

4902-P3 Irrigation Project Case File

TR NUTRIA IRRIGATION REHABILITATION  
PLAN - FY 1972

CUTOFF:  
Filing Office: 45  
Retention: PERMANENT  
Maintain for 5 years after cutoff  
retire to records center. Transfer to  
NARA IAW signed SF 258.

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Input

Program: Irrigation construction

Date: April 24,

Unit of measurement	71	72	0	1973	-10%	+10%	Proposed	1974	197
Funding: \$ m. BIA	\$52.2	\$79.4					\$70.0	\$930.0	\$77

Staffing 0

1. Function & Capabilities: The irrigation construction program is designed to provide construction funds to irrigation projects for improving, rebuilding & Rehabilitat all or a portion of; irrigation dams, outlet works, canals, ditches, drops and land leveling.

The program will ~~make~~ <sup>be</sup> an overall development plan and cost estimates to help the storage and development system.

2. Long Range objectives - The long Range Irrigation program is to; update all irrigation systems, establish water users organizations, develop complete land use plans for all the irrigation system, & complete rehabilitation with Ditch lining, land leveling, turnouts, & land consolidation program designed to combine all small tracts into Economical sized irrigated farms.

### 3. Short Range Goals:

Short range goals will be to begin on the blackrock out let works as soon as possible. Begin other projects and work as money is appropriated.

### 4. Program Strategy & Alternatives:

The program strategy will be to complete the Blackrock dam project as soon as possible then as funds permit completely rehab all irrigation units, storage facilities, etc. This can only be accomplished with the funding that is made available.

# Budget Breakdown

P2-3

## Fy - 1973 Funding Proposed

Ojo caliente Pipeline	16.5	15.0
Pescado Pipeline & diversion ditch	19.3	20.0
Concrete lining at Nutria	42.3	40.0
Surveys & investigations Planning	10.0	25.0
Safety of Dam	<del>100.0</del>	125.0
	<u>\$188.1</u>	225.0
	25.0	
	213.1	

## Fy - 1974 Funding Proposed

Rehabilitation survey & completion report for (5) irrigation units	\$10.0	40.0
Spring development for irrigation & pipeline		
2 springs & pipelines	8.5	8.5
<del>Ojo caliente pipeline</del>	7.5	10.0

Correction of structural deficiencies and/or construction of storage facilities for the protection of the Pueblo of Zunig \$750.0

Total \$776.0

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Budget Breakdown

Program Agriculture

Date April 24, 1972

A. Staffing Name	Grade	Date of instep	FY 1973	FY 1974	FY 1975
BIA					
1. Joseph Donahue	GS-11/5		115.5	115.5	116.0
2. H.B. Simpson	GS-11/4	Jul 72	115.1	115.1	115.5
3. Bob Robertson	GS-11/4	Oct. 72	115.1	115.1	115.5
4. Edison Laselute	GS-7/5	6/22/70	110.6	110.6	110.9
5. Chauncey Simplicio	GS-5/6	2/17/73	8.5	8.8	8.8
6. Lujan Ondelacy	GS-7/6	Aug 72	110.9	110.9	110.9
7. Frank Vacit	WG-6/3		88.1	88.1	88.1
sub total			83.8	84.1	85.7
Less Quarters			-3.0	-3.0	-3.0
			80.8	81.1	82.7
EBC 8.5%			6.7	6.9	7.0
1. Tribal					
1. Rose Marie Guam 1 man year	22/1		4.9	5.1	5.2
EBC 10%			.5	.5	.5
Sub Total			92.9	93.6	95.4
Travel & Per diem			2.6	2.6	2.7
Communications			1.2	1.3	1.4
Materials & Supplies			2.9	2.5	2.5
Motor vehicle operation			6.2	6.1	6.2
Contractual Services			113.0	116.9	116.8
Training			5.5	5	5.5
Administrative cost					
other (Range water dev.)			42.0 4.2	42.0 4.5	42.0 4.5
Total			223.5	228.0	230.0

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PZ-3

OUTPUT STATEMENT

PROGRAM Agricultural

DATE: APRIL 24, 1972

ELEMENT DESCRIPTION	UNIT OF MEASURE	FY 1971 ACTUAL	FY 1972 PROGRAM	72 FY 1973 72			PROPOSED LEVEL	1974 PLANNED	1975 PLANNED
				BASE	-10%	+10%			
Acres Range, Indian Operators	MAC	389.3	389.3	-	-	-	389.3	389.3	389.3
AUMs produced, Indian operators	MAC	56.6	56.6				56.6	57.5	57.5
AUMs used, Indian operators	MAC	<del>56.6</del>	<del>56.6</del>				<del>56.6</del>	<del>57.5</del>	<del>57.5</del>
Acres dry farm & pasture, Indian operators	MAC	1.2	1.2				1.2	1.2	1.2
Acres irrigated lands, Indian operators	MAC	1.5	1.5				1.6	1.7	1.7
Acres Range proper Mgmt. Indian operators	MAC	198.2	198.2				198.2	198.2	199.0
Grazing fees to Tribe	SM	0	0				0	0	0
Value free or subsidized use, Indian op.	SM	112.0	112.0				112.0	114.5	114.5
Indian employment, agriculture (Range Land)	MY	<del>121.5</del>	<del>121.5</del>				<del>121.5</del>	<del>123.5</del>	<del>126.5</del>
Annual capital value increase, range	SM	139.5	139.5				150.0	250.0	175.0
" " " " " irrigated	AM	0	0				4	6	8
Number of water wells	No.	39	39				39	41	43
Ft. of pipeline installed	Miles	6.1	21.1				10.5	10.5	10.5
No. of dams built	No.	36	31				21	35	30
Cu. Ft. of earth	MCF	135.7	120.0				120.0	135.0	130.0
Acres cleared	MAC	6.5	1.5				8.0	4.0	5.0
Acres reseeded	MAC	1.0	<del>2.0</del>				8.4	18.0	10.5
miles of fence built	Miles	21.0	8.0				9.0	10.0	12.0
acres of irrigable land	MAC	47.3	47.3				47.3	47.3	47.3
Acres under ditch <del>decided</del>	MAC	47.2	47.3				47.3	47.3	47.3
Acres irrigated & farmed	MAC	1.5	1.5				1.6	1.7	1.7
Crops produced, corn, hay, etc. pasture	SM	90.8	50.8				60.8	65.0	76.0
No./Cattle	#M	.8	.8				.8	.8	.8
No. of sheep	#M	19.4	18.0				18.0	18.0	18.0
Value of cattle sales	\$M	48.2	50.0				55.0	55.0	57.0
Value of sheep sales	\$M	71.6	70.0				72.0	72.0	72.5
Value of wool sales	\$M	28.1	30.0				30.0	30.0	30.5
Value of incentives	\$M	67.0	50.0				51.0	51.0	51.5
Value of home consumption	\$M	36.0	39.0						
Total Gross Return from subsidized use	\$M	341.7	303.8						

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Program Agriculture

input

PZ-1  
Date April 24, 1972

Unit of measure	71	72	0	-10	+10	Proposed	74	7
Funding \$ m	201.3	204.0	xxx	186.6	224.4	223.5	524.0 <sup>31</sup>	
Staffing NO. BIA	7	7				5	4	4
Tribal	1	1				7	1	1

1. Function & Capabilities: To provide technical assistance and advice to livestock operators & land users in order for them to obtain maximum production from their land & livestock commensurate with the maximum land capabilities and knowledge of individuals involved. The program is also responsible for the protection and wise utilization of Indian operated & owned Range land, irrigated land & forest land.

2. Long Range Objectives: Grazing Fees

- A. Establish range water developments in order to insure livestock distribution and insure adequate water distribution during periods of drought.
- B. Establish range management through tribally enforced management regulations, grazing boundaries, use areas, unit fencing and grazing permits.
- C. Improve range vegetation through interseeding, reseeding, tree & brush eradication and reduce soil erosion.
- D. Completion report of Rehabilitation of the irrigation units. - see construction for funding

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## Agriculture

### 3. Short Range Goals:

- A. Range water Developments; wind mills, pipelines & stock water dams
- B. Improve Range Vegetation in areas where management can be attained, Concentration will be in areas already fenced.
- C. Construct fences in Range use areas in order to obtain maximum Range management and controlled grazing.
- D. Continue to control soil Erosion by water sheds, until complete control is obtained. This will be done on a year to year basis because funds are not available to treat the entire Watershed at one time.
- E. Maintain the Irrigation system; ditch cleaning and regular Irrigation operation and maintenance duties until the salkwash project is completed

4. Program Strategy & Alternatives: The Agriculture program for Fy. 1973, 74 & 75 will be to completely clean up areas (units) that have had partial treatments in the past. These areas will be reviewed by the technical staff to determine their most efficient use. Work will begin in areas that are fenced in order that maximum Range management can be obtained.

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projects and work will be scheduled in accordance with the funding level, by years.

Program Forest Lands

INPUTS

Date: April 24, 1972

UNIT OF MEASURE	FISCAL YEAR								
	71	72	<del>72-1973</del>			73		74	75
			0	-10%	+10%	Proposed			
Funding \$M	9.4	9.6	9.6	8.7			10.5	10.7	10.7
Staffing No.	1	1					1	1	1

## Instructions for Funding and Staffing

The numbers shown on the top are the fiscal years. In the funding line show amount by source. If more than one line is needed to show different sources, add a total line. FY 1971 - Show your actual allocation, FY 1972 - The appropriated current year funds, FY 1973 - 0 is same as FY 1972 appropriated, -10% is 10% less than the FY 1972 appropriated, +10% is 10% over the FY 1972 appropriated.

Proposed = The proposed program. This amount may make the figure in the (0), -10% or +10%, columns meaningless. If this is true only fill out columns that may apply. For instance if your FY 72 allocation is \$100.0 and your proposed program for FY 1973 is 105.0, the amount in the +10% column becomes meaningless. Another example is if your proposed program is 85.0 then the +10%, the -10% and the (0) column become meaningless.

FY 1974-1975 = Project the ideal amount your program will require staffing: Identify positions by BIA or Tribal. Only enter here permanent, full-time positions required to carry out the program you are proposing for FY 1973, 1974 and 1975.

- Function and Capabilities (Give a general explanation of your program functions and capabilities and responsibilities and how they relate to and support the stated objectives of the Zuni Plan.)
- Long Range Objectives (Briefly describe the long range goals of your program in terms of how they relate to the expressed objectives of the Zuni Plan.)
- Short Range Goals (Describe the short range goals of your program - year to year accomplishments - based on the proposed funding level.)
- Program Strategy and Alternatives (Briefly describe your plan of operation and the methods you will employ in obtaining the best program in accordance with the alternate funding levels you may experience in FY 1973. Show how they would affect the outputs in FY 1974 and 1975. List and describe the projects, if any, you will do in FY '73, '74 and '75.

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## 1. Function & Capabilities

The forestry program functions through scaling & marking of Commercial & Shalako timbered areas, issuance of timber permits, & Compliance checking of timber permits, updating the Policy & procedural statement on various timber species, fire suppression, fire suppression. Maintaining an emergency fire tool cache & technical Advice on the Zuni tribal Sawmill, timber reforestation & mistletoe control.

The above mentioned items are carried on in-house with the exception of the commercial logging contracts which are carried on by the area office.

## 2. Long Range Objectives

Reforestation of different adaptable varieties will be tried in the Commercial timber areas of Pica Mesa & the forest unit. Results of these experimental plots will not be realized for 25 to 35 years. Depending upon species & adaptability.

### 3. Short Range Goals.

Continued Marking in the Forest Unit Sale and Skalak's Area. Burning of Slash in the Logging areas for fire suppression and fighting ongoing range & forest fires. Supervising Planting of trees in Timber Stand improvement areas.

### 4. Program Strategy & Alternatives

N.Y.C. & other youth will be used to carry out the work necessary for building fences, planting trees & cutting fence posts for planting plots. Supervisors will be hired to run the youth crew.

Program Forest Lands

Date: April 24, 1972

A. STAFFING

Name	Grade	Date of Instep	Annual Cost		
			1973	1974	1975
1. <u>Pat Tsethlika'i</u>	<u>GS-4</u>	<u>12/14/71</u>	<u>7.9</u>	<u>8.1</u>	<u>8.1</u>
2.					
3.					
Part time (No.)	(Many years)	(Payscale)			

Less Rental Deductions  
Subtotal

	0	0	0
	7.9	8.1	8.1
	.7	.7	.7
	.1	.1	.1
	.3	.3	.3
	1.5	1.5	1.5
Total	10.5	10.7	10.7

- B. EBC
- C. Travel and Per Diem
- D. Communications
- E. Materials & Supplies
- F. Motor Vehicle Operations
- G. Contractual Services
- H. Training
- I. Administrative Cost
- J. Other

INSTRUCTIONS

- A. Staffing - List by name, grade, instep date each full time permanent employee, showing the annual cost for pay for the three fiscal years. Use only the number of lines needed. Then use one line for all part time employees showing the number of people involved, the many years of employment provided and the pay scale. Show the total cost under each of the fiscal years, then subtotal the cost for each of the three years. Deduct from this subtotal the amount of rent which is withheld from any of the federal employee's pay checks for occupancy of a government house at Blackrock. Then subtotal again for the three fiscal years.
- B. EBC - Show here the actual cost to your program for employee benefits. For Tribal employees use 10% of gross payroll and for BIA employees use 8.5% of gross.
- C. Travel and Per Diem - If this is unusually large, footnote and explain how derived.
- D. Communications - Include telephone and telegraph.
- E. Materials and supplies - If this item is unusually large footnote and show a breakout of the items and costs.
- F. Motor Vehicle Operations - GSA vehicle rental and/or actual costs if vehicle is owned.
- G. Contractual Service - Footnote and describe briefly what this item covers.
- H. Training - include tuition, travel and supplies for training of your personnel.
- I. Administrative Cost - BIA programs leave blank. Tribal programs figure 10% of cost or actual if operating under grant or contract.
- J. Other - Any other costs that are not included in the above will be listed here, footnoted and identified.

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OUTPUT STATEMENT

PROGRAM Forest Lands

DATE: APRIL 24, 1972

ELEMENT DESCRIPTION	UNIT OF MEASURE	FY 1971 ACTUAL	FY 1972 PROGRAM	FY 1973			PROPOSED LEVEL	1974 PLANNED	1975 PLANNED
				BASE	-10%	+10%			
Annual allowable cut	MMB	1.50	1.50	1.50	0	0	1.0	0	0
Timber Cut	MMB	3.05	3.79	1.0	0	0	1.0	.1	.1
Value of Timber cut	\$M	103.3	113.3	37.0	0	0	37.0	.8	.8
Stumpage Fed. Admin Fees	\$M	10.3	11.3	3.7	0	0	3.7	.0	.0
Stumpage to Tribe	\$M	93.0	102.0	33.3	0	0	33.3	1.0	1.0
Reforestation	MAC	0	0	2	0	0	1.2	1.5	1.5
Timber Stand Improvement	MAC	0	.01	1.0	0	0	1.0	.5	.5
Total Employment logging & Milling	MY	21	23	13	0	0	13	4	4
Indian Employment, logging, & milling	MY	7	7	4	0	0	4	4	4
Indian wages, salary, logging & Milling	\$M	35.0	35.0	20.0	0	0	20.0	0	0
Indian Empl. and intensive Mgmt. Practice	MY	0							
In									

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Program: Soil Erosion Control & Timber stand improvement Inputs Date: April 24, 1972

Unit of measurement	71	72	0	1973		Proposed	74	75
				-10%	+10%			
Funding \$ m. OEO	xxx	57.5	xxx	51.7	63.3	75.0	50.0	50.0
Total \$ m Tribal + OEO	xxx	72.5	xxx	65.3	79.7	99.6	80.0	80.0
Staffing no. Tribal	xxx	48				55	40	40

1. Function & capabilities: To provide two major rolls as pointed out in the 2 year plan (1) Employment to high school and college students interested in furthering their Educational careers; (2) Soil Erosion control and timber stand improvement. Soil Erosion control was a Number 1. priority in the 2 CDP, these students will be able to construct small drop structures, (rock, brush & wire) reseed areas, dams, etc and construct fences. Now that the timber resource has been cut, there is a possibility of locating and growing a fast or moderately fast growing tree that will produce a forest or timber income to the tribe. This portion of the OEO program will only be on an experimental basis with followup.

2. Long Range Objectives: The long range objectives of this program will be to continue on a yearly basis providing employment to college students and continue with projects (Agriculture, Housing, Landscaping, etc) that will be beneficial to the Pueblo.

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### 3. Short Range Goals:

Continue to assist students interested in college or trades, providing summer employment. This program could be turned into a trade type where students could learn how to be landscape ~~gardeners~~<sup>gardeners</sup>, recreational technicians and beautification specialist. A program of this nature needs further study to determine its potential.

### 4. Program strategy & Alternatives:

The program presently structured is only designed to aid the "Agriculture & Forestry" element in reducing soil erosion & do experimental testing with a variety of different tree species to determine their vigor<sup>(SP)</sup> and growth potential in this area.

If additional funds are made available in 1973, 74 or 75 the program will be expanded to provide a variety of jobs. If the program is reduced, the work will be structured to a reduced number of student employees.



Program: Soil Erosion Control & Timber Stand Improvement. Form PZ-2

Budget Breakdown

Date April 24, 72

A. Staffing	Summer (Part time)	No.	man years	pay scale
	Supervisors	5	1.25	\$ 2.00/hr.
	Student Employees	43	10.75	\$ 1.60/hr.
<u>Total Employed</u>		<u>48</u>	<u>12.0</u>	

FY	1973	1974	1975
personnel cost	55.0	48.0	48.0
Fringe Benefits (EBC) 10%	5.5	4.8	4.8
Consultants & contract services	16.0	12.0	12.0
Travel & Per diem	3.0	2.5	2.5
Materials & Supplies	15.5	10.0	10.0
Other costs -	4.5	2.7	2.7
<u>Total</u>	<u>99.6</u>	<u>80.0</u>	<u>80.0</u>

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## ZUNI RESERVATION NUTRIA IRRIGATION UNIT

1. The Nutria Irrigation Unit - Zuni Irrigation project 1000.45.19. is located approx. 25 miles north east of Zuni, New Mexico, along the Rio Nutria. The unit consists of 700 acres of irrigable land of which 200 acres can be served from the existing distribution system.

Flows of the Rio Nutria provide the water supply for the irrigation unit and are characterized by high flows during the snowmelt and low flows during the summer. Only a small portion of the annual run-off is usable for irrigation under the present conditions due to a each of storage facilities. Only 113 acres of land were irrigated during the 1968 irrigation season.

2. Situation:

One of the major problems effecting the Nutria Irrigation Unit is a shortage of irrigation water during the summer months. In efficient distribution system and improper management are other factors effecting water shortage. All irrigated lands in this unit are tribally owned, but are used by individuals. Utilization of the irrigable land is usually in direct proportion to the available water supply. Production from irrigated lands is badly needed to complement the range livestock program in providing supplemental winter feed and grazing. Production from irrigated garden tracts is an important source of food for home consumption and supplements the earned wage income.

3. Needs:

Establish a self-supporting irrigation unit that will generate a reliable income to the local farm operators and employment for non-operators, the Nutria Irrigation Unit needs are:

- a. Form a local waterusers' organization.
- b. Designate irrigable lands that are entitled to use irrigation water.
- c. Rehabilitate distribution system to conserve water and to provide for a more efficient use of water.
- d. Provide adequate storage capacity for the Nutria Irrigation Unit.

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4. Objectives:

The long range objective for the Nutria Irrigation Unit is to develop an adequate storage and distribution system to irrigate 700 acres of land, and to turn the operation and maintenance of the unit over to the local waterusers' organization. This long range objective can be accomplished in the following steps:

- a. Organize a waterusers' organization.
- b. Designate irrigable land.
- c. Rehabilitate distribution system.
- d. Transfer operation and maintenance of unit to waterusers.
- e. Provide adequate storage capacity for the Nutria Irrigation Unit.

5. Cost:

The following funds are requested for the Nutria Irrigation Unit based on the assumption that the local waterusers are interested in this plan and intend to bring idle lands back under irrigation and improve crop yields on presently irrigated lands through intensification and improved farming practices. A firm commitment from the waterusers on this plan will be required prior to authorizing the expenditure of any construction funds on this unit.

a.	Organize waterusers' organization-----	No Cost
b.	Designate irrigable lands-----	\$ 5,000
c.	Rehabilitate distribution system	
1.	Canal reshaping & lining -	
	3.5 miles @ \$26,400/mile-----	\$92,400
2.	Canal structures-----	\$ 3,600
d.	Transfer Project O&M-----	No Cost
e.	Nutria Storage dam and reservoir	
	Preliminary estimates to increase storage capacity:	
	Existing Proposed	
1.	Surface area 19 acres	83.5 acres
2.	Capacity 0 acre feet	390 acre feet
3.	Fill or embankment needed estimated	63,218 cu. yards
	Total estimated cost based on Preliminary	
	engineering estimates-----	\$125,000
		101,000
	Total -----	\$226,000

6. Technical Assistance:

The success of this unit will require assistance from the Bureau of Indian Affairs, Extension Service, Bureau of Reclamation, Bureau of Sport Fisheries & Wildlife, and Soil Conservation Service.

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7. Plans for Completing Unit:

Action is underway at the present time to form a waterusers' organization. As funds become available, the irrigable lands in the Nutria Irrigation Unit that are entitled to use the available water will be designated. Criteria for the designation shall be established in conjunction with the local waterusers, Zuni Tribe, and the Bureau of Indian Affairs.

A rehabilitation plan will be formalized with the local waterusers. Construction work will be in accordance with this plan. Local waterusers will be employed during construction where appropriate. Other work will be contracted.

The completed unit will be transferred to the local waterusers organization to operate and maintain.

The Bureau of Reclamation has recently completed a Safety of Dam Inspection Report on the Nutria-Zuni watershed. The Bureau of Reclamation will be requested to follow-up the Safety of Dam Report with a Watershed Evaluation Study with feasibility designs and cost estimates for correction of structural deficiencies and also determine what alternative reservoirs and dams should be constructed on the watershed. The proposed Nutria Dam & Storage Reservoir will be included in the study.

8. Description of Completed Unit:

With Canal Rehabilitation Only: Upon completion of the canal rehabilitation, the local waterusers will have an irrigation system that is capable of delivering adequate quantities of water during run-off periods. This system will be economical to operate and an efficient means of delivering and conserving badly needed water. This system will enable the waterusers to irrigate approximately 200 acres with adequate carriage capacity to irrigate 700 acres in the event additional storage is provided. This system can be efficiently operated and maintained by the waterusers.

With Canal Rehabilitation and Nutria Storage Dam & Reservoir: Upon completion of the canal rehabilitation and the construction of Nutria Storage Dam & Reservoir, the Nutria Irrigation Unit will be complete. The Nutria Unit will have adequate storage capacity and distribution system to irrigate 700 acres. This irrigation system can be efficiently operated and maintained by the waterusers.

The Nutria Storage Dam & Reservoir could also be used to store water for developing recreation and tourism potential, for future municipal and industrial developments, and for limited flood control storage on the Zuni Reservation.

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TABLE I

NUTRIA IRRIGATION UNIT IRRIGATION INCOME

Crops	Unit	PRESENT CONDITION C.Y. 1968				With Canal Rehabilitation and improved Management				With Improved Management Canal Rehab. and Nutria Dam			
		Acres	Yield Per Acre	Price Per Unit	Gross Income	Acres	Yield Per Acre	Price Per Unit	Gross Income	Acres	Yield Per Acre	Price Per Unit	Gross Income
Corn	bu.	20	20	1.77	708	39	44.0	1.77	3,036	160	44.0	1.77	12,460
Alfalfa	ton	20	2.5	26.28	1,314	39	3.8	26.28	3,895	130	3.8	26.28	12,980
Wheat	bu.	5	20	1.60	160	9	42.0	1.60	605	20	42.0	1.60	1,120
Oats	bales	15	50	1.25	938	27	100.0	1.25	3,375	135	100.0	1.25	16,875
Beans	cwt.	8	12	7.75	740	10	12.0	7.75	930	15	12.0	7.75	1,395
Garden	acre	10	-	300.00	3,000	13	-	300.00	3,900	20	-	300.00	6,000
Pasture	acre	35	-	34.00	1,190	63	-	33.00	2,079	220	-	33.00	7,260
<b>TOTAL</b>		<b>113</b>			<b>8,050</b>	<b>200</b>			<b>17,820</b>	<b>700</b>			<b>58,310</b>

Increase in annual income with canal rehabilitation \$9,770

Increase in annual income with canal rehabilitation and Nutria Storage Dam & Reservoir \$50,260

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