ADDENDUM TO CHAPTER 5A DEALING WITH LITIGATION ISSUES by Jerry Kindinger

Sources of Aerial Photographs for Use as Evidence

National Agencies

1. U.S. Geological Survey

Tel. 1-800-USA-MAPS; Fax (703) 648-5548; E-Mail: esicmail@asgs.gov

Maintains APSRS database (Aerial Photography Summary Records System) describing over 600,000 aerial photography projects covering the United States and its territories. A number of federal, state and municipal agencies and commercial firms contribute to the APSRS. Since 1975, this database has been a standard reference guide for users of aerial photographs. See Attachment #1.

2. U.S. Army Corps of Engineers

Wash. D.C. Tel. (202) 761-1534

See entry under Local Listings.

3. Department of Agriculture—USDA

Salt Lake City, UT; Tel. (801) 975-3500.

Photographs from federal agencies such as the Bureau of Land Management, the Bureau of Indian Affairs, the Bureau of Reclamation and the U.S. Forest Service have been consolidated under the USDA for years 1954 to the present.

4. National Archives

College Park, MD; Tel. (301) 713-7030

Photographs from many federal agencies that predate 1954 are consolidated at the National Archives.

State Agencies

1. Department of Transportation

Aerial Photography Section, P.O. Box 47384, Olympia, WA 98504-7384 Kathleen Shelton; Tel. (360) 709-5550; Fax (360) 709-5599

Aerial film negative library is in excess of 500,000 and includes most of the state of Washington. Negatives date from 1948 to the present. For Thurston County, some of the negatives date back to 1936. Most of the aerial photographs are taken within 1-2 miles of state routes. There will be a research charge for historical photographs. To inquire about aerial photographs, they request that you fax to them a map of the area of your interest with your name and phone number with the area "squared off" (instead of using legal descriptions). See, Attachment #2.

2. Department of Natural Resources

Olympia, WA "Nina"; Tel. (360) 902-1234

Physically holds their own negatives. Their vertical photos are scaled one inch = 1,000 feet or one inch = one mile. They have aerial photos of anything in Washington state that is not federal land (i.e., national forest land, Indian reservations or restricted airspace such as Hanford). The DNA flies certain areas of the state every year and is in a rotating cycle for others. The photos date back to 1958 depending on the county. Western Washington is flown more often than Eastern Washington. Must use legal description (including section, township and range) to order photos. Prepayment required. [Note: "Nina" of this agency has done extensive research of all sources of aerial photography in the country.]

Local

1. Seattle Department of Construction and Land Use Tel. (206) 684-8875

Plans and photos of residential properties from 1974 and commercial property from as early as 1898 forward can be found at the Microfilm Library in the Dexter Horton Building, 710 Second Avenue #200, Seattle, WA. The library does not take any phone calls—you must order in person between 10:00 a.m.-4:00 p.m. These photos are only for property within the city limits of Seattle.

2. Seattle City Engineer (Public Utilities)

Current aerial photographs (1993-present) can be found in the Geographic Systems Department on the 5th Floor of the Municipal Building, 600 Fourth Avenue, Seattle, WA. Department Director is Elaine Eberly at (206) 684-7405. There is a \$75 charge to pull up information on the computer and \$15 charge per print. Need to use address and/or legal description. Hours of operation are Monday 9-11:30; Tuesday 9-12:30; Wednesday 2-4; Thursday closed; Friday 9-11:30. If looking for aerial photos from 1970 or earlier, contact the City Engineer's Vault Department, (206) 684-5132, on the 8th Floor of the Municipal Building.

Seattle District, U.S. Corps of Engineers Contact Kelly Powell or Joyce Rolstead; Tel. (206) 764-3552

The Corps has made one big night flight a year over all waterways, harbors and shorelines using color infrared film since 1970. These aerial photos will cover a mile on both sides of the waterways. In addition, they take photographs in support of design activities in the state.

Commercial/Private

Walker & Associates

12652 Interurban Avenue So., Seattle, WA 98168 Tel. (206) 244-2300; Fax (206) 244-2333 Contact Laureen O'Toole Kelly or James Boyer

One of the best commercial resources for existing aerial photographs in the state. Photos date back over 60 years. See Attachment #3 for information and list of most popular flights by county and year.

2. For other private agencies, see your local yellow pages.

			283

How To Obtain Aerial Photographs



The U.S. Geological Survey's (USGS)
Earth Science Information Center (ESIC)
maintains an informational data base of
aerial photographic coverage of the
United States and its territories.

This information describes photographic projects from the USGS, other Federal. State, and local government agencies, and commercial firms.

in this part of the original photograph, at a scale of 1:40,000, 1 linch on the photograph represents 3,333 lest on the ground, This original photograph is from NAPPB Roll 8, Frame 3.

The scenes on this page show an original 9-by 9-inch photograph and the results obtained by enlarging a section of the original photograph two and four times. Compare the size of the football field, track, school building, and houses at the different scales.

On receipt of the completed checklist on the reverse side of this form and your marked map, ESIC representatives will assist you in locating and ordering photographs.

Information

For information on these and other USGS products and services, call 1-800-USA-MAPS, fax 703-648-5548, or e-mail: esicmail@usgs.gov.

The EARTHFAX fax-on-demand system is available 24 hours a day at 703-648-4888.

The address for the USGS home page is <URL: http://www.nsgs.gov/>



in this 2X enlargement of the same photograph, at a scale of 1:20,000, 1 inch on the photograph represents 1,666 feet on the ground.



In this 4X enlargement of the same photograph, at a scale of 1:10,000, 1 inch on the photograph represents 633 feet on the ground.

Explanation of APSRS Printout

This computer printout contains records from the Aerial Photography Summary Record System (APSRS) for the area you requested. APSRS records describe aerial photography projects, or sets of photographs, not individual photographs. Each project may contain hundreds of individual photographs. Project descriptions were provided to the U.S. Geological Survey (USGS) by the agencies on the enclosed listing. Agency addresses and telephone numbers are enclosed on a separate list. Contact the agencies directly for further Information or to place an order.

The following items may be included in your printout:

Agency

The agency or commercial firm that can supply more information about the photographs described and can accept orders. Agency addresses and telephone numbers are provided on an enclosed list.

Latitude and longitude

The latitude and longitude of the southeast corner of the USGS 7.5-minute topographic map area that this printout covers.

State and county

The State and county in which the photographed area is located.

Date of coverage

A general date for the photographic project. The exact date of each photograph can be obtained from the agency.

Project code

Assigned by the agency that provided the record.

Scale

The denominator of the ratio that compares one measured unit on an un-enlarged photograph to the actual length of that same measured unit on the ground. For example, SCALE 00120000 represents a scale of 1:120,000, which means 1 inch on the photograph equals 120,000 inches (or 10,000 feet or 1.89 miles) on the ground.

Focal length

Camera focal length.

Film type

Includes black and white, color, color infrared, black-and-white infrared, and thermal. "Other" includes special image types such as side-looking airborne radar (SLAR).

Sensor class

Vertical carto (implies stereo) is generally considered to be suitable for cartographic operations, including photogrammetry. Vertical reconnaissance may be of good resolution but be geometrically unsuitable for photogrammetric operations or unavailable in stereoscopic coverage. Oblique photography and SLAR may also be listed.

Cloud cover

Percentage of the photograph or set of photographs where the ground is obscured by clouds.

Quadrangle coverage

Percentage of the USGS 7.5-minute quadrangle covered by the project record.

Remarks

Contains information provided by the agency, such as the county the photograph project covers, additional project descriptions, or photograph index reference numbers.

Introduction

The Aerial Photography Summary Record System (APSRS) describes aerial photography projects that meet specified criteria over a given geographic area of the United States and its territories.

Aerial photographs are an important tool at carrography and a number of other professions. Land-use planners, real estate developers, lawyers, environmental specialists, and many other professionals rely on detailed and timely aerial photo-graphs.

Until 1975, there was no systematic approach to locate an acrial photograph. or series of photographs, quickly and easily. In that year, the U.S. Geological Survey (USGS) inaugurated the APSRS. which has become a standard reference for users of aerial photographs

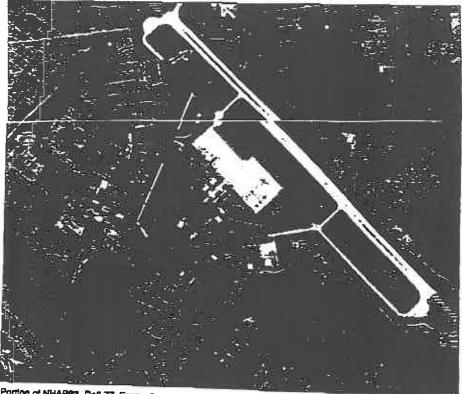
Contents

There are two data bases in the system: the APSRS data base and the contributor data base. Each record in the APSRS data base contains up to 13 descriptive fields. All fields can be displayed, and 12 of the 13 fields can be searched. Not all fields, however, contain data for every record

Each record in the contributor data base contains the name, address, and phone number of a contributor. The contributor field and the field containing the city, State, and zip code can be searched.

The APSRS data base describes more than 600,000 acrial photography projects covering the United States and its territories. A number of Federal, State, and municipal agencies and commercial firms contribute to APSRS.

Each listing is a summary of aerial photography projects within a 7.5-by 7.5-minute quadrangle area, corresponding to the USGS 7.5-minute map series. Entries are sorted by project date and describe the scale, project code, film type, cloud cover, and camera focal length. The entries also give the name of the holding agency or firm.



Portion of NHAP83, Roll 77, Frame 6.

Requirements

Hardware requirements include an IBM PC-XT-AT or compatible microcomputer with 512 kilobytes of memory, with DOS operating system version 3.0 or greater, one 20 megabyte hard drive; and a CD-ROM reader with software drivers that read ISO-9660 formatted CD-ROM's.

Information

The APSRS data base and the contributor data base are available on CD-ROM for \$57.00, plus a \$3.50 handling fee. The CD-ROM contains licensed software for searching, sorting, displaying, printing, and exporting the data. The software must be installed onto a hard drive before the data can be used. The CD-ROM is accompanied by a users manual

For more information on ordering the CD-ROM, or to obtain a list of available photographs covering a specific area,

contact an Earth Science Information Center (ESIC).

The data bases are maintained by the USGS. For information about submutting projects for entry into the APSRS. contact

U.S. Geological Survey APSRS Data Base Manager 509 National Center Restort VA 20192 703-648-5903

For information on other USGS products and services, call 1-800-USA-MAPS e-mail: esicmail@usgs.gov, or fix 703-648-5548.

Receive information from the EARTHFAX fax-on-demand system: which is available 24 hours a day, at 703-648-4888.

The address for the USGS home page. <URL: hup://www.usgs.gov/>

NAPP and NHAP Photographic Enlargements

National Aerial Photography Program

The National Aerial Photography Program (NAPP) was begun in 1987 to collect aerial photographs of the 48 conterminous States on a 5-year cycle.

Copies of NAPP images are available in black-and-white and (or) color-infrared film at 1:40,000 scale.

Figure 1 shows NAPP paper-print sizes and their corresponding scales for standard enlargements.

National High Altitude Photography

The National High Altitude Photography (NHAP) program, which was operated from 1980-89, was coordinated by the U.S. Geological Survey as an interagency project to eliminate duplicate photography in various Government programs.

NHAP copies can be obtained in either black and white or color infrared. The black-and-white film was acquired at 1:80,000 scale and the color-infrared at 1:58,000 scale.

Figure 2 shows NHAP paper-print sizes and their corresponding scales for standard enlargements.

Information

For more information about NAPP and NHAP photographic entargements, contact:

Sioux Falls-ESIC EROS Data Center Sioux Falls, SD 57198-0001 Phone: 605-594-6151 Fax: 605-594-6589

E-mail: custserv@edcserver1.crusgs.gov

Print eize (nches)	Black-and-white scale	Color-infrared scale_	Stack and white 1 inch represents approximately:	Color infrared 1 incb represent approximately:
9×9	1:40,000	1:40,000	3,333 feet	3,333 feet
18 x 18	1:20,000	1:20,000	1.666 feet	1,666 feet
36 x 36	1:10,000	1:10,000	833 feet	833 feet

Figure 1. NAPP paper-print stars and their corresponding scales for standard enlargements.*

Print size (Inches)	Black and white code	Color-infrared	Black and white 1 inch represents approximately:	Color infrared 1 inch represent approximately:
9 x 9	1:80,000	1:58,000	6,666 feet	4.833 feet
18 x 18	1:40,000	1:29,000	3.333 feet	2,416 feet
36 x 36	1:20,000	1:14,500	1,666 feet	1,208 feet

Figure 2.NHAP paper-print sizes and their corresponding scales for standard enlargements.*

For information on other USGS products and services, call 1-800-USA-MAPS. e-mail esicnail@usgs.gov, or fax 703-648-5548.

Receive information from the EARTHFAX fax-on-demand system, which is available 24 hours a day, at 703-648-4888.

The address for the USGS home page is <URL: http://www.usgs.gov/>

^{*}Also available at a scale of 1:24,000 (1 inch=2,000 feat), plus or minus 5 percent, unless the customer provides an exact enlargement factor. Print size will vary according to the scale of the NAPP or NHAP photographs.

Aerial Photographs

Order Form

- Use this form and the Aerial Photographs Price List (see reverse) to order aerial photographs from the U.S. Geological Survey.
- For assistance in completing this form, contact any Earth Science Information Center (ESIC) or call 1-800-USA-MAPS.
- Custom enlargements are available at additional cost.
- Orders are normally shipped within
 45 days after receipt. Priority orders (shipment within 5-7 working days) cost
 If times the standard product price.
- Payment (check, money order, purchase order, Visa or MasterCard Information, or Government account) must accompany order. Make all drafts payable to Dept. of the Infarior—USGS. Do not send cash.

Customers outside the United States must send an international money order or check drawn on a U.S. benk, in U.S. dollars.

- 6. Please include a \$3.50 handling charge per order mailed.
- Return this form and payment to any ESIC shown on the enclosed activess list.

	rst, middle initial, last)				Telephone	Number			Date	
Compan	y or Agency	. –			ESIC Account Number (if known)					
Address						ASTERCARD	•			11
City Sta	e, and ZIP Code				·		uninger.	•		
					Expression	Date				
Ship to	if different from above):			·	Signature					
					Remarks:				<u> </u>	
Photo	Desired - G		1					_		92
Outo	Project or Scene Identification Number	Roll Number	First Frame	Last Frame	Product Code	No. of Frames x	Copies	= Qty	Unit × Price	Total = Price
			-							
									 	+
-					 		 	 	 	+-
			<u> </u>	 	+	 		├	-	
		 	 	J	-	 		-		
		 				ļ		L	<u> </u>	>
		<u></u>						ŀ		
		ļ								
							 	 	+	+
			<u> </u>	 				 		 -
		 			 	-	_			
					<u> </u>		<u> </u>		<u></u> _	
lap na	ue(s):							Subtot	4	
						_		Handlin (per orde	ig Charge r mailed)	3.50
									rder Cost	_
	nts:									07

		(+)

		55

	ERIAL PHOTO SEC KATHLEEN SHELTON JIM WALKER VERN POTTS	MAILING ADDRESS: WSDOT AERIAL PHOTO LAB PO BOX 47384 OLYMPIA, WA 98504-7384	SHIPPING ADDRESS: WSDOT AERIAL PHOTO I 1635 SO, SECOND AVE. TUMWATER, WA 98512
Voice:	360-709-5550	Washington State	
Fax:	360-709-5599	rtment of Transportation	

Aerial Photograpny Section

A Production Audited Group

Introduction

Aerial photography and those products it generates have extensive use as a visual communication tool for planning, property acquisition, engineering, construction, litigation, and public relations.

The photography unit acquires dynamic, timely, high resolution data on the film negatives which it catalogs and stores.

The photo lab unit uses these film negatives to produce hard copy (usually photo print positives on paper) in black-and-white, true color, and color infrared mediums.

This specialized discipline requires a staff of four technical and two clerical employees. The average discipline level is 29 years for the 7 core employees. Their technology level is "leading edge." The scope and volume of work is unlimited.

Funding of the operation is on a 100% cost-recovery basis. We operate entirely on the revenues generated from the sales of products and services provided at cost.

In addition to the Washington State Department of Transportation's (WSDOT) needs, the Aerial Photography Section responds to requests from all levels of local, state and federal government under the terms of the Washington State Interlocal Cooperation Act (RCW 39.34). Also, it should be noted that Washington State Law (RCW 42.12) guarantees copies of all Washington government photography be made aviiable to the requesting public at cost.

Current Status

Aircraft

The Rockwell International Aero Commander 680F Aircraft

WSDOT contracts its photo aircraft from the private sector. The contract calls for a high-winged, twin-engine aircraft, modified for our aerial cameras. The maintenance, lubricants, and pliots are provided by the contractor. WSDOT provides cameras, photographers, fuel, oxygen, and the hanger. We have found the Aero Commander to be a reliable workhorse in our photography program. It provides a steady, controllable camera platform and has excellent for ward and downward visibility.

Aerial Camera

The Zeiss Jens LMK-2000 Aerial Camera

WSDOT owns and operates a precision mapping lens aerial carners that features a gyrostabilized mount with Forward Image Motion Compensation (F(MC) and Differential Exposure Control (DEC).

.

These "leading edge" technologies produce consistently high-definition original aerial negatives and positives. This same technology allows us to also take photography on those absolutely necessary occasions during rough air conditions; low light levels such as dawn, dusk, overcast skies, and light rainfall.

The gyrostabilized mount constantly seeks to keep the camera level, (lens plumb) regardless of the aircraft's attitude during the photo run.

FiMC is best explained by visualizing the fraction of a second that the camera's shutter is open with the film being held totally flat against the pressure plate in the film magazine. At this particular moment in a FIMC-equipped camera, the film and pressure plate are moved rearward ("the opposite direction of flight). The amount of movement is the product of the camera's microprocessor calculation involving the speed of the aircraft, the height of the aircraft above the terrain, and the camera shutter speed being used. This continuous action has the effect of taking a series of overlapping, vertical photgraphs, each of them at a standatil.

DEC is best understood as an automatic exposure control utilizing a light-sensitive sensor with a one degree angular field that is constantly reading the darkest and lightest areas along the center of the flight path. The carneral microprocessor calculates an average of 100 measurements every 3.5 seconds and sends a message to the shutter speed control and, if necessary, to the aperature control. When properly employed, this automatic exposure results in aerial negatives with the same relative density from one negative to the next, one fight line to the next, and one project to the next.

Aeriai Negatives

The present library of aerial film negatives is estimated to be in excess of 500,000 and growning at the rate of 10,200 per year. They include most of the state of Washington. These negatives date from 1948 to the present. All serial negatives gain in value with time. All large format serial negatives are retained in the photo lab archive, a fire/heat resistant vault. They are in the form of 9 1/2-inch wide by 300 foot long rolls of film on spools.

Aerial Photography

Our large format aerial camera is used in two configurations in flight allowing vertical and oblique views to be taken of an area or subject. Photography taken withhigh-resolution 6-inch mapping lens results in a metric quality negative suitable for use in the analytical stero plotters when map compilation is required or high-altitude, small-scale negatives are needed to cover a maximum of area with each photo taken. Photography taken with our 12-inch reconnaissance lens results ineither mapping quality or ultra. large-scale negatives.

Approximately 5 percent of all aerial photography taken is from a helicopter using a hand-held, medium format camera. This allows a close-up view in urban areas where low-flying with fixed-wing aircraft is prohibited.

We presently have the capability of taking vertical, mapping quality, aerial photography with negative scales between 1" == 100' and 1"=4,400'. And oblique photography from 1,000 feet to 26,500 feet above sea level.

Terrestrial Photography

The section also takes special purpose photography for the department with its medium and small format cameras when requested. These ongoing programs involve archival quality negatives of existing historical structures or new construction.

Negative Film Processing

All exposed black-and-white aerial negatives are processed immediately in-house in an automatic film processor. All exposed color films are immediately shipped via United Parcel Service to Chio, for processing in a special processor and returned. United Parcel Service overnight usually arriving the third or fourth working day after being exposed in the camera.

Negative Film Printing

Contact printing of black-and-white, true color, and color infrared negatives to a 9-inch by 9-inch paper or film positive is completed in our lab on an automatic and/or manual dodging contact printers.

Enlargement printing of black-and-white, true color, and color infrared negatives to various sizes and scales on paper or print film positives is completed in our lab on one horizontal aerial enlarger or on one autofocus rectifier enlarger.

Note: Our enlarging capability is from a minimum of 1-foot square to a maximum of 50 inches wide by 144 inches long single print size in color or black-and -white paper or print film.

Our magnification capability is 1.1x through 100k. Our vertical easel is 8 feet high by 12 feet wide

Print Mosaicking, Mounting, and Framing

All requests for mosaiked prints, print mounting, and mounted print framing are completed in our studio using the "cold press" method. Mounting materials are available in three thicknesses: 3/16 inch, 1/2 lnch, and 3/4 inch. The mounting material come in black or white, (solid colors may be special ordered). Maximum single print size capacity in the cold press is 50 lnches by any length. Larger mosaics are created by hinging places together.

1997 UPDATE

Improved Customer Service

We now can offer packaging and shipment of large messaces and mounted prints direct to your office. Costs for this service are nominal and based on packaged size of your order.

The Section has added an accountant to our staff to assist customers with questions regarding invoicing and billing. Simply dial 709-5502 and ask for Lori.

Increased Technology

We have just renewed our present photo aircraft contract for 24 more months and the vendor has elected to offer a second, (optional) high performance aircraft capable of higher altitudes, increased cruise speed and rate of climb.

The Section has also purchased a Ultra Spare 2 System by Sun Computers for the purpose of performing high resolution film scanning. The final product is an orthophoto in digital form for use on your PC or a hardcopy photoprint that can be mosaiked with others.

12		0

		E
s =		

AERIAL PHOTOGRAPHY

EXISTING AERIAL PHOTOGRAPHS . PHOTO LAB SERVICES



Attached you will find our brochure that you requested. If you any further questions, please contact Laureen O'Toole Kelly or James Boyer at 244-2300. They handle our library of exisiting photography.

When ordering enlargements please fax a street map with your area clearly outlined. Indicate the dimensions of the photograph either in terms of scale or size. Include all pertinent information such as whether you need the most current coverage or historical photography. Be as specific as possible. Unfortunately, we cannot take orders for enlargements over the phone. If a fax machine is not available, you can mail the information or visit our Retail Sales office, Mon-Fri 8:30-5:00, where we will be happy to assist you.

Phone	(206)	244-2300
Fax	(206)	244-2333

Service Times

Standard and Rush service times for photographic prints are as follows:

Enlargements 4 Working Days 3 Working Days 2 Working Days 1 Working Day	Normal 50% Rush 75% Rush 100% Rush
Contact Prints 3 Working Days 2 Working Days 1 Working Day	Normal 50% Rush 100% Rush

All orders will be ready at 3 pm on the day they are due. Add extra time for additional services such as mounting, mosaicking, and copy work.

Photo Lab Services

opecial onerges.	
35mm Slides	\$10.00 each
Scaling Fee	\$25.00
Masks	\$30.00 minimum
Enlargements Over 15X	30% charge
Photo Certification	\$20.00/\$5.00 per additional
Overlay Graphics	\$100.00 minimum
Lab Hourly Rate	\$50.00
Butt Splicing and Tone	30% Charge
Matching	-
Stereoscopes	\$32. 00/44.00
funes	RR QQ

Each order must meet a minimum invoice of \$50.00

Finished	3/16"	1/2*
Size	Gatorfoam	Gatorioam
8.5 x 11	12.50	13.50
11 x 14	13.00	14.50
16 x 20	13.75	16.50
20 x 24	18.75	24.00
20 x 30	25.00	30.00
30 x 40	45.00	60.00
Add'l Sq Ft	5.00	6.75
Meximum Size	48 x 96	

Framing is available.

Contact Print Pricing 1st 2-50 51-100 101+ COLOR 60.00 7.00 8.00 5.50 B & W 55.00 6.50 5.50 5.00

No B/W contacts from color negs.

Color Enlargement Pricing

SIZE 8.5 X 11 11 X 14	1st 70.00 85.00	Additionals 10.00 40.00
10 X 30 16 X 20	105.00 110.00	50.00 55.00
20 X 20	120.00	60.00
20 X 30	180.00	80.00
20 X 40	175.00	90.00
20 X 48	210.00	105.00
24 X 24	150.00	75.00
24 X 36	190.00	95.00
30 X 30	210.00	105.00
30 X 40	230.00	115.00
30 X 48	260.00	130.00
30 X 60	300.00	150.00
40 X 40	300.00	150.00
40 X 48	340.00	170.00
40 X 60	370.00	185.00
40 X 72	400.00	200.00
48 X 48	385.00	190.00
48 X 60	440.00	220.00
48 X 72	525.00	260.00
48 X 84	550.00	275.00
48 X 96	600.00	300 .00

B&W Enlargement Pricing (Paper & Mylar)

	CANADA VANA	"to abor or will you
SIZE	1st	Additionals
8.5 X 11	65.00	10.00
11 X 14	75.00	35.00
10 X 30	85.00	40.00
16 X 20	90.00	45.00
20 X 20	100.00	50.00
20 X 30	120.00	60.00
20 X 40	140.00	70.00
20 X 48	160.00	80.00
24 X 24	110.00	55.00
24 X 38	140.00	70.00
30 X 30	165.00	80.00
30 X 40	180.00	90.00
30 X 48	210.00	105.00
30 X 60	225.00	110.00
40 X 40	240.00	120.00
40 X 48	260.00	130.00
40 X 60	290.00	145.00
40 X 72	325.00	160.00

174-0	iak	ina	Q.	ndees.

Finished	Protective	Dry Erase		
Size	Laminate	Laminate		
8.5 x 11	8.50	10.00		
11 x 14	10.00	11.00		
16 x 20	13.50	15.00 16.00		
20 x 24	15.00			
20 x 30	20.00	22.00		
30 x 40	30.00	35.00		
Add'l Sq Ft	4.00	4.25		

Rates and Procedures for Research and Digital Services

Digital Services

Walker and Associates is pleased to offer in-house digital servies including:

Digital output to diskette or CD Overlays of text and graphics Scanning services

Allow us to prepare a price quote to meet your specifications.

Historical Aerial Photo Research

Walker and Associates has over sixty years of historical aerial photography of the Northwest region available for research and purchase. For the best possible service, it is important that you fax us a copy of a map with your areas outlined before you make a trip to Walker and Associates. Stereo pairs and any years of specific interest should be requested at this time.

FAX# (206) 244-2333

You will be called as soon as your research photos are ready. Allow 24 hours per site. (Faxes received after 4:30 P.M. will be considered received the following day).

Research Charges

There is a standard pulling fee of \$5.00 per site per year examined. There is a minimum invoice of \$50.00 Charges for prints ordered will be in addition to research and viewing fees. All special research work done by Walker and Associates will be billed at \$25.00 per half hour.

Ink Jet Prints

Black and white inkjet prints are now available as part of our Research and Viewing service. We will scan your area of interest while you are conducting your research in our office. The final product can be up to 6"x 8" and magnified up to 400%,

This service is in addition to Research and View fees at a rate of \$25.00 per image (\$5.00 per additional copy.)

Washington State Photo Coverage

The chart below refers to our most popular flights by county and year. We are continually updating our flights and limited coverage of additional counties is available. Don't hesitate to ask about your area.

KING CO. 36 800 B KITSAP CO. 46 1000 B 56 1500 B 58 1000 B 60 1000 B 71 1500 B 60 1000 B 71 1500 B 60 1000 B 77 1500 B 77 1500 B 77 1500 B 82 4000 B 80 1500 B 82 4000 B 85 1500 B 60 1000 C 89 3000 C 60 1000 C 89 3000 C 78 1500 B 82 4000 B 85 1500 B 87 1500 B 81 1500	AREA	YR	9 C A L E	FLLM	COUNTY	YR	9C A L E	FILM
S8 1000 B 63 1000 B 60 1000 B 71 1500 B 74 1500 B 77 1500 B 77 1500 B 82 4000 B 80 1500 B 85 1500 B 86 4500 C 82 4000 B 86 4500 C 83 1500 B 85 1500	KING CO.				KITSAP CO.	46	1000	В
60 1000 B 71 1500 B 88 1500 B 73 1500 B 74 1500 B 77 1500 B 80 1500 B 82 4000 B 80 1500 B 85 1500 B 80 1000 C 89 3000 C 81 4000 B 82 2000 B THURSTON CO. 46 1000 B 85 1500 B 86 4500 C 89 1500 B 87 1500 B 88 3000 C 78 1500 B 90 1000 C 82 4000 B (Seattle) 91 800 C 83 1500 B 91 800 C 83 1500 B 92 2000 C 83 1500 B 95 2000 C 83 1500 B 97 1500 B 99 3000 C 81 4000 B 99 3000 C 82 4000 B 85 1500 B 90 2000 C 87 1500 B 86 1500 B 87 1500 B 87 1500 B 88 1500 B 89 3000 C 80 1500 B 80 1500 B 81 4000 B 82 4000 B 82 2000 B 89 3000 C 83 1500 B 81 1500 B 84 1500 B 82 2000 C 85 1500 B 87 1500 B 86 4500 C 89 3000 C 87 1500 B 89 3000 C 88 3000 C 89 3000 C 80 3000 C 89 3000 C 81 1000 B 81 1500 B 81 1500 B 81 1500 B 82 2000 C 81 1500 B 83 1500 B 81 1500 B 84 1500 B 81 1500 B 85 1500 B 81 1500 B 86 4500 C 81 1500 B 87 1500 B 88 1500 B 89 22000 C 88 1500 B 89 3000 C 88 1500 B 91 1500 B 88 1500 B 91 1500 B 89 3000 C 80 1500 B 80 3000 C 80 1500 B 81 1500 B 81 1500 B 81 1500 B 82 2000 C 81 1500 B 83 1500 B 84 1500 B 85 1500 B 86 1500 B 96 1500 B 97 1500 B 98 3000 C 99 2000 C 81 1500 B 90 2000 C							1500	В
88 1500 B 73 1500 B 73 1500 B 74 1500 B 77 1500 B 82 4000 B 80 1500 B 80 1000 C 89 3000 C 81 1500 B 85 150								В
74 1500 B 77 1500 B 82 4000 B 80 1500 B 85 1500 B 87 1500 B 87 1500 B 87 1500 B 87 1500 B 81 150								В
77 1500 B 82 4000 B 82 4000 B 80 1500 B 81 4000 B 85 1500 B 86 4500 C 89 3000 C 78 1500 B 82 4000 B 91 500 B 82 4000 B 91 500 B 82 4000 B 91 500 B 81 1500 B 81								8
80 1500 B 85 1500 B 85 1500 B 80 1000 C 81 4000 B 82 2000 B THURSTON CO. 46 1000 B 86 4500 C 89 3000 C 81 1500 B 80 3000 C 82 4000 B 92 2000 C 82 4000 B 92 2000 C 82 4000 B 92 2000 C 83 1500 B 93 3000 C 83 1500 B 93 3000 C 83 1500 B 95 2000 C 83 1500 B 95 2000 C 85 1500 B 87 1500 B 81 1500 B 81 1500 B 82 2000 B 82 2000 B 83 3000 C 83 1500 B 84 1500 B 85 1500 B 86 4500 C WHATCOM CO. 50 1000 B 89 3000 C 89 3000 C 89 3000 C 89 1500 B 81 1500 B 8								В
80 1000 C 89 3000 C 81 4000 B 82 2000 B THURSTON CO. 46 1000 B 65 1500 B 86 4500 C 89 1500 B 90 1000 C 82 4000 B 91 5000 B 91								
81 4000 B 82 2000 B 85 1500 B 86 4800 C 89 3000 C 78 1500 B 90 1000 C 89 3000 C 89 1500 B 87 1500 B 87 1500 B 81 1500 B 82 2000 B 82 2000 B 83 1500 B 84 4500 C 85 1600 B 86 4500 C 87 1500 B 88 1500 B 89 3000 C 89 1500 B 80 3000 C 81 1000 B 82 2000 B 83 3000 C 84 1000 B 85 1500 B 86 4500 C 87 1500 B 88 1500 B 89 3000 C 89 1500 B 80 3000 C 81 1500 B 81 1500 B 82 2000 C 83 1500 B 84 1500 B 85 1500 B 86 4500 C 87 1500 B 88 1500 B 88 1500 B 88 1500 B 89 3000 C 89 1500 B 80 4600 C 80 800 C 80								
B2 2000 B								_
85 1500 B 60 1000 B 86 4500 C 89 1500 B 90 1000 C 82 4000 B 91 1500 B 90 1000 C 82 4000 B 91 1500 B 91 150								
86 4500 C 69 1500 B 89 3000 C 78 1500 B 90 1000 C 82 4000 B (Beilevue) 91 800 C 83 1500 B 92 2000 C 89 3000 C (Seattle) 93 840 B 95 2000 C ISLAND CO. 57 1000 B 87 1500 B 65 1000 B 87 1500 B 69 1500 B 81 1500 B 82 2000 B 89 3000 C 83 1500 B 84 1000 B 82 2000 B 85 1600 B 89 3000 C 89 3000 C 69 1500 B 86 4500 C WHATCOM CO. 50 1000 B 87 1500 B 81 1500 B 88 1500 B 81 1500 B 88 1500 B 81 1500 B 88 1500 B 81 1500 B 89 3000 C 69 1500 B 80 1500 B 81 1500 B 81 1500 B 81 1500 B 82 4000 B 81 1500 B 83 1500 B 81 1500 B 84 1500 B 81 1500 B 85 1500 B 81 1500 B 86 4600 C 81 1500 B 87 1500 B 81 1500 B 88 1500 B 82 2000 C 89 2000 C 89 2000 C 89 3000 C 89 1500 B 80 4600 C 81 1500 B 81 1500 B 82 4000 B SKAGIT CO. 69 1500 B 83 1500 B 84 1500 B 91 2000 C 85 1500 B 91 2000 C 86 1500 B 87 1500 B 91 2000 C 88 1500 B 88 1500 B 91 2000 C 88 1500 B 90 2000 C TRI CITIES 79 750 B 88 1500 B 88 1500 B 91 2000 C 92 2000 C TRI CITIES 79 750 B 88 1500 B 98 1500 B 99 2000 C TRI CITIES 79 750 B 88 1500 B 90 2000 C TRI CITIES 79 750 B 88 1500 B 90 2000 C TRI CITIES 79 750 B					THURSTON CO			-
89 3000 C						-		
(Beilevue) 91 800 C 82 4000 B 92 2000 C 89 3000 C 89 300								
(Bellevue) 91 800 C 83 1500 B 92 2000 C 89 3000 C (Seattle) 93 840 B 95 2000 C ISLAND CO. 57 1000 B 85 1000 B 87 1500 B 81 4000 B 82 2000 B 83 1500 B 84 4500 C 89 3000 C 89 3000 C 89 1500 B 89 3000 C 81 1000 B 89 3000 C 89 3000 C 89 3000 C 89 3000 C 89 1500 B 80 1500 B 81 1500 B 81 1500 B 82 2000 B 83 1500 B 84 1500 B 85 1500 B 86 4500 C 87 1500 B 88 1500 B 88 1500 B 89 3000 C 89 1500 B 80 81 1500 B 81 1500 B 82 4000 B 83 1500 B 84 1500 B 85 1500 B 86 4500 C 87 1500 B 88 1500 B 88 1500 B 89 3000 C 89 2000 C 80 2000 C								
92 2000 C 89 3000 C	(Reliance)							
(Seartie) 93 840 B 90 2000 C 95 2000 C 95 2000 C 92 2000 C 99 3000 C 9000 C 99 3000 C 99 3000 C 9000 C 99 3000 C 99 3000 C 9000 C 9000 C 9000 C 9000 C 9000 C 9000 C	(Dalla Aria)							
SNO. CO. 47 1000 B 55 1000 B 65 1000 B 76 1500 B 81 4000 B 82 2000 B 85 1600 B 86 4500 C 93 2000 C 89 3000 C 89 3000 C 89 1500 B 89 3000 C 89 1500 B 81 1500 B 81 1500 B 82 2000 B 83 2000 C 84 1000 B 85 1500 B 86 4500 C 87 1500 B 87 1500 B 88 1500 B 89 3000 C 89 3000 C 69 1500 B 60 1500 B 77 1500 B 88 1500 B 88 1500 B 89 3000 C 89 3000 C 80 1500 B 80 4600 C 81 1500 B 81 1500 B 82 2000 C 83 1500 B 84 1500 B 85 1500 B 86 4600 C 87 1500 B 88 1500 B 89 3000 C	(Saama)							
SNO. CO. 47 1000 B 65 1000 B 69 1500 B 67 1500 B 72 1000 B 69 1500 B 61 1500 B 61 1500 B 61 1500 B 61 1500 B 62 2000 B 62 2000 B 63 1600 B 62 2000 C 61 1000 B 61 1500	(Seame)				ISLAND CO			
55 1000 8 69 1500 8 87 1500 8 72 1000 8 87 1500 8 72 1000 8 81 4000 8 82 4000 8 82 2000 8 89 3000 C 85 1600 8 93 2000 C 89 3000 C 61 1000 8 89 3000 C 69 1500 8 89 1500 8 75 1500 8 89 1500 8 81 1500 8 77 1500 8 81 1500 8 82 4000 8 82 2000 C 83 1500 8 82 2000 C 84 1000 8 87 75 1500 8 85 1500 8 82 2000 C 85 1500 8 82 2000 C 86 1500 8 82 2000 C 87 1500 8 88 1500 8 88 3000 C 81 1500 8 89 3000 C 81 1500 8 86 4600 C 81 1500 8 87 1500 8 91 2000 C 88 1500 8 91 2000 C 89 2000 C TRI CITIES 79 750 8 86 1500 8 91 2000 C 87 1500 8 91 2000 C 88 1500 8 91 2000 C 89 2000 C TRI CITIES 79 750 8 88 1500 8 91 2000 C 88 1500 8 91 2000 C 88 1500 8 91 2000 C 89 2000 C TRI CITIES 79 750 8 88 1500 8 91 2000 C 88 1500 8 91 2000 C 88 1500 8 91 2000 C	SNO CO				IZLAND CO.			
87 1500 B 72 1000 B 78 1500 B 81 1500 B 81 4000 B 82 4000 B 82 2000 B 89 3000 C 85 1500 B 93 2000 C 86 4500 C WHATCOM CO. 50 1000 B 89 3000 C 61 1000 B 77 1500 B 75 1500 B 78 1500 B 83 1500 B 78 1500 B 83 1500 B 78 1500 B 92 2000 C 88 4500 C 81 1500 B 78 1500 B 92 2000 C 88 4500 C 81 1500 B 88 1500 B 75 1500 B 88 1500 B 75 1500 B 89 3000 C 81 1500 B 80 4500 C 81 1500 B 81 1500 B 82 4000 C 81 1500 B 83 1500 B 91 2000 C 84 2000 C 84 2000 C 85 1500 B 91 2000 C 86 1500 B 87 1500 B 91 2000 C 88 1500 B 91 2000 C 88 1500 B 91 2000 C 89 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 88 1500 B 91 2000 C 88 1500 B 91 2000 C 89 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 89 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 98 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 98 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 98 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 99 2000 C TRI CITIES 79 750 B 88 1500 B 91 2000 C 99 2000 C TRI CITIES 79 750 B	6NO. CO.							
76 1500 B 81 1500 B 81 4000 B 62 4000 B 82 2000 B 89 3000 C 85 1500 B 93 2000 C 86 4500 C WHATCOM CO. 50 1000 B 89 3000 C 61 1000 B 77 1500 B 75 1500 B 78 1500 B 81 1500 B 78 1500 B 82 2000 C 85 1500 B 75 1500 B 86 4500 C 81 1500 B 87 1500 B 75 1500 B 88 1500 B 75 1500 B 88 1500 B 75 1500 B 89 3000 C 89 1500 B 80 4500 C 81 1500 B 81 1500 B 82 2000 C 89 1500 B 83 1500 B 84 1500 B 91 2000 C 85 1500 B 91 2000 C 86 1500 B 91 2000 C 87 1500 B 91 2000 C 88 1500 B 91 2000 C 89 2000 C 75 1500 B 91 2000 C 89 2000 C 75 1500 B 91 2000 C 89 2000 C 75 1500 B 91 2000 C 89 2000 C 75 1500 B 91 2000 C 89 2000 C 75 1500 B 91 2000 C 89 3000 C 75 1500 B 91 2000 C 89 3000 C 75 1500 B 91 2000 C 89 3000 C 75 1500 B 91 2000 C 89 3000 C 75 1500 B 91 2000 C 80 1000 B 91 2000 C 92 2000 C								
81 4000 B								
82 2000 B 89 3000 C 85 1500 B 93 2000 C 69 1500 B 81 1500 B 82 2000 C 81 1500 B 81 1500 B 81 1500 B 82 2000 C 81 1500 B 91 2000 C								
85 1500 B 93 2000 C 89 1500 B 1500 B 86 4500 C 87 1500 B 87 1500 B 87 1500 B 87 1500 B 88 1500 B 88 1500 B 89 3000 C 99 3000 C								
86 4500 C WHATCOM CO. 50 1000 B 89 3000 C 61 1000 B 93 2000 C 69 1500 B 89 1500 B 75 1500 B 81 1500 B 81 1500 B 82 4000 B 84 1500 B 85 1500 B 75 1500 B 86 4600 C 81 1500 B 88 4600 C 81 1500 B 89 3000 C 88 1500 B 89 3000 C 88 1500 B 1500 B 90 2000 C 89 2000 C 91 2000 C 89 1500 B 85 1500 B 90 2000 C 89 1500 B 85 1500 B 90 2000 C 89 1500 B 85 1500 B 90 2000 C 89 1500 B 85 1500 B 91 2000 C 85 1500 B 91 2000 C 85 1500 B 91 2000 C 86 1500 B 87 1500 B 91 2000 C 88 1500 B 91 2000 C 88 1500 B 91 2000 C 89 3000 C								
89 3000 C 61 1000 6 93 2000 C 69 1500 8 PIERCE CO. 48 1000 B 75 1500 B 89 1500 B 81 1500 B 77 1500 B 88 1500 B 82 4000 B 8KAGIT CO. 69 1500 B 85 1500 B 75 1500 B 86 4600 C 81 1500 B 89 3000 C 81 1500 B 89 3000 C 81 1500 B 90 2000 C 92 2000 C 92 2000 C 92 2000 C 92 2000 C 79 1500 B 85 1500 B 91 2000 C 86 1500 B 91 2000 C 87 1500 B 91 2000 C 88 1500 B 91 2000 C 89 2000 C 93 2000 C					WHATCOM CO			
93 2000 C 69 1500 B PIERCE CO. 48 1000 B 75 1500 B 89 1500 B 81 1500 B 77 1500 B 88 1500 B 82 4000 B SKAGIT CO. 69 1500 B 85 1500 B 75 1500 B 86 4600 C 81 1500 B 89 3000 C 81 1500 B 89 3000 C 92 2000 C 90 2000 C 92 2000 C 91 2000 C 92 2000 C 92 2000 C 79 1500 B 95 1500 B 91 2000 C 96 2000 C 77 1500 B 97 1500 B 91 2000 C 88 1500 B 91 2000 C 92 2000 C 93 2000 C								ล
PIERCE CO. 48 1000 B 75 1500 B 81 1500 B 77 1500 B 88 1500 B 88 1500 B 82 2000 C 85 1500 B 81 1500 B 86 4500 C 81 1500 B 89 3000 C 82 2000 C 83 1500 B 85 1500 B 91 2000 C 91 20								
89 1500 B 81 1500 B 77 1500 B 88 1500 B 82 4000 B SKAGIT CO. 69 1500 B 85 1500 B 75 1500 B 86 4500 C 81 1500 B 89 3000 C 88 1500 B 90 2000 C 92 2000 C 92 2000 C 870KANE CO. 67 1500 B 85 1500 B 91 2000 C 86 1500 B 91 2000 C 87 1500 B 91 2000 C 88 1500 B 91 2000 C 89 2000 C 93 2000 C	PIERCE CO							
77 1500 B 88 1500 B 78 1500 B 92 2000 C 82 4000 B SKAGIT CO. 69 1500 B 85 1500 B 75 1500 B 86 4600 C 81 1500 B 89 3000 C 92 2000 C 90 2000 C 92 2000 C 92 2000 C 92 2000 C 92 2000 C 8POKANE CO. 67 1500 B 85 1500 B 91 2000 C 86 1600 B 91 2000 C 87 1500 B 91 2000 C 88 1500 B 91 2000 C 88 1500 B 91 2000 C 88 1500 B 91 2000 C								
78 1500 B 82 4000 B SKAGIT CO. 69 1500 B 85 1500 B 75 1500 B 86 4600 C 81 1500 B 89 3000 C 88 1500 B 90 2000 C 92 2000 C 92 2000 C 8POKANE CO. 67 1500 B 85 1500 B 91 2000 C 68 1500 B 91 2000 C 68 1500 B 91 2000 C 69 2000 C TRI CITIES 79 750 B 78 1500 B 71 1500 B 74KIMA 65 1000 B 78 1500 B 68 1000 B 78 1500 B 78 1000 B 88 1500 B 78 1000 B								8
82 4000 B SKAGIT CO. 69 1500 B 85 1500 B 75 1500 B 86 4600 C 81 1500 B 88 1500 B 90 2000 C 92 2000 C 92 2000 C 92 2000 C 92 2000 C 850KANE CO. 67 1500 B 91 2000 C 75 1500 B 91 2000 C 91 2000 C 91 2000 C 91 2000 B 92 2000 C 93 2000 C 93 2000 C								c
85 1500 B 75 1500 B 86 4600 C 81 1500 B 89 3000 C 88 1500 B 90 2000 C 92 2000 C 92 2000 C 8POKANE CO. 67 1500 B 95 1500 B 91 2000 C 85 1500 B 91 2000 B 86 1500 B 78 1000 B 87 1500 B 78 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C					SKAGIT CO.			В
86 4600 C 81 1500 8 89 3000 C 88 1500 8 90 2000 C 92 2000 C 92 2000 C 8POKANE CO. 67 1500 8 85 1500 8 91 2000 C 84 2000 C TRICITIES 79 750 8 85 1500 B 91 2000 C 85 1500 B 91 2000 C 85 1500 B 91 2000 C 86 1000 B 91 2000 C 87 1500 B 91 2000 C 88 1500 B 78 1000 B 88 1500 B 78 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C								3
89 3000 C		86		С				9
90 2000 C 92 2000 C 8POKANE CO. 67 1500 E 95 2000 C 8POKANE CO. 67 1500 E 95 2000 C 75 1500 E 95 2000 C		89						8
CLALLAM CO. 75 1500 8 79 1500 8 91 2000 C 90 2000 C TRI CITIES 79 750 8 91 2000 C TRI CITIES 79 750 8 91 2000 C 71 1500 B 71 1500 B 78 1600 B 68 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C			2000	Ç		92		C
85 1500 B 91 2000 C 781 CITIES 79 750 B 91 2000 C 781 CITIES 79 750 B 91 2000 C 71 1500 B 91 2000 C 91 2000 B 91 2000 C 91 2000 C 91 2000 C 91 2000 C		92	2000	C	SPOKANE CO.	67	1500	В
90 2000 C TRICITIES 79 750 8 8AN JUAN CO. 80 1000 B 91 2000 C 71 1500 B YAKIMA 65 1000 B 78 1500 B 68 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C	CLALLAM CO.		1500			79	1500	В
SAN JUAN CO. 60 1000 B 91 2000 C 71 1500 B YAKIMA 55 1000 B 78 1500 B 68 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C		85	1500	8		91	2000	С
8AN JUAN CO. 60 1000 B 91 2000 C 71 1500 B YAKIMA 65 1000 B 78 1500 B 68 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C		90	2000	C	TRI CITIES	79	750	а
76 1500 B 68 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C	SAN JUAN CO.	60	1000	В		91	2000	С
76 1500 B 68 1000 B 88 1500 B 78 1000 B 92 2000 C 93 2000 C		71	1500	8	YAKIMA	55	1000	3
92 2000 C 93 2000 C		78	1500	В		68	1000	3
-							1000	8
BOISE.ID. 95 2000 0		92	2000	Ç				C
					BOISE, ID	95	2000	С

COVERAGE IS PARTIAL FOR SOME COUNTIES IN CERTAIN YEARS COLOR FILM INDICATED BY "C" SLACK AND WHITE BY "R"

	â			25