

Z201-697

JAN 31 2007

APPLICANT INFORMATION

Please type in the information on pages 1 through 3 **USING ONLY THREE PAGES**
(or reproduce the pages on your computer **using the spacing and layout shown,**
NOT TO EXCEED 3 PAGES)

Pages 1 through 3 must accompany your application!
THE FIRST 3 PAGES ARE NOT A PLACE TO DESCRIBE YOUR
PROJECT IN DETAIL

Name of project: Baker Irrigation Efficiency - Walla Walla River

OWEB dollars requested: \$26,500.00

Total cost of project: \$52,207.00

Applicant: Walla Walla Basin Watershed Council

Phone: 541-938-2170

Fax: 541-938-6639

Applicant Address: PO Box 68
Street

Milton-Freewater
City

99362
Zip

Applicant Affiliation (if any): Oregon Plan Watershed Council

Technical Contact (if different): Brian Wolcott, WWBWC Coordinator

Phone: 541-938-2170

Fax: 541-938-6639

Landowner(s) (if the project will occur on private land):

Bob Baker

Fiscal Officer (if any): John C. Zerba

Phone: 541-938-6105

Fiscal Officer Affiliation: Watershed Council Chairman

Fax: 541-938-6639

Fiscal Officer Address: PO Box 68

Milton-Freewater

99362

Street

City

Zip

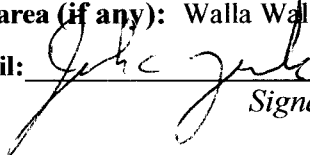
Project location: Walla Walla River
Watershed

South Fork Walla Walla
Sub-Watershed

Umatilla
County

Name of the watershed council in the area (if any): Walla Walla Basin Watershed Council

Endorsement of the watershed council:



Signature of Watershed Council Chairperson

Section II

PROJECT SUMMARY

Check the primary type of activity proposed:

Watershed Restoration

Watershed Education

Watershed Monitoring

Watershed Assessment/Action Plan

Land or Water Acquisition

Brief Summary of Project: Bob Baker seeks cost share funding to convert 24.1 acres of flood irrigated orchard to a permanent pumped mainline and lateral sprinkler system. The water savings will be protected instream as part of the the Water Resource Department's Conserved Water Program. An estimated 0.3 cfs instream water right will be created with 1865, 1890, and 1905 dates attached. This additional water is part of a concerted effort across the Walla Walla Basin to improve flows for ESA listed Bull Trout, Steelhead and Chinook salmon.

1. **Have you applied for OWEB funding for this project previously?** Yes No

2. **List all agencies and organizations from which funding is anticipated for the proposed project.**
 (Note: at least 25% in match funding is required - see the Guidebook for a definition of match).

Agency/Organization	Cost Share			\$ Amount/Value
	Cash	In-Kind	Secured	
Oregon Watershed Enhancement Board	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$26,500.00
Bob Baker	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$24,707.00
Oregon Water Resources Dept.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$500.00
Walla Walla Basin Watershed Council	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$500.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0.00

Total Estimated Project Costs: \$52,207.00

3. **Have any conditions been placed on other funds that may affect project completion?**
 Yes No If yes, explain:

4. **Are there additional partners (agencies, landowners, volunteers)?** Yes No

What will they do? Oregon Water Resources Department will assist Mr. Baker in completing the Conserved Water Application and they will also monitor the diverted water and instream flow. The Watershed Council will assist in planning, and promotion of this conservation effort to other landowners.

5. a) **Is the proposal part of an existing plan for the watershed?** Yes No

If yes, name the plan and reference sites(s) or elements of the plan related to the project:
 "Watershed Assessment & Action Plan; Upper Walla Walla River Subbasin 1999" Restoration. Goals F-4, F-5, F-9. "Bull Trout Working Group Recovery Plan Draft". Bi-State Habitat Conservation Strategy's Early Action Program.

_b) How does this proposal relate to workforce and economic development plans in the local community? A majority of the Walla Walla Basin's economy is based on irrigated agriculture. Assisting landowners with water conservation will allow them to farm in a sustainable manner and reduce the chance of ESA enforcement for bull trout/steelhead impacts.

6. **If the project is not primarily for education and/or public awareness, how will you promote public awareness about watershed enhancement and the efforts being undertaken locally?**

Information about the project will be given at regular Watershed Council meetings, growers seminars, and field tours, as well as being published in the newsletter and posted on the Council website (www.wwbwc.org). Local newspapers will be informed and other publicity opportunities will be sought.

7. What is the proposed schedule for the project? (include start date, critical element dates, completion date, and monitoring schedule):

Engineered plans have been developed and costing has been worked out. The Conserved Water Application will be submitted. If funded, work will begin in January and completed by 2002 irrigation season. Monitoring will continue for the next ten years.

8. Have affected individuals and organizations been contacted about this proposal and do they support it? Yes No Please explain:

The landowner and state agencies that we will be working with have been a part of the preparation of this grant application including the time line, costs, and staffing requirements. The irrigation system upgrades would all take place within the Bob Baker property.

9. Required Attachments: Be sure to complete and attach these forms to the back of your application:

- Budget
- Match Funding for OWEB Grants
- Legal Requirements
- OWEB Project Types Check Sheet
- Other documentation requested in Section III

Section III
SPECIFIC PROJECT ACTIVITY

USE 8½" x 11" SINGLE-SIDED PAGES

WATERSHED RESTORATION PROJECTS:

For on-the-ground (or in-stream) projects, please answer the following questions. If there are multiple locations, **be specific for each site.**

T1. What is the present situation? Describe the current conditions at the project site(s).

There is a concerted effort across the basin to increase summer flows for ESA listed bull trout and steelhead. Currently, Bob Baker's orchard is inefficiently irrigated using river water with a flood irrigated furrow system. The orchard is located on the South Fork of the Walla Walla River, approximately 6 miles upriver from the previously dewatered stretch of the river which is still the reach of greatest concern in the Walla Walla Basin to the Federal fish management agencies. Mr. Baker needs cost share assistance in upgrading to a more efficient irrigation system. He will leave a portion of his saved water rights in stream as a protected in stream right.

T2. What are you proposing to do? Supply sufficient detail to match the project's complexity and technical difficulty so that its viability can be evaluated. Who will do the project design? Were other alternatives considered? How does the project meet the Oregon Aquatic Habitat Restoration and Enhancement Guide?

Bob Baker will convert 24.1 acres of furrow irrigated orchard to a permanently piped in ground sprinkler system (also known as a "solid set") as part of a OWRD conserved water agreement project. Water conserved from the project will be transferred to instream water rights. This project will allow a rate reduction from 16.88 gallons per minute to 11.2 gpm on the 24.1 acres. The 5.7 gpm saved per acre will be the equivalent of 136.9 gpm or (0.3 cfs) left in stream. The acres have water right priority dates of 1865 (senior), 1890 (senior), and 1905 (junior). Mr. Baker completed a headgate and measuring device project last year (as part of OWEB grant # 99-602) at his diversion point which allows easy and precise monitoring of water use. A new fish screen has also been installed.

The irrigation engineering specialists with Pendleton Grain Growers, Inc. have designed, and will oversee installation of the pump, mainline laterals, and Nelson Rotator sprinklers. Design and cost estimate are attached.

In addition to Baker's existing water rights, he is also conducting a water right transfer (OWRD transfer # T-8561). This transfer may affect the amount of water that will be returned to the river. The transfer involves 6 acres of water right from the next diversion point downstream. It is anticipated that the request will be approved by OWRD. It is an upstream POD change, but involves less than 0.2 % of the low flow volume in the South fork of the Walla Walla River. (0.2 cfs/108 cfs). The water right volume transferred is 6 acres x 16.9 gpm = 101.3 gpm/448 gpm = 0.2 cfs. (The South Fork's low flow month is September with 108 cfs as the month's average.)

In the unlikely event that the transfer is not approved, then a portion of the conserved water from the remaining 18.1 acres (5.7 gpm x 18.1 acres = 102.8 gpm) will go to the new ground (11.2 gpm x 6 acres = 67.2 gpm) while the remaining portion of the conserved water will remain in stream. (102.8 gpm - 67.2 gpm = 35.6 gpm) or 0.1 cfs. If the transfer is for some reason not approved, the contingency plan would be to inform OWEB prior to project approval and make adjustments in the Conserved Water Application regarding the portion of the water right returned to the river and reduce the OWEB contributed project costs to the current 18.1 acres of water rights.

Estimated project cost if transfer approved:	\$26,500 OWEB \$24,707 Baker
If transfer is not approved:	\$11,000 OWEB \$40,207 Baker

T3. What is the watershed benefit? Does the project address limiting factors for watershed conditions?

Limited instream flows in the summer is the primary factor which harms fish in the Walla Walla Basin. This project leaves water in the river which will improve habitat and water quality, including temperature. The South Fork Walla Walla River is 303(d) listed for temperature. The additional water left in stream will contribute to a basinwide effort to create better flows for fish passage and habitat.

T4. Explain how this project implements a watershed assessment/action plan or agricultural water quality management plan or farm plan.

This project is part of the Walla Walla Basin and Sub-basin summary objectives and goals of the Action Plan for restoration by increasing instream flows and allowing farms to continue to operate. This project also supports the Basin's Draft SB 1010 Plan, by providing more efficient use of river water for irrigation.

T5. What are the project objectives?

- Increase river quantity
- Increase efficiency of irrigation withdrawals
- Addresses the needs of people and fish as they relate to the Endangered Species Act
- Provides a mechanism which leads to a permanent agreement between fish interests and irrigators as part of the Bi State Habitat Conservation Plan.
- Can be implemented in a relatively short period of time when compared to other long term solutions
- Provides the most benefits for the cost when compared to other solutions
- Demonstrates an alternative to the community-destroying conflicts associated with managing the watershed
- Enhances ecology, economy, and social welfare in the Walla Walla watershed community

T6. How will success be determined, i.e., what elements will be monitored/evaluated – by whom, how often, and for how long? How will the effectiveness of the project be assessed? (OWEB will usually require post-project monitoring of on-site restoration projects for 5 years). List:

<u>Agency/Organization</u>	<u>Address</u>	<u>Activity & Frequency</u>	<u>Signature</u>
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The Watershed Council Coordinator will inspect the during construction and prior to full payment.

Water Resource Department will monitor water use.

The success of this project will be determined by the restoration of in stream flows that would normally have occurred during the May-August period while still providing irrigation water to these farms at that time. The Watershed Council Coordinator will monitor the project for the next ten years.

T7. Who will inspect the completed work?

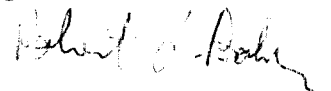
The Watershed Council, and the OWRD will inspect the completed project and monitor it's benefits to the farm and the river for the next ten years.

T8. Who will maintain the project and for how long? List:

<u>Name/Agency/Organization</u>	<u>Address</u>	<u>Activity & Frequency</u>	<u>Signature</u>
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The landowner, Bob Baker.

83651 W. Mesapkt.



T9. Which elements of the project will OWEB funds be used for?

OWEB funds will pay for materials up to \$24,100 (or \$1000 an acre of upgraded irrigation system for the orchard). Baker will contribute the balance for the materials, estimated at \$3957, as well as installation costs \$17,500, rock \$2750, manual labor, and backhoe time as cost share. OWRD will assist in water right validation and monitoring.

T10. Additional Required Attachments:

- Land Use Information** (see attached form)
- Maps:** Provide a general map highlighting the location and extent of your project. On a more detailed map, locate site specific activities. **Please provide maps on 8½" x 11" pages and include a legend and scale. *Avoid color and detail that will not photocopy clearly.***
- Location:** Provide the township, range, section and 1/4 corner location of each site. Provide a relative reference to the site such as stream mile if appropriate.
- Photographs:** If applicable, provide photographs to aid in understanding the situation.
- Project Designs** (if applicable)

WATERSHED RESTORATION BUDGET

Attach additional pages if necessary

<i>Itemize projected costs under each of the following categories:</i>	Unit (i.e. hours, each, foot)	Unit Cost	Donated Services/Supplies*	Match Funds*	OWEB Funds	Total Costs
PERSONNEL						
TRAVEL						
CONTRACTED SERVICES						
Irrigation system install			\$17,500			\$17,500
SUPPLIES/MATERIALS						
Irrigation pipe & pump materials				\$3,957	\$24,100	\$28,057
Power equipment				\$500		\$500
Pipe bedding material	8.5 tons	\$323.53/ton		\$2,750		\$2,750
PRODUCTION COSTS						
EQUIPMENT						
Sub-Totals			\$17,500	\$7,207	\$24,100	\$48,807
ADMINISTRATION**						
WWBWC grant & fiscal admin					\$2,400	\$2,410
MONITORING (Component to be monitored, cost per year, number of years, and total cost)						
OWRD monitoring			\$500			\$500
Watershed Council -- Monitor/promote			\$500			\$500
TOTALS:			\$18,500	\$7,207	\$26,500	\$52,207

* List secured other funding on attached Match Funding form

** Administration costs may not exceed 10% of sub-total amount requested from OWEB

MATCH FUNDING FOR OWEB GRANTS

*Please document the match funding listed on
page 2 and the budget page of your grant application*

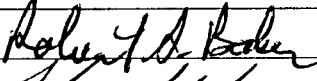


Match funding does not have to be secured at the time of application but you must document that at least 25% of match funding has been sought. Should you receive a grant from OWEB, at least 25% in match must be secured prior to OWEB providing any funds.

Match funding may be in the form of cash on-hand, cash that is pledged to be on-hand before the project begins, secured funding commitments, pending funding commitments (must be secured before the project begins and no later than 12 months from the date of the OWEB award), the value of donated conservation easements, or the value of donated labor and materials essential to the project.

This form is provided for your convenience. You may use it, or provide letters or other appropriate documentation from your project contributors.

Project Name: BAKER IRRIGATION EFFICIENCY - WALLA WALLA RIVER

Applicant: WALLA WALLA BASIN WATERSHED COUNCIL

Match Funding Source	Signature of Authorized Representative	Dollar Value	Secured/Pending	Date
Bob Baker (landowner)		\$24,707.00	secured	9-27-01
OWRD (monitoring)		\$1,000	secured	9-26-01
WALLA WALLA WATERSHED COUNCIL		500	SECURED	9-26-01

LEGAL REQUIREMENTS

AGREEMENTS:

I/we, Walla Walla Basin Watershed Council
of Milton-Freewater, Oregon, hereby make application for
financial assistance under the terms and conditions of the Oregon Watershed Enhancement
Board in the amount of \$ 26,500.00. The total cost of the project is \$ 52,207.00 as
shown on page 1.

I/we understand that if this proposal is funded, I/we will be required to:

- Sign a Grant Agreement containing the terms and conditions upon which funds will be released, including submission of necessary permits and documents, a certification to comply with state, federal and local regulations, and a release of liability for the State of Oregon;
- Obtain landowner, monitoring, and maintenance agreements;
- Certify that the project complies with state, federal and local regulations;
- Submit written evidence that all applicable permits and licenses from local, state or federal agencies or governing bodies have been obtained or are not needed;
- Submit a report at the completion of the project and subsequent periodic reports to OWEB on the project's performance;
- Agree that educational products resulting from projects are public domain;
- For restoration projects, complete the Oregon Plan Watershed Restoration Project Reporting form; and
- For restoration projects, certify that the work to be accomplished will comply with the Oregon Habitat Restoration Guidelines.

Signed:  Date: 9-25-01

Title: Council Chairman

BASER IRRIGATION EFFICIENCY

LAND USE INFORMATION SHEET

This information is needed to determine if the proposed project
complies with statewide planning goals and is compatible
with local comprehensive plans (ORS 192.180)

CITY/COUNTY LAND USE INFORMATION (to be completed by local planning officials):

Please check below the one that applies:

- This project is not regulated by the local comprehensive plan and zoning ordinance.
- This project has been reviewed and is compatible with the local comprehensive zoning ordinance. (Please cite appropriate plan policies, ordinance section, and case numbers.)
Umatilla County Development Code Section 152.056
- This project has been reviewed and is not compatible with the local comprehensive plan and zoning ordinance. (Cite appropriate plan policies, ordinance section, and case numbers).
EFU (Exclusive Farm Use, use permitted outright)
- Compatibility of this project with the local planning ordinance cannot be determined until the following local approvals are obtained:

- | | |
|------------------------------|--------------------------|
| _____ Conditional Use Permit | _____ Development Permit |
| _____ Plan Amendment | _____ Zone Change |
| _____ Other | |

An application has has not been made for the local approvals checked above.

* Signature of Local Official: *Patty Perry, Umatilla County Planning*
 Title: *Senior Planner* Date: *1-29-02*

Must be authorized signature from your local City/County Planning Department

PGG

PENDLETON GRAIN GROWERS, INC.

JOHN TIMMONS
Pump & Irrigation

P.O. Box A
217 E. Broadway
Milton-Freewater, OR 97862

Work (541) 938-5551
Home (541) 938-7871
Fax (541) 938-3147

PAGE NO 1

DIY'S HOMETOWN STORE

FREEWATER 938-5551 HERMISTON 566-5531 ISLAND CITY 963-4115
REMIT TO:
0 BOX 1248 PENDLETON, OR 97801

65170

TERMS: DUE END OF MONTH
CLERK: JRT
DATE: 3/..0/01
TIME: 10:55

SOLD TO
ROBERT BAKER
83651 WINESAP RD
MILTON-FREEWTR OR 97062

SHIP TO
EXP. DATE: 12/31/01
SLSP: 10 JOHN
TAX: 054 ORE - M/F RETAIL STR
DOC# 52599

* ESTIMATE

EST. 52599

NOTICE: PLEASE READ IMPORTANT INFORMATION ON THE BACK.

QUANTITY		UM	SKU	DESCRIPTION	SUGG	UNITS	NET		EXTENSION
SHIPPED	ORDERED								
	1	EA	4740	15HP PUMP 250GPM @150TDH		1	1800.00 /EA	1,800.00	
	1	EA	4650S	ELECTRICAL SET UP		1	1800.00 /EA	1,800.00	
	1	EA	4740	SUCTION/DISCHARGE		1	1500.00 /EA	1,500.00	
	1300	FT	63120G	PIPE PVC 63H GSK 12"	4.99	1300	2.70 /FT	3,510.00	
	1600	FT	125040G	PIPE PVC 125H SDR 4"	.99	1600	.65 /FT	1,040.00	
	1000	FT	125030S	PIPE PVC 125H SDR 3"	.60	1000	.40 /FT	400.00	
	1200	FT	125020S	PIPE PVC 125H SDR 2"	.27	1200	.19 /FT	228.00	
	50	EA	4740	11/2 ELD4084-350POLY 350FT ROLLS		50	82.25 /EA	4,112.50	
	20	EA	EHD2667066	POLY TUBE 1" 660'	59.99	20	59.95 /EA	1,199.00	
	12	EA	300BPES	VALVE RR 3" ELEC PLASTIC CONTROL		12	203.06 /EA	2,436.72	
	2	EA	ACV200P	AIR CONTROL VALVE 2" PLASTIC	69.99	2	59.492/EA	118.98	
	12	EA	2401040	TEE 4" PVC SOC	19.12	12	9.368/EA	112.42	
	24	EA	2436342	RED ML ADPT TXS 3X4 PVC	9.26	24	4.242/EA	101.81	
	1000	EA	FT4	HOSE ASSY NELSON FT4	1.69	1000	1.29 /EA	1,290.00	
	1000	EA	N9725024	STAKE 8MM NELSON	.69	1000	.55 /EA	550.00	
	1000	EA	R2000C	R2000 COMPLETE	7.69	1000	6.85 /EA	6,850.00	
	6	EA	21436010	INSERT ML ADPTR 1" POLY	.63	6	.40 /EA	2.40	
	.20	EA	21429010	INSERT COUPLER 1" POLY	.69	.20	.69 /EA	.14	
	.39	EA	4740	11/2 X 1 INSERT 21429211		.39	1.49 /EA	.58	
	50	EA	21436015	INSERT ML ADPTR 1-1/2 POLY	1.11	50	.752/EA	39.60	

CONT'D

RECEIVED BY

NOTICE TO BUYER: We warrant that seeds and plants we sell will conform to the label description as required under State and Federal Seed Laws. We make no warranties, express or implied, of merchantability, fitness for purpose or otherwise, which would extend beyond such descriptions, and in any event our liability for breach of any warranty or contract with respect to such seeds or plants is limited to the purchase price of such seeds or plants. We further limit to the purchase price any liability of any kind on account of any negligence whatsoever on our part with respect to such seeds or plants.

WARE

PAGE NO 2



EVERYBODY'S HOMETOWN STORE

PENDLETON 276-7611 ATHENA 566-3545 MILTON-FREEWATER 938-5551 HERMISTON 566-5591 ISLAND CITY 963-4195

REMIT TO: PGG
PO BOX 1248
PENDLETON, OR 97801

REMIT TO:
PGG, PO BOX 1248 PENDLETON, OR 97801

CUSTOMER NO.	JOB NO.	PURCHASE ORDER NO.	REFERENCE	TERMS	CLERK	DATE	TIME
65170				DUE END OF MONTH	JRT	9/10/01	10:56

ROBERT BAKER
83651 WINESAP RD

MILTON-FREEWTR OR 97862

S
H
I
P
T
O

EXP. DATE: 12/31/01

DJCH 525996

* ESTIMATE *

SLSPP: 10 JOHN

TAX: 054 ORE - M/F RETAIL STR

EST. 525996

NOTICE: PLEASE READ IMPORTANT INFORMATION ON THE BACK.

QUANTITY SHIPPED	ORDERED	UM	SKU	DESCRIPTION	SUGG	UNITS	500.00 NET /EA	EXTENSION
	1	EA	4740	MISC MATERIAL		1	500.00	500.00
	95	EA	2406020	ELL 90 2" PVC SOC	1.98	95	1.112/EA	105.64 PH
	70	EA	2438251	RED BUSH 2X1-1/2 PVC SPIG X FIPT	2.10	70	1.192/EA	83.44 PH
	20	EA	2401020	TEE PVC 2" SOC	2.44	20	1.352/EA	27.04 PH
	30	EA	2401338	RED TEE 3X2 PVC SOC	11.49	30	6.232/EA	186.96 PH
	10	EA	2406040	ELL 90 4" PVC SOC	12.89	10	6.197/EA	61.97 PH

ADD
ADD

17500 INSTALLED
2750 PIPE BEDDING MATERIAL @ 8.59/TON

** ESTIMATE ** ESTIMATE ** ESTIMATE ** ESTIMATE **

TAXABLE	0.00
NON-TAXABLE	28057.20
SUBTOTAL	28057.20

TAX AMT JNT	0.00
TOTAL AMOUNT	28057.20

RECEIVED BY

TO BUYER: We warrant that seeds and plants we sell will conform to the label description as required by state and Federal Seed Laws. We make no warranties, express or implied, of merchantability, fitness for use or otherwise, which would extend beyond such descriptions, and in any event our liability for breach of warranty or contract with respect to such seeds or plants is limited to the purchase price of such seeds. Our further limit to the purchase price any liability of any kind on account of any negligence whatsoever with respect to such seeds or plants.

MILTON-FREEWATER LIGHT & POWER

Bob Baker

South Fork WW River Rd.

15hp Pump

Overhead

06-Dec-00

Item #	Stock Item	No. of Items	Units	Cost/Item	TOTAL COST
40015	Transformer (10KVA)	2	ea	\$338.00	\$676.00
Transformer Total					\$676.00
	V-66S Meter	1	ea.	\$190.00	\$190.00
30261	Cutout, 100 Amp 15 KV	2	ea.	\$40.50	\$81.00
30089	Clamp, Hot Tap	2	ea.	\$0.90	\$1.80
30010	Lighning Arrestor	2	ea.	\$25.00	\$50.00
	Transformer Ground (Complete)	1	ea.	\$12.93	\$12.93
30630	DM-4M2 Cluster Mount	1	ea.	\$61.30	\$61.30
30166	4C#4 (100')	24	lbs.	\$1.84	\$44.16

Material Total **\$441.19**

TRANSFORMER ALLOWANCE

INVENTORY OVERHEAD	\$676.00	x 1.3 =	\$878.80
TRANSFORMER ALLOWANCE	\$878.80	- \$750 =	\$128.80

MATERIAL COSTS

INVENTORY OVERHEAD	\$441.19	x 1.3 =	\$573.55
MATERIAL ALLOWANCE	\$573.55	- \$250 =	\$323.55

COST SUMMARY

TRANSFORMER	\$128.80
MATERIALS	\$323.55
FEES	\$0.00

TOTAL COST TO CUSTOMER \$452.35

Note: This estimate valid for 60 days

BAKER IRRIGATION EFFICIENCY - WALLA WALLA RIVER

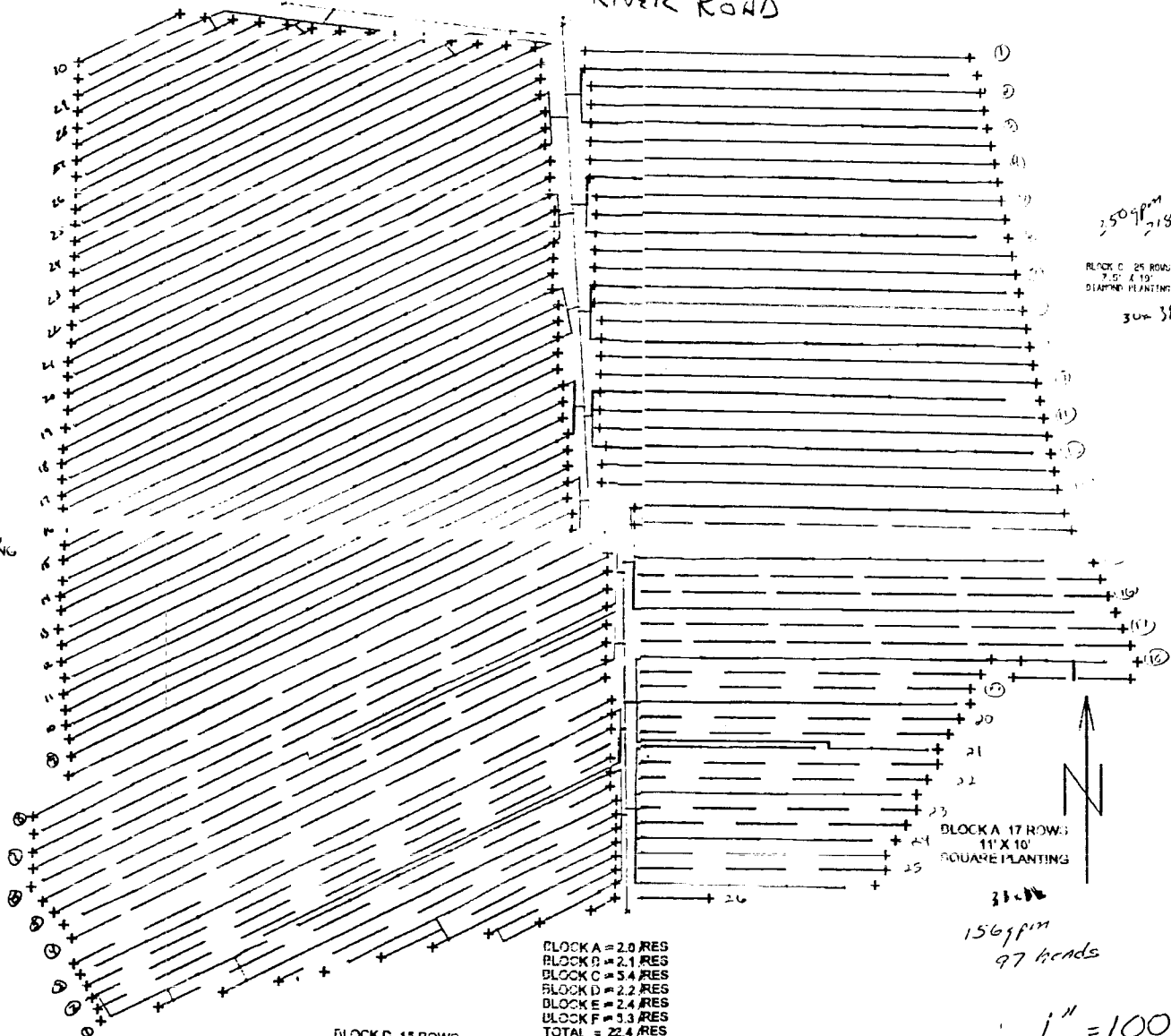
18 SETS

S.F.K. WALLA WALLA RIVER ROAD

ROBERT BAKER
Designed by: LOUIS
Date: 28 December 2

Pipe key

1"	Class 128 IPS GW
1 1/4"	Class 128 IPS GW
1 1/2"	Class 128 IPS GW
2"	Class 128 IPS GW
2 1/2"	Class 128 IPS GW
3"	Class 128 IPS GW
4"	Class 128 IPS GW



328 outlets
228 1/2"
1 1/2" X 17' 200log
DIAMOND PLANTING
39 x 36 x 34

250 gpm
218 heads
BLOCK C 25 ROWS
7.5' X 19'
DIAMOND PLANTING
39 x 38

113 gpm
15' X 15'
DIAMOND PLANTING
36 x 30

1 1/2 or 1 1/4"
Poly

BLOCK E 9 ROWS
17' X 17' 200log
DIAMOND PLANTING
Head 34 x 38
167 gpm
104 outlets

BLOCK A = 2.0 RES
BLOCK B = 2.1 RES
BLOCK C = 3.4 RES
BLOCK D = 2.2 RES
BLOCK E = 2.4 RES
BLOCK F = 3.3 RES
TOTAL = 22.4 RES

BLOCK D 15 ROWS
13' X 15' 200log
DIAMOND PLANTING
HEADS 39 x 30

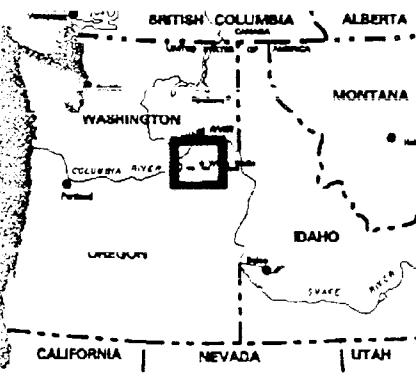
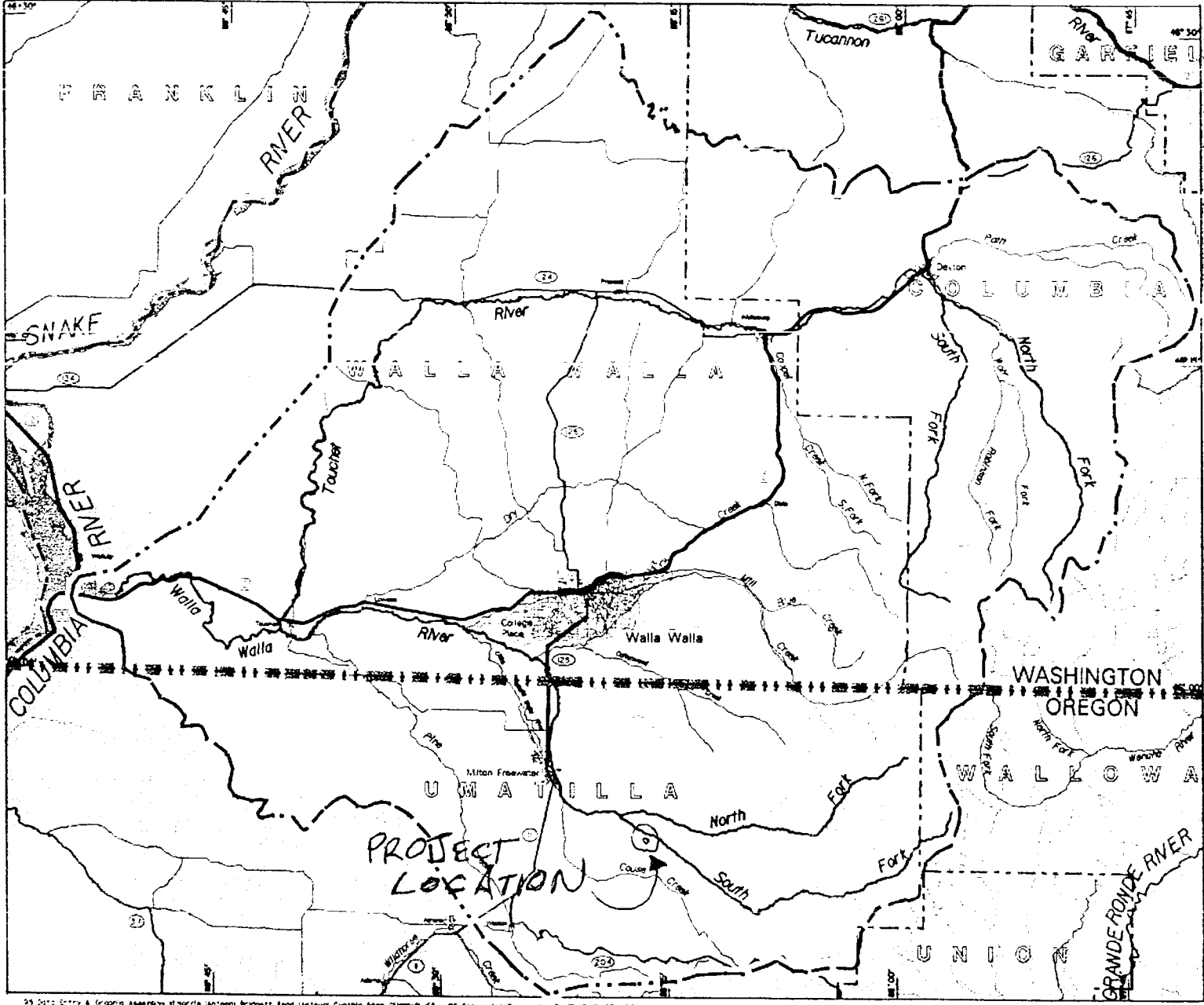
BLOCK A 17 ROWS
11' X 18'
SQUARE PLANTING
31 x 36
156 gpm
97 heads



1" = 100'

Symbolic / V.I. key
 * Main Pipe
 * Main Pipe Impact Drive
 * Water Supply

BAKER IRRIGATION EFFICIENCY

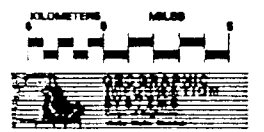


BOUNDARIES
 Walla Walla River Watershed
 State
 County

HIGHWAY
 U.S.
 State
 County

POPULATION	CITY
25,000 - 49,000	Walla Walla
10,000 - 24,999	Pe...
2,000 - 9,999	
0 - 1,999	

Source: Hydrology, Transportation, Boundaries - US Department of Agriculture, National Digital Data Bank



Walla Walla River Watershed

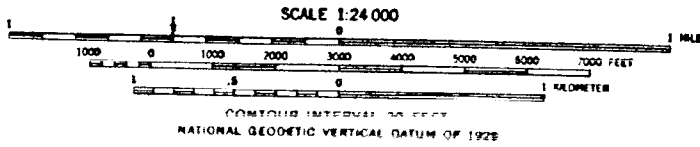
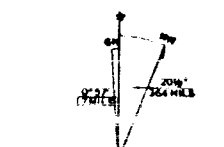
BASE MAP

29 Data Entry & Graphic Assembly of Maps; Antenna; Bridge; Road; Antenna; Cyntha; Ben; CLIFF; PLEA. 25 Conversion; George; North; CLIFF; PLEA. 26 Model; Tone; Coordinator; Rose; Brook; CLIFF; PLEA. 27 Coordinator; Tom; Fisher; CLIFF; PLEA. 28 Study; Manager; Cindy; Hyde; CLIFF; PLEA.

T5N R36E SECTION 26
 NE CORNER OF NW CORNER



Mapped, edited, and published by the Geological Survey
 Control by USGS and USC&GS
 Topography by photogrammetric methods from aerial
 photographs taken 1957. Field checked 1964
 Polyconic projection. 1927 North American datum
 10,000-foot grid based on Oregon coordinate system, north zone
 1000-meter Universal Transverse Mercator grid ticks.
 To place on the predicted North American Datum 1983
 move the projection lines 18 meters north and



BOB BAKER
IRRIGATION
EFFICIENCY

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

LOCATION

OREGON