.80,	3.20,	13.60,					
C19 1 29.	2.,19.,	37068.,	5.75,	2.52,	1.26,	1.89,	0.25,	0.83,	0.50,
	2.32,	1.00,	6.80,	23.13,					
C19 1 31.	2.,19.,	35844.,	9.15,	2.52,	1.39,	1.95,	0.00,	0.00,	2.16,
	1.49,	0.90,	2.80,	22.36,					
C19 1 33.	1.,19.,	39208.,	8.30,	2.52,	1.89,	2.14,	1.26,	0.00,	3.32,
	1.33,	0.50,	3.20,	24.46,					
C19 1 35.	2.,19.,	24614.,	4.15,	2.52,	1.51,	1.97,	0.76,	0.00,	2.82,
	0.83,	0.80,	0.00,	15.36,					
C19 1 37.	3.,19.,	26728.,	4.40,	2.52,	1.26,	1.90,	0.25,	0.00,	1.88,
	1.33,	1.00,	2.13,	16.67,					
C19 1 39.	1.,19.,	38656.,	10.00,	2.52,	1.26,	2.02,	0.00,	0.00,	1.66,
	1.66,	1.00,	4.00,	24.12,					
C22 1 2.	3.,22.,	84953.,	8.30,	2.52,	1.01,	1.51,	0.84,	0.55,	2.21,
	1.77,	1.20,	3.73,	23.65,					
C22 1 11.	1.,22.,	101760.,	10.00,	2.52,	1.76,	1.89,	0.25,	1.66,	3.32,
	2.32,	0.60,	4.00,	28.33,					
C22 1 17.	4.,22.,	57688.,	2.83,	2.52,	1.01,	1.76,	0.19,	0.42,	0.91,
	1.83,	1.20,	3.40,	16.06,					
C22 1 19.	4.,22.,	92177.,	7.88,	2.52,	1.39,	2.14,	0.06,	1.66,	1.99,
	2.32,	0.90,	4.80,	25.66,					
C22 1 33.	4.,22.,	75397.,	7.88,	2.52,	1.26,	1.89,	0.19,	0.00,	1.08,
	1.58,	1.00,	3.60,	20.99,					

EXHIBIT IV - 10 (Continued)

C22 1 35.	1.,22.,	64484.,	8.30,	2.52,	1.76,	2.19,	0.25,	0.00,	1.66,
0.66,	0.60,	0.00,	17.95,						
C22 1 49.	1.,22.,	81756.,	10.00,	2.52,	1.51,	2.27,	0.00,	0.00,	0.00,
1.66,	0.80,	4.00,	22.76,						
C30 1 3.	4.,30.,	80759.,	10.00,	0.00,	1.06,	1.06,	0.76,	1.66,	2.82,
1.74,	1.16,	4.00,	24.26,						
C30 1 17.	4.,30.,	97480.,	10.00,	0.00,	1.44,	1.44,	0.25,	3.32,	3.32,
2.66,	0.86,	6.00,	29.28,						
C30 1 19.	4.,30.,	87361.,	9.15,	0.00,	1.01,	1.01,	0.76,	2.91,	2.24,
2.57,	1.20,	5.40,	26.24,						
C30 1 33.	4.,30.,	83835.,	9.15,	0.00,	1.56,	1.56,	1.58,	2.91,	2.24,
1.83,	0.76,	3.60,	25.18,						
C30 1 35.	4.,30.,	69329.,	9.15,	0.00,	0.56,	0.56,	1.89,	1.25,	1.74,
1.33,	1.56,	2.80,	20.82,						
C30 1 49.	4.,30.,	79787.,	10.00,	0.00,	0.81,	0.81,	0.50,	2.49,	2.66,
1.74,	1.36,	3.60,	23.97,						
C30 1 51.	4.,30.,	76854.,	9.15,	0.00,	0.81,	0.81,	1.39,	1.66,	2.66,
1.66,	1.36,	3.60,	23.08,						
C30 2 1.	4.,30.,	82977.,	10.00,	0.00,	1.14,	1.14,	0.25,	2.08,	3.32,
1.91,	1.10,	4.00,	24.92,						
C30 2 3.	4.,30.,	77100.,	9.15,	0.00,	0.93,	0.93,	1.32,	2.08,	1.66,
1.83,	1.26,	4.00,	23.16,						
C30 2 17.	4.,30.,	75219.,	9.15,	0.00,	1.01,	1.01,	0.25,	2.08,	1.83,
2.08,	1.20,	4.00,	22.59,						
C30 2 33.	4.,30.,	63573.,	9.58,	0.00,	1.06,	1.06,	1.07,	0.00,	1.49,
1.08,	1.16,	2.60,	19.10,						
C30 2 49.	4.,30.,	62802.,	10.00,	0.00,	1.01,	1.01,	1.89,	0.00,	1.33,
0.83,	1.20,	1.60,	18.86,						
C36 1 33.	4.,36.,	15071.,	10.00,	1.26,	2.27,	1.39,	0.25,	1.66,	1.66,
1.66,	0.20,	4.00,	24.35,						
C36 1 35.	4.,36.,	18358.,	10.00,	1.26,	2.27,	0.76,	0.13,	3.32,	3.07,
2.66,	0.20,	6.00,	29.66,						
C36 1 49.	4.,36.,	15137.,	10.00,	1.26,	2.27,	1.44,	0.50,	1.25,	1.00,
1.74,	0.20,	4.80,	24.45,						
C36 1 51.	4.,36.,	17940.,	10.00,	1.26,	2.27,	0.81,	0.25,	3.32,	2.91,
2.57,	0.20,	5.40,	28.99,						
C36 1 37.	4.,36.,	16184.,	10.00,	1.26,	2.27,	1.64,	0.25,	2.49,	1.08,
2.16,	0.20,	4.80,	26.15,						
C36 1 39.	4.,36.,	17170.,	10.00,	1.26,	2.02,	0.76,	0.19,	3.32,	3.32,
2.08,	0.40,	4.40,	27.74,						
C36 1 53.	4.,36.,	15238.,	10.00,	1.26,	2.27,	1.69,	0.25,	1.66,	0.66,
1.83,	0.20,	4.80,	24.62,						
C36 1 55.	4.,36.,	15660.,	10.00,	1.26,	2.02,	0.81,	0.44,	2.49,	1.83,
1.66,	0.40,	4.40,	25.30,						
C36 2 33.	4.,36.,	14357.,	8.30,	1.26,	0.76,	1.89,	1.58,	1.66,	1.66,
1.49,	1.40,	3.20,	23.20,						
C36 2 35.	4.,36.,	14046.,	10.00,	1.26,	1.14,	1.89,	1.89,	0.83,	1.99,
1.00,	1.10,	1.60,	22.69,						
C36 2 49.	4.,36.,	13615.,	9.15,	1.26,	0.76,	1.89,	0.76,	1.25,	1.49,
1.25,	1.40,	2.80,	22.00,						
C36 2 51.	4.,36.,	17564.,	10.00,	1.26,	1.14,	1.89,	0.13,	3.32,	2.91,
2.24,	1.10,	4.40,	28.38,						
C36 3 1.	4.,36.,	13648.,	10.00,	1.26,	2.02,	2.02,	0.25,	0.42,	1.16,
1.33,	0.40,	3.20,	22.05,						
C36 3 3.	4.,36.,	13000.,	10.00,	1.26,	2.02,	2.02,	0.25,	0.00,	1.66,
1.00,	0.40,	2.40,	21.00,						
C36 3 17.	4.,36.,	14439.,	10.00,	1.26,	2.02,	2.14,	1.64,	0.42,	1.49,
1.16,	0.40,	2.80,	23.33,						
C36 3 19.	4.,36.,	13995.,	10.00,	1.26,	2.02,	2.14,	0.76,	0.42,	1.66,
1.16,	0.40,	2.80,	22.61,						
C36 3 5.	4.,36.,	13316.,	10.00,	1.26,	1.89,	1.82,	0.76,	0.00,	1.33,
1.16,	0.50,	2.80,	21.51,						

EXHIBIT IV - 10 (Continued)

C36 3 7.	4.,36.,	14889.,	10.00,	1.26,	1.89,	1.64,	0.50,	1.25,	2.24,
	1.58,	0.50,	3.20,	24.06,					
C36 3 21.	4.,36.,	14345.,	10.00,	1.26,	2.27,	1.44,	1.32,	0.83,	1.16,
	1.49,	0.20,	3.20,	23.17,					
C36 3 23.	4.,36.,	13876.,	10.00,	1.26,	1.89,	1.26,	1.39,	0.42,	1.49,
	1.41,	0.50,	2.80,	22.42,					
C36 3 33.	4.,36.,	14088.,	10.00,	1.26,	2.02,	2.14,	2.52,	0.00,	1.99,
	0.83,	0.40,	1.60,	22.76,					
C36 3 35.	4.,36.,	14272.,	10.00,	1.26,	2.02,	2.14,	0.25,	0.00,	1.49,
	1.49,	0.40,	4.00,	23.06,					
C36 3 49.	4.,36.,	14592.,	10.00,	1.26,	2.02,	2.14,	2.52,	0.42,	1.66,
	1.16,	0.40,	2.00,	23.58,					
C36 3 51.	4.,36.,	13676.,	10.00,	1.26,	2.02,	2.14,	1.07,	0.00,	1.16,
	1.25,	0.40,	2.80,	22.10,					
C36 3 37.	4.,36.,	13917.,	10.00,	1.26,	2.02,	1.56,	0.50,	0.00,	1.33,
	1.41,	0.40,	4.00,	22.48,					
C36 3 39.	4.,36.,	13536.,	10.00,	1.26,	2.27,	1.26,	1.58,	0.42,	1.33,
	1.16,	0.20,	2.40,	21.87,					
C36 3 53.	4.,36.,	12862.,	10.00,	1.26,	2.02,	1.64,	2.52,	0.00,	1.00,
	0.75,	0.40,	1.20,	20.78,					
C36 3 55.	4.,36.,	12793.,	10.00,	1.26,	2.02,	1.51,	2.52,	0.00,	1.49,
	0.66,	0.40,	0.80,	20.67,					
C36 4 33.	4.,36.,	15733.,	9.58,	1.26,	0.76,	1.89,	1.58,	1.66,	2.32,
	1.58,	1.40,	3.40,	25.42,					
C36 4 35.	4.,36.,	18602.,	10.00,	1.26,	1.51,	1.44,	1.26,	3.32,	2.66,
	2.41,	0.80,	5.40,	30.05,					
C36 4 49.	4.,36.,	12231.,	9.15,	1.26,	0.76,	1.94,	1.26,	0.00,	1.08,
	0.91,	1.40,	2.00,	19.76,					
C36 4 51.	4.,36.,	14444.,	10.00,	1.26,	0.76,	1.94,	2.21,	0.00,	1.66,
	0.91,	1.40,	3.20,	23.33,					
C36 4 53.	4.,36.,	15020.,	10.00,	1.26,	1.51,	1.89,	1.58,	1.25,	2.82,
	1.16,	0.80,	2.00,	24.27,					
C36 4 55.	4.,36.,	15126.,	10.00,	1.26,	1.51,	1.18,	1.07,	1.25,	3.07,
	1.49,	0.80,	2.80,	24.44,					
C36 5 17.	4.,36.,	17867.,	10.00,	1.26,	1.31,	1.64,	0.25,	3.32,	3.32,
	2.41,	0.96,	4.40,	28.87,					
C36 5 19.	4.,36.,	15504.,	10.00,	1.26,	1.31,	1.01,	0.50,	2.49,	2.82,
	1.49,	0.96,	3.20,	25.05,					
C36 5 33.	4.,36.,	18478.,	10.00,	1.26,	1.31,	1.64,	0.76,	3.32,	3.32,
	2.49,	0.96,	4.80,	29.85,					
C36 5 35.	4.,36.,	16813.,	10.00,	1.26,	1.31,	1.39,	1.58,	2.49,	3.32,
	1.66,	0.96,	3.20,	27.16,					
C36 5 49.	4.,36.,	14708.,	10.00,	1.26,	1.31,	1.69,	1.01,	1.25,	2.24,
	1.25,	0.96,	2.80,	23.76,					
C36 5 51.	4.,36.,	16087.,	10.00,	1.26,	1.31,	1.69,	1.26,	1.66,	3.07,
	1.58,	0.96,	3.20,	25.99,					
C36 5 37.	4.,36.,	16916.,	10.00,	1.26,	1.44,	1.39,	0.25,	3.32,	2.82,
	1.99,	0.86,	4.00,	27.33,					
C36 5 39.	4.,36.,	17745.,	10.00,	1.26,	1.44,	1.64,	0.76,	3.32,	3.07,
	2.32,	0.86,	4.00,	28.67,					
C36 5 53.	4.,36.,	15676.,	10.00,	1.26,	1.44,	1.69,	0.50,	2.08,	2.32,
	1.58,	0.86,	3.60,	25.32,					
C36 5 55.	4.,36.,	18316.,	10.00,	1.26,	1.44,	1.69,	1.26,	2.91,	2.66,
	2.32,	0.86,	5.20,	29.59,					
C37 1 30.	1.,37.,	82596.,	10.00,	0.00,	0.76,	1.94,	0.25,	0.00,	1.00,
	1.99,	1.40,	5.60,	22.94,					
C37 1 31.	2.,37.,	79008.,	10.00,	0.00,	0.76,	1.94,	0.25,	0.00,	0.00,
	1.99,	1.40,	5.60,	21.94,					
C37 1 38.	2.,37.,	27052.,	0.00,	0.00,	0.00,	2.07,	1.39,	0.00,	0.50,
	1.16,	2.00,	0.40,	7.51,					
C37 1 39.	4.,37.,	50943.,	5.00,	0.00,	0.00,	2.02,	1.89,	0.00,	1.16,
	1.08,	2.00,	1.00,	14.15,					
C37 2 2.	3.,37.,	67836.,	8.87,	0.00,	0.56,	1.82,	0.25,	0.00,	0.66,
	1.66,	1.56,	3.47,	18.84,					

EXHIBIT IV - 10 (Continued)

C37 2 11.	1.,37.,	67068.,	10.00,	0.00,	0.81,	1.82,	0.25,	0.00,	1.00,
	1.00,	1.36,	2.40,	18.62,					
C37 2 17.	4.,37.,	47877.,	5.00,	0.00,	0.00,	2.07,	0.25,	0.00,	0.25,
	1.33,	2.00,	2.40,	13.30,					
C37 2 19.	3.,37.,	42755.,	3.33,	0.00,	0.00,	2.07,	0.50,	0.00,	0.66,
	1.44,	2.00,	1.87,	11.87,					
C37 2 33.	3.,37.,	59752.,	6.67,	0.00,	0.00,	2.02,	2.52,	0.00,	1.22,
	1.11,	2.00,	1.07,	16.59,					
C37 2 35.	1.,37.,	79884.,	10.00,	0.00,	1.26,	2.02,	2.52,	0.00,	1.66,
	1.33,	1.00,	2.40,	22.18,					
C39 1 1.	4.,39.,	13293.,	10.00,	0.00,	0.56,	1.26,	0.44,	0.42,	1.99,
	1.41,	1.56,	3.20,	20.84,					
C39 1 3.	4.,39.,	12860.,	10.00,	0.00,	0.56,	1.26,	0.13,	0.00,	1.00,
	1.66,	1.56,	4.00,	20.16,					
C39 1 17.	4.,39.,	14439.,	10.00,	0.00,	0.56,	1.51,	0.06,	1.25,	3.32,
	1.58,	1.56,	2.80,	22.63,					
C39 1 19.	4.,39.,	15826.,	10.00,	0.00,	0.00,	1.44,	0.06,	1.66,	2.49,
	2.16,	2.00,	5.00,	24.81,					
C39 1 5.	4.,39.,	13200.,	10.00,	0.00,	0.00,	1.44,	0.00,	0.83,	1.16,
	1.66,	2.00,	3.60,	20.69,					
C39 1 7.	3.,39.,	14325.,	10.00,	0.00,	0.00,	1.51,	0.00,	1.11,	0.66,
	2.10,	2.00,	5.07,	22.45,					
C39 1 21.	4.,39.,	15168.,	10.00,	0.00,	0.00,	1.66,	0.00,	1.66,	1.66,
	1.99,	2.00,	4.80,	23.78,					
C39 2 31.	2.,39.,	12876.,	10.00,	0.00,	0.00,	1.89,	0.00,	0.00,	0.00,
	1.49,	2.00,	4.80,	20.19,					
C39 2 39.	4.,39.,	14706.,	10.00,	0.00,	1.69,	1.64,	0.25,	0.42,	2.41,
	1.99,	0.66,	4.00,	23.05,					
C39 3 25.	2.,39.,	16674.,	10.00,	0.00,	0.00,	1.89,	0.63,	1.66,	0.83,
	2.32,	2.00,	6.80,	26.14,					
C39 3 19.	4.,39.,	14679.,	10.00,	0.00,	0.00,	1.76,	0.69,	0.83,	1.41,
	1.91,	2.00,	4.40,	23.01,					
C39 3 55.	4.,39.,	15858.,	10.00,	0.00,	0.00,	2.02,	0.13,	1.66,	1.41,
	2.24,	2.00,	5.40,	24.85,					
C06 1 52.	2., 6.,	19640.,	10.00,	0.00,	2.52,	2.52,	0.00,	2.49,	1.33,
	1.16,	0.00,	2.40,	22.42,					
C06 1 45.	2., 6.,	21324.,	10.00,	0.00,	2.52,	2.52,	0.13,	3.32,	1.33,
	1.33,	0.00,	3.20,	24.34,					
C06 1 39.	2., 6.,	9152.,	0.00,	0.00,	2.52,	2.52,	0.13,	2.49,	0.50,
	1.49,	0.00,	0.80,	10.45,					
C06 1 53.	3., 6.,	22569.,	10.00,	0.00,	2.52,	2.52,	0.08,	3.32,	1.44,
	1.88,	0.00,	4.00,	25.76,					

Wisconsin in cooperation with a joint project of the appraisal professional groups called EDUCARE, The Education Foundation for Computer Applications to Real Estate, and EDUCARE Network, Inc., a cooperative which makes these systems available to the real estate industry through GE Time Sharing. Over the years MKTCOMP has been used intensively by such federal agencies as the National Park Service in the acquisition of the southwest Everglades in Florida, The National Wildlife Service in the evaluation of border waters in Minnesota, and the Bureau of Indian Affairs for pricing agricultural land. Private appraisers have used it for ranch lands, single family homes, and rental comparisons as well as automated community tax assessment.

H. A Brief Explanation of the MKTCOMP System

The essence of the market comparison approach in real estate appraisal is the process of selection from a broad array of sales, those properties which are most substitutable to the subject property in terms of physical attributes (the principle of substitution) with adjustment made for small differences in proportion to the contribution these differences make in the price of each sale (principle of contribution). In order to execute this process in a data processing mode without placing any constraints upon the manner in which the appraiser wishes

to express his judgment, experience and insight, the MKTCOMP system has the following components:

1. A subject file which provides the identification and desired attributes for one or more subject properties, which in this case consists of 590 40-acre units as prepared in II and IV-G.
2. A comparable sale file which in this case consists of the 173 40-acre sub-sale units prepared as previously described in this chapter and containing the same set of attributes provided for the subject property.
3. The factor file which identifies each attribute in the same sequence and category established for the subject file and comparable sale file together with the appropriate adjustment for a difference in the degree or quantity of a specific attribute when each comparable is compared to the subject property. These adjustments will be discussed below.
4. A ranking procedure which will array the 173 comparable sub-sale units in order of their similarity to the subject 40-acre unit to be appraised. The degree of similarity is measured by means of Euclidian distance and development of a coefficient of comparability, which will be described below, generated from adjustments for differences between subject and

comparables in the ten wilderness attributes in the factor file.

5. Decision Rule #1 of the appraiser is to consider only the best 28 comparables for each 40-acre section, so that 28 from a potential of 173 alternatives will be selected using the comparability coefficient as most similar to the subject 40 in terms of the ten wilderness attributes previously defined.
6. Decision Rule #2 addresses the problem that of the 14 original comparable sales, some contribute many more 40-acre cells to the 173 pool of sub-sales than others so that a larger number of sub-sale properties from the same original sale might dominate the array of comparable 40's. To avoid one comparable sale dominating any particular set, the appraiser directed the system to accept only the first and best sub-sale from any specific sale of the 14 in the final array selected, so that the 28 may be reduced to as low as six 40's to avoid no more than one 40 in the set from any one sale.
7. Decision Rule #3 is to choose up to the best ten 40-acre units of those surviving decision #2 by computing the mean of the survivors and discarding any 40 where the reallocated price is more than two

standard errors from the mean of the cluster to avoid outliers.

The system keeps count of the frequency with which each of the 14 comparables plays a part in the value conclusion and the relative aggregate influence of private and government sales so that the appraiser may judge the equity and scope of representation of the comparables in the final conclusion. Rather than rely entirely upon the automated process, the appraiser and staff then took a sample of the foremost comparable sales, located the appropriate three dimensional slides, and matched these visually and from data records to the subject property, to confirm the appropriateness of selection.

The key link between subject property and comparable sale is the Factor File. The factors selected are the wilderness attributes previously described which in combination represent the wilderness components of the RARE II concepts of wilderness. Following the factor name, the file provides a type code which indicates the type of adjustment which should be made, followed by the actual rate or quantity of adjustment to be made. The system allows for five code types, of which three might be relevant to this appraisal.

Type Code 1 designates factors for which the adjustment to be made is specified in number of dollars per point. (For example, each additional parking

stall in a garage could be assumed to require an adjustment of \$1,200 or each square foot of building difference might require an adjustment of \$20.)

Type Code 2 designates factors which compare on a proportion or percentage of the sales price. (For example, adjusted age provides for an adjustment for the difference between the age of a comparable and a subject property which is associated with a 2 percent decline in price, thus a $-.02$.) Similarly, each increment in a construction quality code number describing a comparable would be associated with a 3 percent adjustment in price. The construction quality code number assigned to each comparable by the user is optional and subjective.

In this appraisal, all adjustments are made as a Type Code 1 based on the relative contribution in dollars per point of each of the ten variables in terms of the mean price per 40 acre sub-sale unit. A computer program called FACTOR was designed to accumulate into a single total the sum of individual attribute scores to calculate a ratio which demonstrates the relative contribution of each attribute point

score to the total point score. Since dollar adjustments must be made to 40-acre sub-sale units, the mean price of \$43,794 of the 173 sub-sales was multiplied by the percentage of contribution of any single attribute to the aggregate point score in order to establish a dollar amount per point of final adjustment for differences (see Exhibit IV-11) between a 40-acre subject property and any one 40-acre sub-sale. The model permits initial selection of a set of candidates for comparable analysis with a partial factor set as will be shown below.

Comparison or matching of the subject 40 acres to all of the 173 40-acre sub-sales in the sale pool is a two-step process which parallels the traditional market comparison done manually. In Step 1, for example, an appraiser might compare two 3-bedroom homes otherwise identical except for the fact that Comparable A, which sold for \$60,000, has two bathrooms; Comparable B, which sold for \$50,000 has one bathroom, and the subject property has 1-1/2 bathrooms. The appraiser might determine that each bathroom fixture in addition to the first bathroom was worth \$1,000 in the consumer's mind and list of preferences. In that case, Comparable A would be compared by taking 1-1/2 baths (five fixtures) in the subject minus two baths (six fixtures) for a reduction in price of minus one fixture converted to dollars of minus \$1,000 for an adjusted

EXHIBIT IV-11

FACTOR ADJUSTMENTS USED
FOR TWO-STAGE MKTCOMP SELECTION

MEAN PRICE PAID PER WILDERNESS CELL IS 43,794

	<u>PERCENTAGE CONTRIBUTION</u>	<u>FINAL ADJUSTMENT FACTORS</u>	<u>INITIAL SELECTION FACTORS</u>
SALE ID	0	0	0
PRICE	0	0	0
APPARENT NATURALNESS	25.00%	10949	0
DISTANCE TO PERIMETER	6.25	2737	0
VIEW FROM CELL-REV	6.25	2737	0
VIEW TO CELL-REV	6.25	2737	0
VEGETATION SCREENING	6.25	2737	1099
CHALLENGE	8.33	3646	1099
DIVERSITY - %SLOPE	8.33	3646	0
DIVERSITY - TERRAIN	8.33	3646	0
VIEW FROM	5.00	2190	0
SCENIC QUALITY	20.00	8759	1099
WILDERNESS ATTRIBUTES	0	0	0

DIS ALL25.FAC

0,0,0,0
1,28,0
2,1,0.
3,590,2.0
4,10,0.
5,2,0.
0,0,0
SALEID,1,0,0,0,0,0
PRICE,0,0,1,0,0,0
APPNTL,1,0,10949,1,0,0
DISTANCE,1,0,2737,1,0,0
VIEWFRMR,1,0,2737,1,0,0
VIEWTOR,1,0,2737,1,0,0
VEGSCRN,1,0,2737,1,0,1099
CHALLENG,1,0,3646,1,0,1099
DIVSLOPE,1,0,3646,1,0,0
DIVTERRA,1,0,3646,1,0,0
VIEWTON,1,0,2190,1,0,0
SCENICQL,1,0,8759,1,0,1099
WILDATT,1,0,0,0,0,0

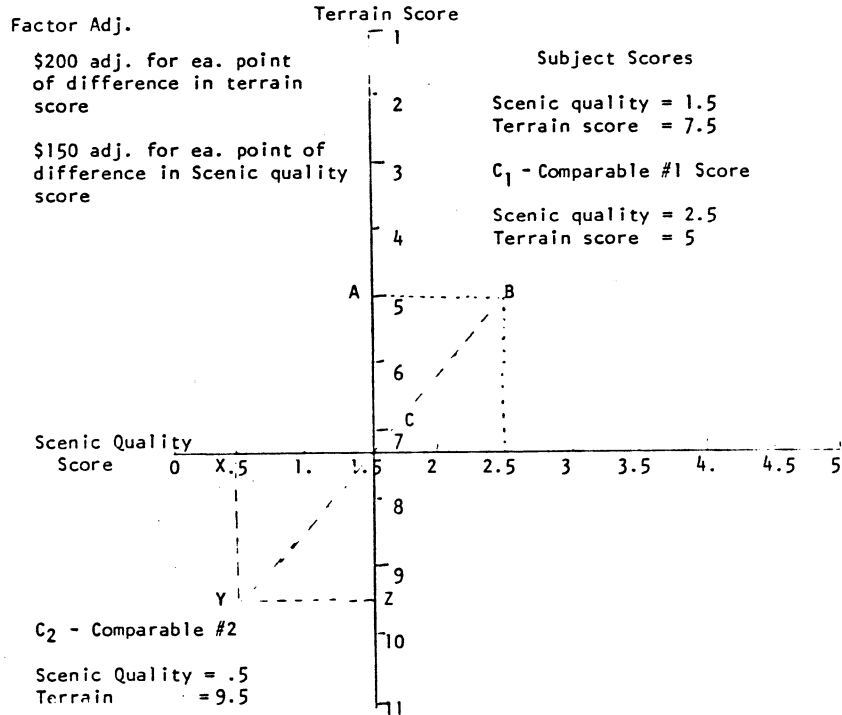
price of \$59,000. At the same time, Comparable B with three fixtures subtracted from the five in the subject property would indicate a plus two fixtures times \$1,000 or an adjustment upward of \$2,000 for a total price of \$57,000. Adjusting sales prices for the differences in the bathrooms greatly reduces the dispersion of prices, although it can almost never explain the total difference in consumer motivations. The property which is most comparable is the one which is least adjusted for differences. A variety of small adjustments is preferable to one large single adjustment so that small errors in the appraisal judgment can begin to offset each other. Thus, ten \$100 adjustments are preferable to a single \$1,000 adjustment, since some are plus and some are minus, some may be a little high and others a little low.

Step 2 requires the appraiser to rank all the comparables for degree of comparability to treat the adjustments as absolute numbers (ignoring the + or - sign) and to penalize for larger adjustments, it is desirable to square each adjustment, take the sum of the square, and then compute the square root of the sum of the squares as a measure of the relative distance (geometric distance serving as a measure of difference) of each comparable from the subject property. Notice that in the immediate example above \$100 squared is $\$10,000 \times 10 = \$100,000$ sum of the square of all adjustments as compared to \$1,000

squared which equals \$1 million. The square root of \$100,000 is \$316.23, a much smaller number than the square root of \$1 million (\$1,000) so that the property with more frequent small adjustments is more comparable. The \$316.23 is the comparability coefficient which appears in MKTCOMP. That method, which is best known as Euclidian distance, is applied to the subject appraisal as illustrated in Exhibit IV-12. In order to convert differences in two different scores, such as scenic quality and terrain, it is necessary to have a common denominator in terms of dollars per point so that it is possible to measure difference in terms of total dollars of adjustment. In the hypothetical example of Exhibit IV-12 terrain points are considered to contribute 1.33 percent more to value than scenic quality points, an implication that is drawn from the appraiser's assignment of \$200 adjustment for each full point of difference of the terrain score between subject and comparable and only \$150 adjustment for each full point difference of scenic quality score. To understand Exhibit IV-12, assume that a subject 40-acre unit has a score of 1.5 for scenic quality and 7.5 for terrain. For two dimensions the subject property is represented by the intersection of the vertical line for terrain score and the horizontal line for scenic quality score. Comparable #1 is defined by point B at the upper right and Comparable #2 is identified as point Y at

EXHIBIT IV - 12

GRAPHIC ILLUSTRATION OF EUCLIDIAN DISTANCE AS A METHOD FOR RANKING COMPARABLE SALES OF RELATIVELY DIFFERENT ATTRIBUTE SETS



$$(AB)^2 + (AC)^2 = (BC)^2$$

$$(1.5 - 2.5)^2 + (7.5 - .5)^2 = (BC)^2$$

$$\begin{aligned} (-1)^2 + (2)^2 &= (BC)^2 \\ 1 + 4 &= (5)^2 \text{ or } BC = \sqrt{5} \end{aligned}$$

$$\left[(AB^S - AB^{C1}) (\$ \text{ factor adjustment}) \right]^2 + \left[(AC^S - AC^{C1}) (\$ \text{ factor adjustment}) \right]^2 = (BC)^2 \text{ or Euclidian distance (hypotenuse)}$$

and $\sqrt{(BC)^2}$ is the coefficient of comparability

$$\left[(1.5 - 2.5) * 150 \right]^2 + \left[(7.5 - .5) * 200 \right]^2 = BC^2$$

$$\frac{(-150)^2}{(-150)^2} + \frac{(7.5 - .5) * 200}{(500)^2} = BC^2$$

$$22500 + 250000 = BC^2$$

$$\sqrt{272500} = BC$$

$$522 \text{ or } 522.02 = BC_1$$

$$YC_2^2 = \left[(C_s - XC_2) * 150 \right]^2 + \left[(AC_s - CZ_C) * 200 \right]^2$$

$$YC_2^2 = \left[(1.5 - .5) * 150 \right]^2 + \left[(7.5 - 9.5) * 200 \right]^2$$

$$YC_2^2 = (150)^2 + (-400)^2$$

$$YC_2^2 = 22500 + 160000$$

$$YC_2^2 = 182500$$

$$\sqrt{182500}$$

$$YC_2 = 427.20$$

YC_2 is $\leq BC_1$

427 \leq 522

Therefore, Comp #2 is more comparable to the subject

the lower left. Which is most comparable to C depends on whether the hypotenuse of the triangle BC or YC is shorter. In the illustration, the hypotenuse of YC is 427 as compared to 522 for BC so that Comparable #2 is most comparable. The MKTCOMP uses multi-dimensional geometry and takes the sum of the squares of all adjustments before solving for the coefficient of comparability with which to rank each of the 173 comparable sub-sales relative to the subject 40 and then takes the best 28, i.e., the lowest 28 comparability coefficients.

The MKTCOMP model permits a two-stage application of the Euclidian distance selection process because if one factor is given too much weight initially, the square of that number will be so big that the selection process would lock into selection of comparables that were identical in only one factor since none of the other differences when squared and summed would modify the ranking established by the single dominant adjustment. Therefore, the first column of selection adjustments softens the significance of particular variables to permit a possible greater diversity of selection and those selected are then readjusted to the final factor file in a second pass. The factor adjustments used for initial selection and those used for final adjustment are displayed in Exhibit IV-11. Notice the selection adjustments have softened the emphasis on apparent naturalness and scenic quality lest the

system choose only comparable sub-sales which are identical to the subject property's score in most categories. The final set of adjustments reflects the equal weight given the four components of RARE-II wilderness which generate the wilderness score as displayed earlier in Exhibit IV-8.

The MKTCOMP model then allows the appraiser to further screen the initial set of 28 sub-sale comparables in order to be assured of reasonable diversity among comparable sales and buyer/seller motivations while at the same time reducing the dispersion before calculating a mean price of the similar properties selected. The program will only accept the first and best sub-sale in terms of comparable coefficients from any one subject sale. It will then compute the mean adjusted price of the remaining comparable sales units and reject any price which is more than two standard errors from the mean so that outlier sales cannot adversely affect the final pricing of the subject 40. Of the remaining comparables, the best 10 are selected and the mean of these remaining sales is the price assigned the subject 40. Each step should reduce the dispersion of the sale cluster as represented by the standard error of the mean. Exhibit IV-13 provides a sample output and explanations of each number are attached to the output to assist in understanding the process. The same output is available for each 40 acres of the subject property and is included in

Appendix C of this appraisal. Note that every comparable 40-acre sub-sale is identified and the actual adjustments to those which were used to price the subject 40 has a separate one-page report as illustrated in Exhibit IV-13. Sale values have been summarized by 640 acre sections (Exhibit IV-14), by cluster (Exhibit IV-15), by the number of percentage of times a sub-sale unit was chosen from each comparable sale (Exhibit IV-16), and by the number of sub-sale units involving government purchases and non-government purchases (Exhibit IV-16). Note the evenness of representation for all comparable sales, large and small, expensive and inexpensive and the further balance between government and non-government sales. The appraiser feels that this balance neutralizes the immeasurable influence of seller attitudes when negotiating with government or private agencies concerned with wilderness conservation. It is a clear statement of objectivity in the matching of physical elements without regard to price. Finally, the values are provided for each of the 20 ownership positions (Exhibit IV-17). THE TOTAL VALUE OF THE 20 OWNERSHIP POSITIONS BASED ON 40-ACRE MARKET COMPARISON COMPARABLE MATCHING IS \$35,750,000. However, the MKTCOMP value of \$35,734,100 or \$35,750,000 should be put in context in terms of more traditional market comparison approaches and in terms of the issues of plottage and economies of scale.

EXHIBIT IV - 13

SAMPLE MARKET COMPARISON OUTPUT AVAILABLE FOR EACH OF 590
SUBJECT PROPERTY 40 ACRE UNITS. ENTIRE OUTPUT CAN BE
FOUND AT THE END OF APPENDIX C

PROPERTY REPORT 1 @

10 NCMP5

28 NCMP5

10 NCMP5 60054.72656 AVE ADJ PR

46401.71484 STD DEV

Rule #1: Select Best 28

Rule #2: Select Best 40 Acre Cell from Each Comp.

10 NCMP5 60054.73047 AVE ADJ PR

46401.71484 STD DEV

Rule #3: Discard Outlier Beyond 2.0 Std. Dev. from Mean of Survivors of Rule #2.

1 4 33 2 10 4. ADJUSTMENT == ID code of subject cell
FACTOR TYP RATE AVE. S-DEV.

SALEID	1.	0.00	0.	0.
PRICE	0.	1.00	57669.	40400.
APPNTL	1.	10949.00	11628.	14759.
DISTANCE	1.	2737.00	-3104.	3429.
VIEWFRMR	1.	2737.00	2751.	1440.
VIEWTOR	1.	2737.00	2318.	1091.
VEGSCRN	1.	2737.00	714.	1506.
CHALLENG	1.	3646.00	-1721.	1510.
DIVSLOPE	1.	3646.00	-5699.	3088.
DIVTERRA	1.	3646.00	-5093.	806.
VIEWTON	1.	2190.00	-1748.	917.
SCENICQL	1.	3759.00	2339.	4178.

Dispersion of adjustment for final selected comps.

Average adjustment per factor

Dollar adjustment per point of score difference

AVE ADJUSTED AMT 60055. 46402.
WEIGHTED AVE. 55000.

102:C30	2	33.	4.
157:C37	2	35.	1.
18:C02	3	51.	2.
81:C19	1	33.	1.
85:C22	1	2.	3.
41:C40	1	53.	4.

ID code of each comp.

Score of comparable property

Dollar adjustment for difference per point from subject

FACTOR	SUBJECT	102-AMT	ADJ	157-AMT	ADJ	18-AMT	ADJ	81-AMT	ADJ	85-AMT	ADJ	41-AMT	ADJ
SALEID	0.00	30.00	0.	37.00	0.	2.00	0.	19.00	0.	22.00	0.	40.00	0.
PRICE	0.00	63573.00	63573.	79884.00	79884.	19918.00	19918.	39208.00	39208.	84953.00	84953.	29692.00	29692.
APPNTL	10.00	9.58	4599.	10.00	0.	8.30	18613.	8.30	18613.	8.30	18613.	10.00	0.
DISTANCE	0.00	0.00	0.	0.00	0.	0.00	0.	2.52	-6897.	2.52	-6897.	0.00	0.
VIEWFRMR	2.52	1.06	3996.	1.26	3449.	1.89	1724.	1.89	1724.	1.01	4133.	1.51	2764.
VIEWTOR	2.50	1.06	3941.	2.02	1314.	1.44	2901.	2.14	985.	1.51	2710.	1.76	2025.
VEGSCRN	1.58	1.07	1396.	2.52	-2573.	1.26	876.	1.26	876.	0.84	2025.	1.26	876.
CHALLENG	0.00	0.00	0.	0.00	0.	0.83	-3026.	0.00	0.	0.55	-2005.	0.83	-3026.
DIVSLOPE	0.50	1.49	-3610.	1.66	-4229.	0.50	0.	3.32	-10282.	2.21	-6235.	3.07	-9370.
DIVTERRA	0.00	1.08	-3938.	1.33	-4849.	1.33	-4849.	1.03	-4849.	1.77	-6453.	1.74	-6344.
VIEWTON	0.00	1.16	-2540.	1.00	-2190.	0.50	-1095.	0.50	-1095.	1.20	-2628.	0.80	-1752.
SCENICQL	3.20	2.60	5255.	2.40	7007.	2.40	7007.	3.20	0.	3.73	-4642.	3.69	-3504.

ADJUSTED AMOUNT	72673.	77812.	42070.	38284.	83573.	11362.
SELECTION INDEX	865.	1357.	1315.	352.	1169.	1072.

Subject 40 acre score data

Square root of sum of the squares of the differences between subject and comp. The lower the index, the more comparable to the subject 40 acre cell.

Reallocated price adjusted for difference between comp. and subject

Reallocated price per 40 acre cell

EXHIBIT IV - 14

SUMMARY OF MKTCOMP VALUES BY SECTION OR PARTIAL SECTION

VALUATION RESULTS BY SECTION

SEQUENCE NO. Y-COORDINATE X-COORDINATE VALUATION

1	1	4	\$136,108.
2	2	3	\$926,718.
3	3	4	\$994,571.
4	3	6	\$310,490.
5	4	3	\$1,012,490.
6	4	5	\$1,046,360.
7	4	9	\$743,355.
8	5	4	\$965,438.
9	5	6	\$937,572.
10	5	8	\$958,302.
11	6	3	\$1,046,540.
12	6	5	\$945,055.
13	6	7	\$1,265,050.
14	6	9	\$994,823.
15	7	4	\$1,122,810.
16	7	6	\$843,708.
17	7	8	\$1,174,470.
18	8	3	\$845,065.
19	8	5	\$1,003,280.
20	8	7	\$976,748.
21	8	9	\$977,272.
22	9	4	\$779,997.
23	9	6	\$608,490.
24	9	8	\$964,412.
25	9	10	\$593,628.
26	10	3	\$856,392.
27	10	9	\$817,651.
28	11	8	\$174,841.
29	13	4	\$808,419.
30	14	3	\$1,231,690.
31	14	5	\$905,230.
32	15	4	\$962,912.
33	16	3	\$954,182.
34	16	5	\$940,593.
35	16	11	\$504,871.
36	17	10	\$810,362.
37	17	12	\$465,371.
38	21	10	\$898,623.
39	21	12	\$994,264.
40	22	9	\$912,955.
41	22	11	\$972,816.
42	22	13	\$350,148.

\$35,734,100.

EXHIBIT IV - 15

SUMMARY OF MKTCOMP VALUATION
RESULTS BY CLUSTER I TO IV

VALUATION RESULTS BY CLUSTER	
CLUSTER NO.	VALUATION
1	\$4,128,810.
2	\$1,780,600.
3	\$5,803,020.
4	\$24,021,700.
	=====
	\$35,734,200.

EXHIBIT IV - 16

NUMBER AND PERCENTAGE OF
SELECTION OF EACH COMPARABLE
SUB-SALE

<u>No. Landmark</u>	<u>Number of Sub-Sales Chosen</u>	<u>Percentage Times Chosen</u>
1	142.	0.03
16	306.	0.06
17	500.	0.10
18	232.	0.05
22	362.	0.07
30	580.	0.11
37	250.	0.05
2	520.	0.10
6	146.	0.03
9	283.	0.06
19	316.	0.06
36	621.	0.12
39	327.	0.06
40	492.	0.10

SUMMARY OF SELECTION BY FREQUENCY
DISTRIBUTION BETWEEN
GOVERNMENT AND NON-GOVERNMENT

2372	.467205
2705	.532795

EXHIBIT IV - 17

COMPUTER SUMMARY OF OWNERSHIP VALUES
DISTRIBUTED TO EACH OF 20 OWNERS BY
ASSEMBLAGE OF 40-ACRE PARCEL VALUES
IN EACH OWNERSHIP

DIS MKTONR.FIX

+CPU LIMIT: NONE ELAPSED TIME LIMIT: 7 HRS, 50 MINS

RUN MKTONR.BAS
INPUT FILENAME? MKTCMP.FIX
OUTPUT FILENAME <MKTCMP.FIX>? MEAN.OUT
ENTER 0 FOR MEAN PRICE
ENTER 1 FOR WEIGHTED AVE
ENTER 2 FOR POST SELECTED MEAN PRICE
? 0

OWNERSHIP SUMMARY FOR MEAN.OUT

1	\$4,089,320.
2	\$3,380,380.
3	\$5,823,230.
4	\$5,599,520.
5	\$976,748.
6	\$1,003,280.
7	\$1,390,990.
8	\$1,728,860.
9	\$1,464,440.
10	\$1,553,040.
11	\$1,882,630.
12	\$2,030,870.
13	\$1,869,640.
14	\$1,894,770.
15	\$192,188.
16	\$186,746.
17	\$91,884.
18	\$263,531.
19	\$146,561.
20	\$165,454.

=====
\$35,734,100.

I. Market Comparison Price Model No. 2

There are alternative approaches to MKTCOMP for determining market price from the array of comparable sales data in Exhibit IV-8. None are as sensitive and objective as MKTCOMP, but traditional formats may serve as a check and stabilizing adjustment of results. The first of these is perhaps the most basic and traditional. One conventional approach is to use an average price per acre for several alternative acreage categories. In this case the 14 comparables can be divided between those which are appropriate only to sections and subsections where the best use is clearly as a trail-head and access route to a public heritage, and those best considered as wilderness. Recalling the conclusions as to highest and best use (Section II), indicated that all of Cluster II was an access control corridor and that certain components in Sections I and III were best preserved as wilderness trail-head and access routes, with the balance of their lands being irreplaceable wilderness inextricably tied to the view shed of the Enchanteds Area. Cluster IV was a wilderness in its own right, with visual control by its singular horseshoe-ridge pattern; its scale at 17,000 acres before combination with Federal lands made it one of the largest roadless areas of its kind in private ownership. Only two of its sections were

considered trail-heads and development pressure points, and the balance of the sections were considered wilderness acres.

To determine the mean adjusted price refer to Exhibit IV-18 of comparable sales representing major access points to the wilderness which the public or conservationists would need to control if they were to control the level of utilization, the appraiser selected only those sales with a wilderness score higher than the comparable mean of 5.4 and a scenic quality comparable mean score higher than 1.0 since the subject property is generally superior to both these categories. These standards selected comparable No. 30 G, Sloan Kettering; No. 16 G, Bettis; No. 22 G, Wolfinbarger; and No. 18 G, Matteson; indicating their average adjusted price per acre in Column 12 of Exhibit IV-18 and the mean price of \$3,142, or rounded to \$3,150 per acre. The standard deviation is a respectable \$831 per acre.

To price the remaining acreage in each cluster which could be considered wilderness, it was important to select comparables of the highest wilderness quality and scenic quality. Therefore, the appraiser determined to use only those comparables where the average wilderness score per ten acres was greater than 5.4, the mean wilderness score for all the properties, and the scenic quality score was greater than 1.0. Definition of a set of comparable sales strong in wilderness

SORTING OF COMPARABLE SALES AS WILDERNESS AND
TRAIL HEAD WITH ABOVE AVERAGE SCORES FOR WILDERNESS
AND SCENIC QUALITY

	<u>Landmark No.</u>	<u>Name</u>	<u>No. of Acres</u>	<u>Adjusted Price</u>	<u>Price/ Acre</u>	<u>Mean Acre Price of Those Properties With Wilderness Score 5.4 and Scenic Quality Score 1.62</u>	<u>Mean Acre Price of Those Properties With Trail Head Entries With Wilderness Score 5.4 and Scenic Quality Score 1.0</u>
1	9	Sunset Lakes	320	\$136,000	\$425	\$425	
2	40	Mueller	640	501,000	782.81	783	
3	2	Phelps Creek	357	287,000	803.92	804	
4	16 G	Bettis	160	497,000	3,106.25	3,106	\$3,106
5	36	Ankeny	1,760	671,000	381.25	381	
6	30 G	Sloan-	462.8	937,000	2,024.63	2,025	2,025
		Kettering					
7	39	National Wildlife	336	159,000	473.21	473	
8	18 G	Matteson	81.83	281,000	3,433.95	3,434	3,434
9	22 G	Wolfenbarger	87.7	351,000	4,002.28	4,002	4,002
10	6	Lake Caroline	41.7	42,000	1,007.19		
11	1 G	Marble Creek	120	501,000	4,175		
12	19	Taylor	64.84	132,000	2,035.78		
13	17 G	Lanham	620	1,499,000	2,417.74		
14	37 G	Markley	120.65	337,000	2,793.20		
				MEAN (AVERAGE)	\$1,190	\$1,142	\$3,142
				STANDARD DEVIATION	1,363	1,034	831
					or \$1,150 per acre rounded	or \$3,150 per acre rounded	

and scenic quality produced seven comparables, No. 9, Sunset Lake; No. 40, Mueller-Dome Rock; No. 39, National Wildlife on Holter Lake; No. 30 G, Sloan-Kettering; No. 2, Phelps Creek; No. 17 G, Bettis, and No. 36, Ankeny. These convert to a mean price per acre of \$1,142, or rounded to \$1,150 per acre. These prices were then applied to each ownership position by cluster as demonstrated in Exhibit IV-19 to estimate a total market value of \$33,001,550, allocated to each owner as indicated in Column 6.

Although selection of comparables are based on better than average wilderness scores and scenic quality scores well above average, and average price per acre approach can be suspect because:

1. Average price quality does not reflect the superior wilderness quality of the subject property reflected by the large percentage of cells with higher than average scores, particularly in Clusters 3 and 4.
2. For comparable sales quality scores declined significantly with increasing size of the purchase, a correlation which is not really true for the subject property, which has so many superior ten acre cells in each cluster.
3. Average price is insensitive to the fact that prices tend to fall per acre for the very largest properties and

VALUATION BY CLUSTER AND OWNERSHIP USING AVERAGE PRICE PER ACRE
OF HIGH QUALITY WILDERNESS OR TRAIL HEAD COMPARABLES -
PRICING MODEL NUMBER 2

(1) Owner No.	(2) Cluster I	(3) Cluster II	(4) Cluster III	(5) Cluster IV	(6) Total Per Owner No.
1	1483 x 1150 = 1,705,450			861 x 1150 = 990,150	\$2,695,600
2				1662 x 1150 = 1,911,300	
2				640 x 3150 = 2,016,000	3,927,300
3				2960 x 1150 = 3,404,000	
3				640 x 3150 = 2,016,000	5,420,000
4			623 x 1150 = 716,450	1404 x 1150 = 1,614,600	
4	106 x 3150 = 333,900	1028 x 3150 = 3,238,200	320 x 3150 = 1,008,000		6,911,150
5				640 x 1150 = 736,000	736,000
6				640 x 1150 = 736,000	736,000
7	426 x 1150 = 489,900				
7	534 x 3150 = 1,682,100				2,172,000
8			929 x 1150 = 1,068,350		1,068,350
9				980 x 1150 = 1,127,000	1,127,000
10				960 x 1150 = 1,104,000	1,104,000
11				1326 x 1150 = 1,524,900	1,524,900
12				1182 x 1150 = 1,359,300	1,359,300
13			616 x 1150 = 708,400	640 x 1150 = 736,000	1,444,400
14			889 x 1150 = 1,022,350		
14			320 x 3150 = 1,008,000		2,030,350
15				102 x 1150 = 117,300	117,300
16				102 x 1150 = 117,300	117,300
17				120 x 1150 = 138,000	138,000
18				110 x 1150 = 126,500	126,500
19				110 x 1150 = 126,500	126,500
20				104 x 1150 = 119,600	119,600
	\$4,211,350	\$3,238,200	\$5,531,550	\$20,020,450	\$33,001,550

therefore the process would tend to be insensitive to changes in a court decision as to the size of the appraisal unit. It was noted in Section I that whatever appraisal model was chosen, it should be responsive to changing appraisal instructions by negotiators or the courts.

4. An average price mechanism does not replicate or predict prices of the comparable properties. Instead, it substitutes an average as a consistent pattern.

5. An average price mechanism is not sensitive to differences in point scores or size of ownership position by cluster for each of the twenty owners.

Therefore, an alternative pricing model such as MKTCOMP must be weighted more heavily because it provides greater sensitivity to the differences among comparables and between comparables and subject properties relative to wilderness elements which affect price of wilderness tracts. In short, the point systems developed to this stage in the appraisal should be integrated into the price formula rather than simply used as a sorting device as was done to select comparables for the average price estimate.

J. Multiple Regression Applications to Valuation of Subject Property

In recent years mass appraisals of roughly similar properties have utilized a statistical technique called

stepwise multiple regression in an effort to relate physical factors to price. Although the technique produces relatively unreliable prices for each individual subject unit, the nature of the technique minimizes the collective error so that the aggregate sum of all prices of the individual subjects is highly reliable. Indeed, multiple regression was first applied to farm and ranch land appraisals using soil types and animal unit month scoring systems, not unlike the point scores used in this appraisal for wilderness.

In this case, a multiple regression program which is a routine component of MINITAB on the WITS system of the University of Wisconsin School of Business was used to test the applicability of stepwise multiple regression analysis to the subject property.

The nine comparable sales used for the average log price per ten acre cell were regressed in various combinations against the ten wilderness attributes previously discussed. Only two attributes, apparent naturalness and vegetation cover had t values greater than two.

The nine comparable sales, using log price per ten acre cell, were then regressed against apparent naturalness and vegetation cover to provide an R-squared of 71 percent after adjustment for six degrees of freedom. The results are shown in Exhibit IV-20. The regression equation derived is:

THE REGRESSION EQUATION IS
 $Y = 6.75 - 1.26 X_1 + 1.01 X_2$

```

MTB >NOPRI
MTB >READ 'REG.MOD' INTO C1-C14
MTB >DIVI C2 10 C15
MTB >DIVI C3 C15 C16
MTB >LOGT C16 C17
MTB >PRINT C2 C15
COLUMN      C2      C15
COUNT      9      9
ROW
1      160.00    16.000
2      463.00    46.300
3      82.00     8.200
4      88.00     8.800
5      320.00    32.000
6      640.00    64.000
7      357.00    35.700
8      1760.00   176.000
9      336.00    33.600
    
```

	COLUMN	COEFFICIENT	ST. DEV. OF COEF.	T-RATIO = COEF/S.D.
	--	6.7528	0.5888	11.46
X1	C4	-1.2560	0.2957	-4.24
X2	C8	1.012	1.253	0.80

THE ST. DEV. OF Y ABOUT REGRESSION LINE IS
 $S = 0.2230$
 WITH (9 - 3) = 6 DEGREES OF FREEDOM

R-SQUARED = 78.4 PERCENT
 R-SQUARED = 71.2 PERCENT, ADJUSTED FOR D.F.

ANALYSIS OF VARIANCE

	DUE TO	DF	SS	MS=SS/DF
	REGRESSION	2	1.08154	0.54077
	RESIDUAL	6	0.29855	0.04975
	TOTAL	8	1.38010	

```

MTB >PRINT C15 C16 C17
COLUMN      C15      C16      C17
COUNT      9      9      9
ROW
1      16.000    31062.5    4.49224
2      46.300    20237.6    4.30616
3      8.200     34268.3    4.53489
4      8.800     39886.4    4.60082
5      32.000    4250.0     3.62839
6      64.000    7828.1     3.89366
7      35.700    8039.2     3.90521
8      176.000   3812.5     3.58121
9      33.600    4732.1     3.67506
    
```

FURTHER ANALYSIS OF VARIANCE
 SS EXPLAINED BY EACH VARIABLE WHEN ENTERED IN THE ORDER GIVEN

	DUE TO	DF	SS
	REGRESSION	2	1.08154
	C4	1	1.04903
	C8	1	0.03250

ROW	X1	Y	PRED. Y VALUE	ST.DEV. PRED. Y	RESIDUAL	ST.RES.
9	2.50	3.6750	3.6603	0.1874	0.0147	0.12

X DENOTES AN OBS. WHOSE X VALUE GIVES IT LARGE INFLUENCE.

MTB >REGRESS C17 2 C4 C8

DURBIN-WATSON STATISTIC = 1.86
 MTB >STOP

Minitab B1.1 ** Statistics Dept, Penn State Univ
 University of Toledo PDP-11 version RST5 / RSX.
 STORAGE AVAILABLE 5019

$$\text{Price} = 6.7528 - 1.26 (X1 - \text{apparent naturalness}) \\ + 1.01 (X2 - \text{vegetation})$$

This equation expresses price as the log of price per ten acre cell. The use of the log compresses the variance attributable to the many varied sized properties with resulting varied prices per acre. The equation was then applied to each ten acre data cell of the subject property to infer the values by ownership position and cluster shown in Exhibit IV-21.

Regression also tends to provide some volatility for the six smallest ownerships although ten acre cells do permit some offset of statistical variance in the price inference for each ten acres.

Regression is not a true market comparison, as noted earlier, although some recognition should be made of its aggregate value indications.

K. Synthesis and Reconciliation of Market Comparison Value Indicators

Three valuation methods using market comparison data have been applied using three units of comparison, one acre for the average price per acre approach, ten acres for the multiple regression approach, and a 40 acre sub-unit for the MKTCOMP approach.

The average price per acre model (pricing model no. 2) has little to recommend it other than its tendency to stabilize values of the smallest acreage owners, primarily owners 15

EXHIBIT IV - 21

PRICING OF 20 OWNERSHIP POSITIONS USING MULTIPLE
REGRESSION PRICING MODEL NUMBER 3

Ready

DISPLAY VALUE.OUT

RUN SUNSUB

ENTER INPUT FILE NAME

? RUN2.SRT

1	1	924.	10,276,000.	1,483.
1	4	505.	1,096,230.	861.
2	4	1,324.	13,636,900.	2,302.
3	4	2,153.	4,444,220.	3,600.
4	1	66.	249,172.	106.
4	2	706.	1,020,900.	1,028.
4	3	541.	881,141.	943.
4	4	846.	1,139,360.	1,404.
5	4	372.	544,575.	640.
6	4	359.	728,025.	640.
7	1	556.	1,226,260.	960.
8	3	516.	1,101,760.	929.
9	4	592.	942,279.	980.
10	4	574.	1,045,100.	960.
11	4	798.	1,592,030.	1,326.
12	4	695.	1,520,870.	1,182.
13	3	344.	336,701.	616.
13	4	317.	931,407.	640.
14	3	704.	1,333,560.	1,209.
15	4	59.	159,791.	102.
16	4	55.	171,369.	102.
17	4	69.	81,136.	120.
18	4	61.	241,037.	110.
19	4	62.	177,266.	110.
20	4	56.	219,950.	104.

TOTAL POINTS = 13,250.

TOTAL ACRES = 22,454.00

TOTAL AMOUNT = 45,088,100.

NORMAL END OF RUN

through 20. Owners of 640 acres have 16 sections of 40 acres each so that the theory of offsetting error can control small variances between the 40s, stabilizing prices to reflect significant differences without exaggeration. Therefore it may be useful to recognize the average price per acre to some small degree in the final conclusion.

Multiple regression (pricing model no. 3) is reliable in the aggregate but also suspect for small size parcels because there may be an insufficient number of cells to affect residual errors. It also is not quite a true market comparison as each subject is compared to the least squares mean of the sample rather than to specific comparable sales. Nevertheless, the power of multiple regression analysis to predict aggregate values in mass appraisals is well established.

Therefore we have chosen to set our final price estimate as a weighted average of the three methodologies, placing a five percent (5%) weight on the simple average price per acre method, a fifteen percent (15%) weight on multiple regression, and a weight of eighty percent (80%) on MKTCOMP. These weights are applied in Exhibit IV-22 and the sum of the total values ascribed each owner is the result.

WEIGHTED AVERAGE SYNTHESIS OF THREE PRICING MODELS
TO ESTABLISH FAIR MARKET VALUE AS OF JANUARY 1, 1981
FOR 20 OWNERSHIP POSITIONS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Owner Number	Price Model Number 1 (MKTCOMP)	Column (2) x .80	Price Model Number 2 (Avg. Price Per Acre)	Column (4) x .05	Price Model Number 3 (Multiple Regression Per 10 Acres)	Column (6) x .15	Total of Columns (3), (5), & (7)
1	\$4,092,800*	\$3,274,240	\$2,699,080*	\$134,954	\$11,375,710*	\$1,706,357	\$5,115,551
2	3,380,380	2,704,304	3,927,300	196,365	13,636,900	2,045,535	4,946,204
3	5,823,230	4,658,584	5,420,000	271,000	4,444,220	666,633	5,596,217
4	5,599,520	4,479,616	6,911,150	345,558	3,290,573	493,586	5,318,760
5	976,748	781,398	736,000	36,800	544,575	81,686	899,884
6	1,003,280	802,624	736,000	36,800	728,025	109,204	948,628
7	1,390,990	1,112,792	2,172,000	108,600	1,226,260	183,939	1,405,331
8	1,728,860	1,383,088	1,068,350	53,418	1,101,760	165,264	1,601,770
9	1,464,440	1,171,552	1,127,000	56,350	942,279	141,342	1,369,244
10	1,553,040	1,242,432	1,104,000	55,200	1,045,100	156,765	1,454,397
11	1,882,630	1,506,104	1,524,900	76,245	1,592,030	238,805	1,821,154
12	2,030,870	1,624,696	1,359,300	67,965	1,520,870	228,131	1,920,792
13	1,869,640	1,495,712	1,444,400	72,220	1,268,108	190,216	1,758,148
14	1,894,770	1,515,816	2,030,350	101,518	1,333,560	200,034	1,817,368
15	192,188	153,750	117,300	5,865	150,791	22,619	182,234
16	186,746	149,397	117,300	5,865	171,369	25,705	180,967
17	91,884	73,507	138,000	6,900	81,136	12,170	92,577
18	263,531	210,825	126,500	6,325	241,037	36,156	253,306
19	146,561	117,249	126,500	6,325	177,266	26,590	150,164
20	165,454	132,363	119,600	5,980	219,950	32,993	171,336
TOTAL	\$35,737,562	\$28,590,049	\$33,005,030	\$1,650,253	\$45,091,519	\$6,763,730	\$37,004,032

* \$3,480 added for mineral rights on 174 acres

Soudan's Ranch, Inc.

EXHIBIT IV - 22

IV-79

L. Final Value Conclusion

The appraiser therefore concludes that the fair market value by individual owner and claim number as presented in Exhibit IV-23 totals the sum of:

THIRTY-SEVEN MILLION DOLLARS

(\$37,000,000)

as of January 1, 1981, under the assumptions, limiting conditions, and appraisal judgements included in this report.

EXHIBIT 23

FAIR MARKET VALUE BY OWNER NUMBER AND
COMPLAINT NUMBER AS OF JANUARY 1, 1981

LETTER OF TRANSMITTAL DATED MARCH 1, 1982

<u>Owner No.</u>	<u>Owner Name</u>	<u>Acres Owned</u>	<u>Total Fair Market Value</u>	<u>Complaint No.</u>
1	L. V. Brown	2,342.92	\$ 5,115,551	C-80-365
2	Sheila D. Brown	2,301.68	4,946,204	C-80-351
3	J. M. Brown, Jr.	3,599.78	5,596,217	C-80-362
4	Jean O. Brown	3,483.60	5,318,760	C-80-355
5	Chester Chastek	640.00	899,884	C-80-366
6	Catherine Chastek	640.00	948,628	C-80-367
7	Beverly C. Cook	960.00	1,405,331	C-80-349
8	Deborah A. Hansen	928.40	1,601,770	C-80-352
9	Stephanie M. Brown	979.90	1,369,244	C-80-353
10	Lawrence V. Brown, Jr.	960.00	1,454,397	C-80-361
11	Josephine H. Brown	1,326.56	1,821,154	C-80-350
12	Patricia E. Brown	1,182.40	1,920,792	C-80-359
13	Jacqueline Brown	1,255.57	1,758,148	C-80-363
14	Barbara Huquenin	1,208.80	1,817,368	C-80-364
15	Patrick C. Chastek	101.78	182,234	C-80-348
16	Joyce Esposito	101.79	180,967	C-80-354
17	Gary R. Chastek	120.00	92,577	C-80-356
18	Thomas D. Chastek	110.00	253,306	C-80-357
19	Lawrence F. Chastek	110.00	150,164	C-80-358
20	Michael P. Chastek	<u>103.59</u>	<u>171,336</u>	C-80-360
TOTAL		22,456.77	\$37,004,032	
		Acres		

Signed


James A. Graaskamp

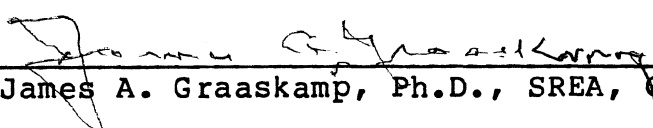
CERTIFICATE OF APPRAISAL

We hereby certify that we have no interest, present or contemplated, in the property and that neither the employment to make the appraisal nor the compensation is contingent on the value of the property. We certify that we have personally inspected the property and that according to our knowledge and belief, all statements and information in the report are true and correct, subject to the underlying assumptions and limiting conditions.

Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-365, and owned by L. V. Brown, as of January 1, 1981, is:

FIVE MILLION ONE HUNDRED FIFTEEN THOUSAND
FIVE HUNDRED FIFTY ONE DOLLARS

(\$5,115,551)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date


CERTIFICATE OF APPRAISAL

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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-351, and owned by Sheila D. Brown, as of January 1, 1981, is:

FOUR MILLION NINE HUNDRED FORTY SIX THOUSAND
TWO HUNDRED FOUR DOLLARS

(\$4,946,204)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date


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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-362, and owned by J. M. Brown Jr., as of January 1, 1981, is:

FIVE MILLION FIVE HUNDRED NINETY SIX THOUSAND
TWO HUNDRED SEVENTEEN DOLLARS

(\$5,596,217)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

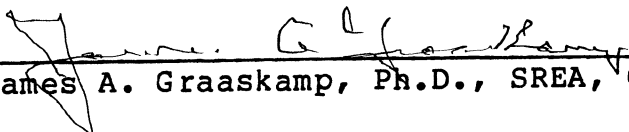
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-355, and owned by Jean O. Brown, as of January 1, 1981, is:

FIVE MILLION THREE HUNDRED EIGHTEEN THOUSAND
SEVEN HUNDRED SIXTY DOLLARS

(\$5,318,760)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

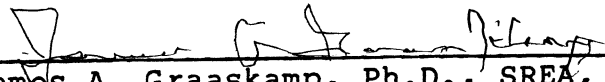
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-366, and owned by Chester Chastek, as of January 1, 1981, is:

EIGHT HUNDRED NINETY NINE THOUSAND
EIGHT HUNDRED EIGHTY FOUR DOLLARS

(\$899,884)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

CERTIFICATE OF APPRAISAL

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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-367, and owned by Catherine Chastek, as of January 1, 1981, is:

NINE HUNDRED FORTY EIGHT THOUSAND
SIX HUNDRED TWENTY EIGHT DOLLARS

(\$948,628)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-349, and owned by Beverly C. Cook, as of January 1, 1981, is:

ONE MILLION FOUR HUNDRED FIVE THOUSAND
THREE HUNDRED THIRTY ONE DOLLARS
(\$1,405,331)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

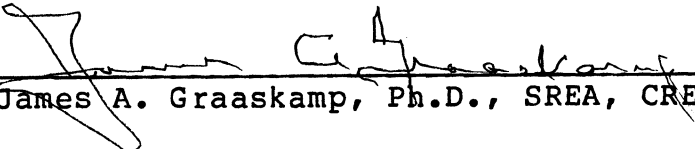
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-352, and owned by Deborah A. Hansen, as of January 1, 1981, is:

ONE MILLION SIX HUNDRED ONE THOUSAND
SEVEN HUNDRED SEVENTY DOLLARS

(\$1,601,770)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

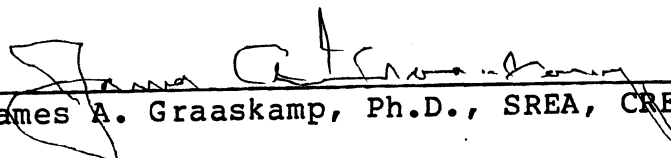
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-353, and owned by Stephanie M. Brown, as of January 1, 1981, is:

ONE MILLION THREE HUNDRED SIXTY NINE THOUSAND
TWO HUNDRED FORTY FOUR DOLLARS

(\$1,369,244)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

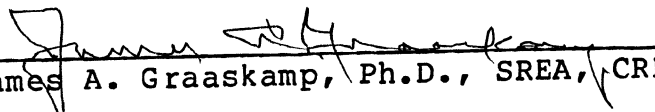
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-361, and owned by Lawrence V. Brown Jr. as of January 1, 1981, is:

ONE MILLION FOUR HUNDRED FIFTY FOUR THOUSAND
THREE HUNDRED NINETY SEVEN DOLLARS

(\$1,454,397)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

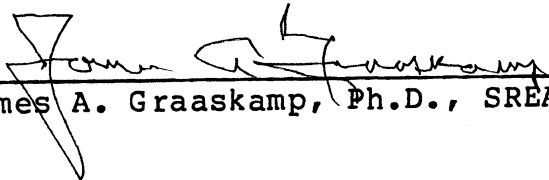
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-350, and owned by Josephine H. Brown as of January 1, 1981, is:

ONE MILLION EIGHT HUNDRED TWENTY ONE THOUSAND
ONE HUNDRED FIFTY FOUR DOLLARS

(\$1,821,154)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

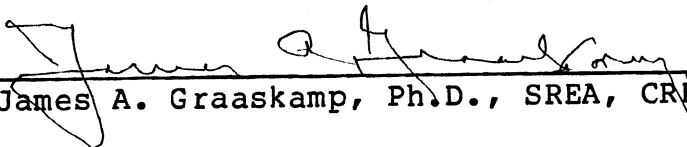
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-359, and owned by Patricia E. Brown as of January 1, 1981, is:

ONE MILLION NINE HUNDRED TWENTY THOUSAND
SEVEN HUNDRED NINETY TWO DOLLARS

(\$1,920,792)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

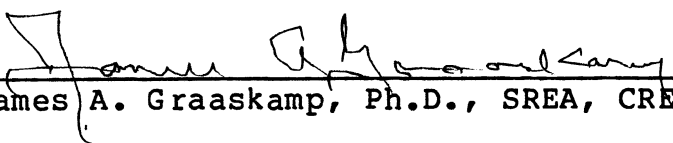
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-363, and owned by Jacqueline Brown as of January 1, 1981, is:

ONE MILLION SEVEN HUNDRED FIFTY EIGHT THOUSAND
ONE HUNDRED FORTY EIGHT DOLLARS

(\$1,758,148)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

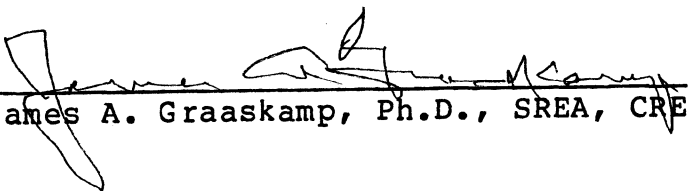
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-364, and owned by Barbara Huquenin as of January 1, 1981, is:

ONE MILLION EIGHT HUNDRED SEVENTEEN THOUSAND
THREE HUNDRED SIXTY EIGHT DOLLARS

(\$1,817,368)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

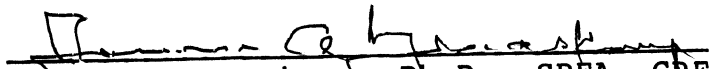
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-348, and owned by Patrick C. Chastek as of January 1, 1981, is:

ONE HUNDRED EIGHTY TWO THOUSAND
TWO HUNDRED THIRTY FOUR DOLLARS

(\$182,234)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

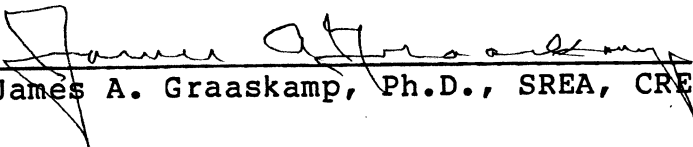
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-354, and owned by Joyce Esposito as of January 1, 1981, is:

ONE HUNDRED EIGHTY THOUSAND
NINE HUNDRED SIXTY SEVEN DOLLARS

(\$180,967)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

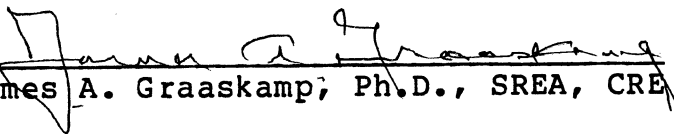
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-356, and owned by Gary R. Chastek as of January 1, 1981, is:

NINETY TWO THOUSAND
FIVE HUNDRED SEVENTY SEVEN DOLLARS

(\$92,577)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

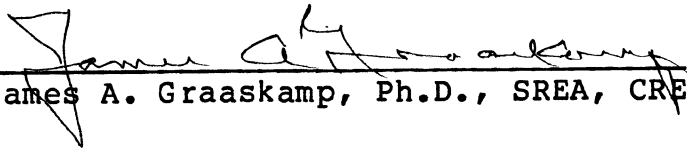
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-357, and owned by Thomas D. Chastek as of January 1, 1981, is:

TWO HUNDRED FIFTY THREE THOUSAND
THREE HUNDRED SIX DOLLARS

(\$253,306)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date


CERTIFICATE OF APPRAISAL

We hereby certify that we have no interest, present or contemplated, in the property and that neither the employment to make the appraisal nor the compensation is contingent on the value of the property. We certify that we have personally inspected the property and that according to our knowledge and belief, all statements and information in the report are true and correct, subject to the underlying assumptions and limiting conditions.

Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-358, and owned by Lawrence F. Chastek as of January 1, 1981, is:

ONE HUNDRED FIFTY THOUSAND
ONE HUNDRED SIXTY FOUR DOLLARS

(\$150,164)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

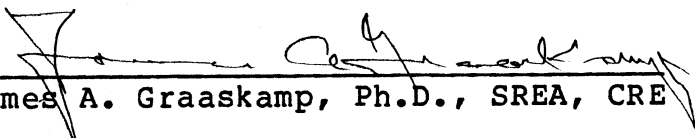
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Based upon the information and subject to the limiting conditions contained in this report, it is our opinion that the Fair Market Value, as defined herein, of the property in Complaint Number C-80-360, and owned by Michael P. Chastek as of January 1, 1981, is:

ONE HUNDRED SEVENTY ONE THOUSAND
THREE HUNDRED THIRTY SIX DOLLARS

(\$171,336)


James A. Graaskamp, Ph.D., SREA, CRE

3-1-82
Date

STATEMENT OF LIMITING CONDITIONS

1. Contributions of Other Professionals

This appraisal is a team study by various professional disciplines and specialists, under the direct control and supervision of Professor James A. Graaskamp. Each professional has responsibility for the care and craftsmanship of their contribution and those who work under their direction. Each contributor was subject to quality control procedures described elsewhere in this report but no absolute warranty can be made by Landmark Research, Inc., or by the individual appraiser in charge. Information and data processing furnished by others was believed to be reliable and computer data hand checked but no guarantee of computer infallibility can be provided.

- . Legal descriptions of the subject site and ownership positions were provided by Attorney Ed Parry and reviewed for consistency by Professor Ralph Kiefer, P.E., whose credentials can be found in Appendix B. Professor Kiefer supervised design of a grid system for computer mapping of subject parcels, federal lands, and comparable properties. In addition, he supervised three-dimensional photography of subject and comparable lands, and supervised Sean Ahearn in the correct placement of comparable legal descriptions on aerial photographs and other map information sources.
- . Computer mapping, data processing, and related matters were the responsibility of Michael L. Robbins, who also supervised the input of basic data concerning the properties in this report. These procedures and data systems can be found in Appendix C.
- . Development of scenic quality ratings from Visitor Employed Photography (VEP) and statistical analysis of related data together with a review of literature and practices of the Forest Service and others in this related area are the responsibility of Professor Bernard Niemann and Professor Richard Chenoweth and representations of the appraiser are based solely on their materials in Appendix D.

- . Landmark Research, Inc., and this appraiser take no responsibility for timber cruises and timber valuation. Some data was provided from Pack River data resources by John Lyngstad and all timber valuation estimates were provided by Kenneth E. Beil, A.C.F., of International Forestry Consultants, Inc., in a letter dated August 27, 1981.
- . All maps and sketches in this report are included for illustrative purposes only, to assist the reader in visualizing a property or attribute; none of these drawings represent actual surveys or scaled presentations.
- . Information on comparable sales was gathered from a variety of sources and validated wherever possible by the appraiser by direct conversation or correspondence with grantor, grantee, or their agents. In several cases photocopies of documents of record were furnished directly by Ed Parry but the appraiser takes responsibility for validation of basic sales price and terms of sale.
- . The MKT COMP computer program and concepts are the property of EDUCARE NETWORK, INC., and the program is currently available on GE Time Sharing and on The University of Wisconsin School of Business WITS System. It is used for assessment and valuation purposes by a number of communities, lending institutions, and federal agencies and is believed to be reliable. It represents several years of development work by H. Robert Knitter, Michael L. Robbins, and James A. Graaskamp and appraisers throughout the country and is believed to be reliable and accurate in its process.

2. Facts and Forecasts Under Conditions of Uncertainty

- . Data mapping has been done with craftsmanship and care, but the nature of available mapping resources such as U.S. Geodetic Survey Maps, and orthographic maps will cause some ground proofing errors which in urban appraisal could be serious but which in huge landscapes permits the application of rules of statistical offsetting error. Since the basic information unit is ten square acres, there are more than ten thousand information cells on the subject property and its environs. Data on comparable sales has also been organized by ten acre cells and placed on maps of the

comparables as described in the report by Sean Ahearn in Appendix B. Despite possible site border aberrations, we believe that the process has made site data representative at a refined scale never before available with both spatial location and detail as is provided in this report for comparable sized vast land wilderness tracts.

- . Those who would use this appraisal must keep in mind that key assumptions defining the date, scope, or other critical premises on which any appraisal is dependent are stated in ALL CAPITAL LETTERS throughout the report and these assumptions are a significant part of the statement of limiting conditions in this report.

3. Controls on Use of Appraisal

- . Possession of this report or any copy thereof does not carry with it the right of publication nor may the same be used for any other purpose by anyone without the previous written consent of the appraiser or the applicant, and in any event, only in its entirety.
- . Neither all nor any part of the contents of this report shall be conveyed to the public through advertising, public relations, news, sales, or other media without the written consent and approval of the author, particularly regarding the valuation conclusions, and the identity of the appraiser, or of the firm with which he is connected or any of his associates.

J A M E S A . G R A A S K A M P

PROFESSIONAL DESIGNATIONS

SREA, Senior Real Estate Analyst, Society of Real Estate Appraisers

CRE, Counselor of Real Estate, American Society of Real Estate
Counselors

CPCU, Certified Property Casualty Underwriter, College of Property
Underwriters

EDUCATION

Ph.D., Urban Land Economics and Risk Management - University of Wisconsin
Master of Business Administration Security Analysis - Marquette University
Bachelor of Arts - Rollins College

ACADEMIC HONORS

Chairman, Department of Real Estate and Urban Land Economics,
School of Business, University of Wisconsin
Urban Land Institute Research Fellow
University of Wisconsin Fellow, Omicron Delta Kappa
Lambda Alpha - Ely Chapter
Beta Gamma Sigma, William Kiekhofers Teaching Award (1966)

PROFESSIONAL EXPERIENCE

Dr. Graaskamp is the President and founder of Landmark Research, Inc., which was established in 1968. He is also co-founder of a general contracting firm, a land development company and a farm investment corporation. He is formerly a member of the Board of Directors and treasurer of the Wisconsin Housing Finance Agency. He is currently a member of the Board and Executive Committee of First Asset Realty Advisors, a subsidiary of First Bank Minneapolis. He is the co-designer and instructor of the EDUCARE teaching program for computer applications in the real estate industry. His work includes substantial and varied consulting and valuation assignments to include investment counseling to insurance companies and banks, court testimony as expert witness and the market/financial analysis of various projects, both nationally and locally, and for private and corporate investors and municipalities.