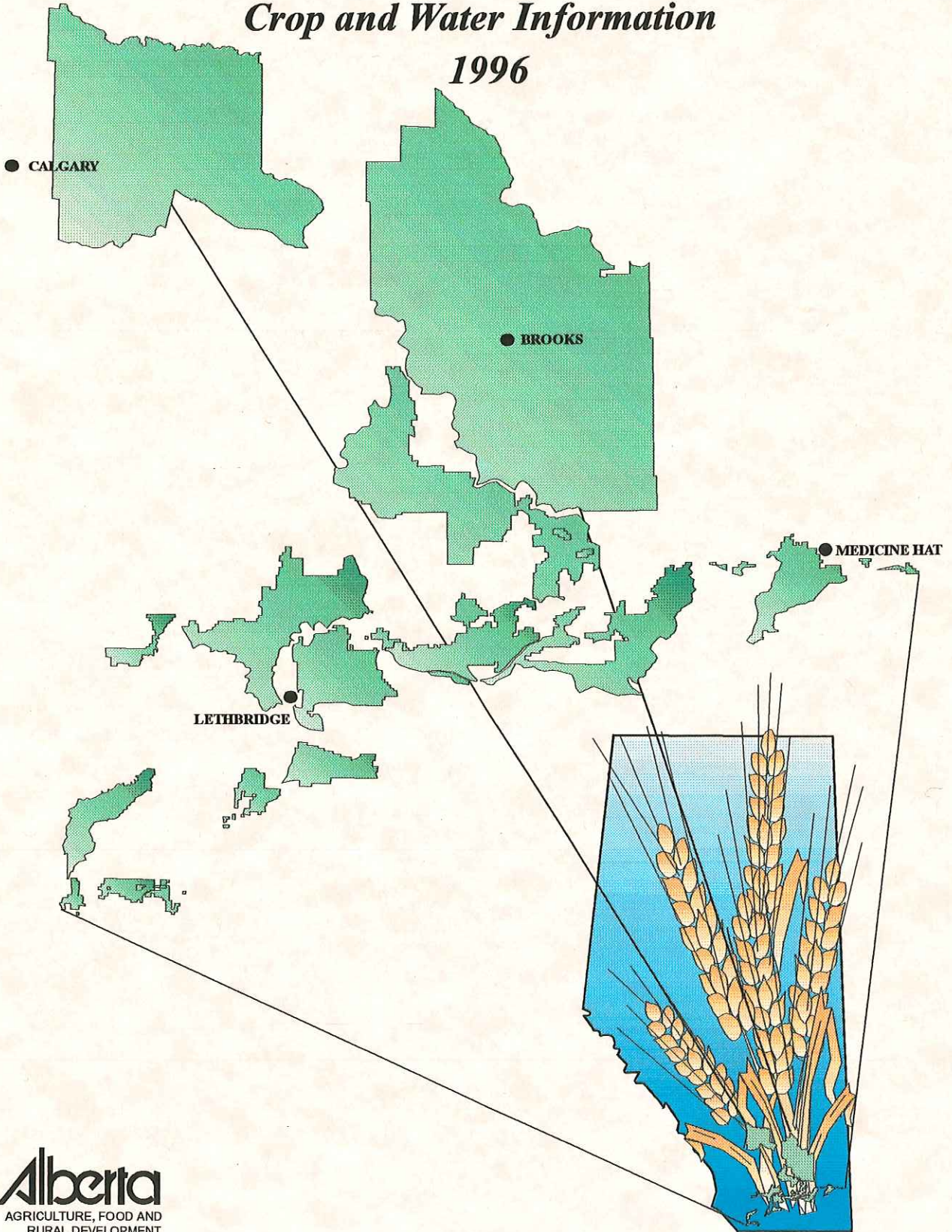


ALBERTA IRRIGATION DISTRICTS

Crop and Water Information

1996



ALBERTA IRRIGATION DISTRICTS

Crop and Water Information

1996



May 1997

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Alberta Agriculture, Food and Rural Development, Agriculture Centre,
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Internet address: <http://www.agric.gov.ab.ca/irrigate/stats/crop95a.html>

INTRODUCTION

This report is prepared by Alberta Agriculture, Food and Rural Development; Irrigation Branch. The purpose of this booklet is to provide an overview of pertinent irrigation data related to the thirteen irrigation districts in southern Alberta.

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TABLE II - CROPS GROWN ON ACTUALLY IRRIGATED ACRES WITHIN THE THIRTEEN IRRIGATION DISTRICTS - 1996

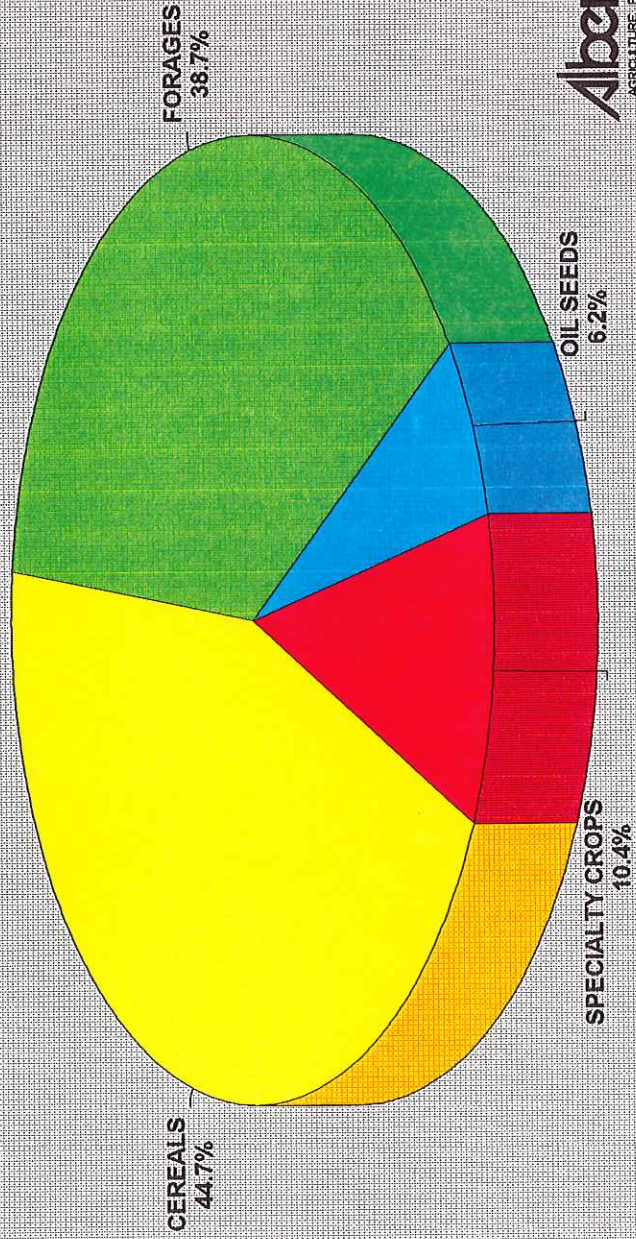
IRRIGATION DISTRICTS																	
CROPS	AID	LID	MVID	RCID	sub-total	SMRID West	SMRID East	SMRID sub-total	BRID	EID	LNID	MID	RID	TID	UID	WID	DISTRICT TOTALS
CEREALS	202	500	0	100	802	78,373	103,672	182,045	109,326	101,195	52,215	7,341	19,400	30,776	4,236	14,983	522,319
FORAGES	1,943	3,727	1,053	634	7,357	39,102	42,780	81,882	47,032	136,279	76,374	6,356	18,640	21,252	9,093	47,846	452,111
OIL SEEDS	0	50	0	0	50	8,623	17,525	26,148	15,308	15,959	7,582	574	1,297	908	730	3,627	72,183
SPECIALTY CROPS	0	0	0	0	0	17,244	31,429	48,673	24,369	16,913	6,702	70	285	21,697	24	2,254	120,987
OTHER	0	0	0	0	0	144	206	350	20	729	274	0	40	133	52	0	1,598
ACTUALLY IRRIGATED ACRES	2,145	4,277	1,053	734	8,209	143,486	195,612	339,098	196,055	271,075	143,147	14,341	39,662	74,766	14,135	68,710	1,169,198

This table is a summary of the data from Table I. The data in this table is comprised from the addition of a number of columns from Table I. These are listed below for each title and shown on the pie charts.

- | | |
|-----------------|------------------------------------|
| <u>CROPS</u> | <u>COLUMNS</u> |
| Cereals | a to j |
| Forages | k to v |
| Oil Seeds | w to ad |
| Specialty Crops | ae to bi |
| Other | bj to bl (not shown on pie charts) |

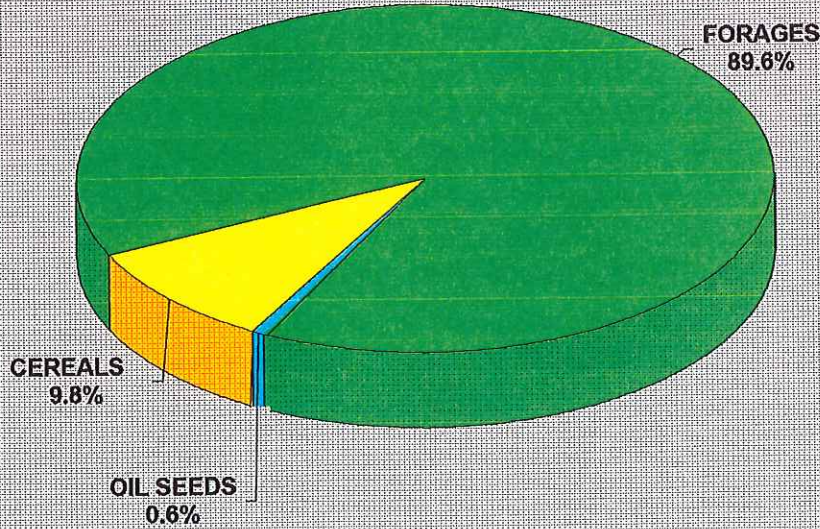
IRRIGATED CROPS - 1996

Alberta Irrigation Districts



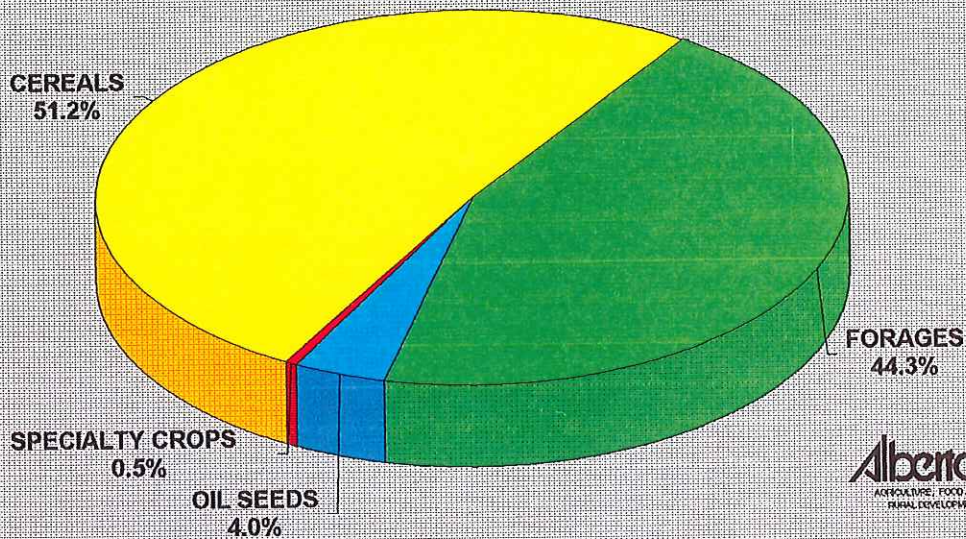
IRRIGATED CROPS - 1996

Aetna, Leavitt, Mountain View and Ross Creek Irrigation Districts



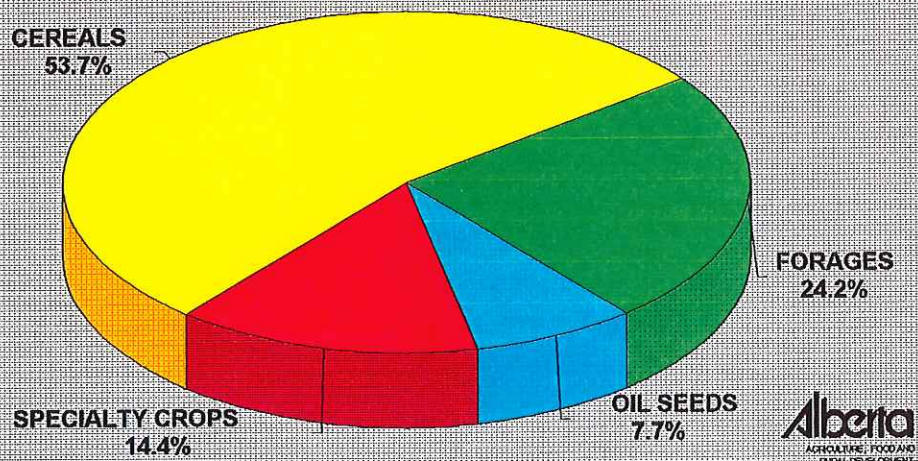
IRRIGATED CROPS - 1996

Magrath Irrigation District



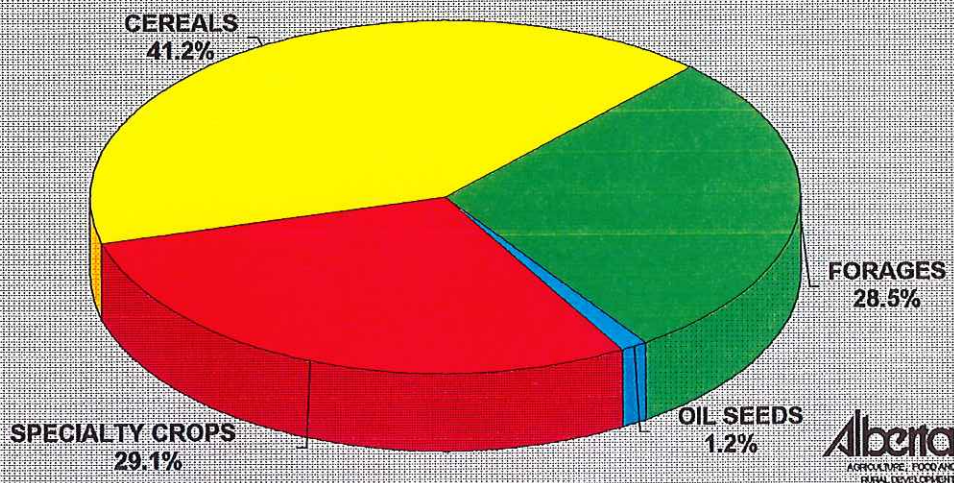
IRRIGATED CROPS - 1996

St. Mary River Irrigation District



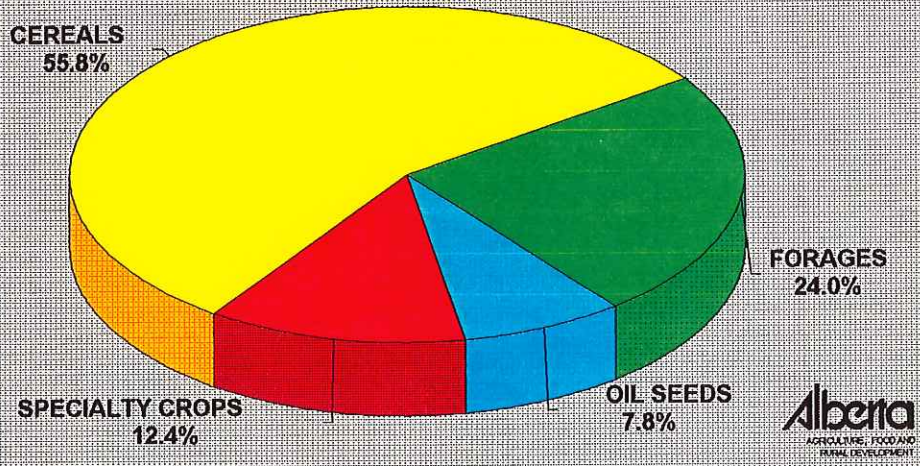
IRRIGATED CROPS - 1996

Taber Irrigation District



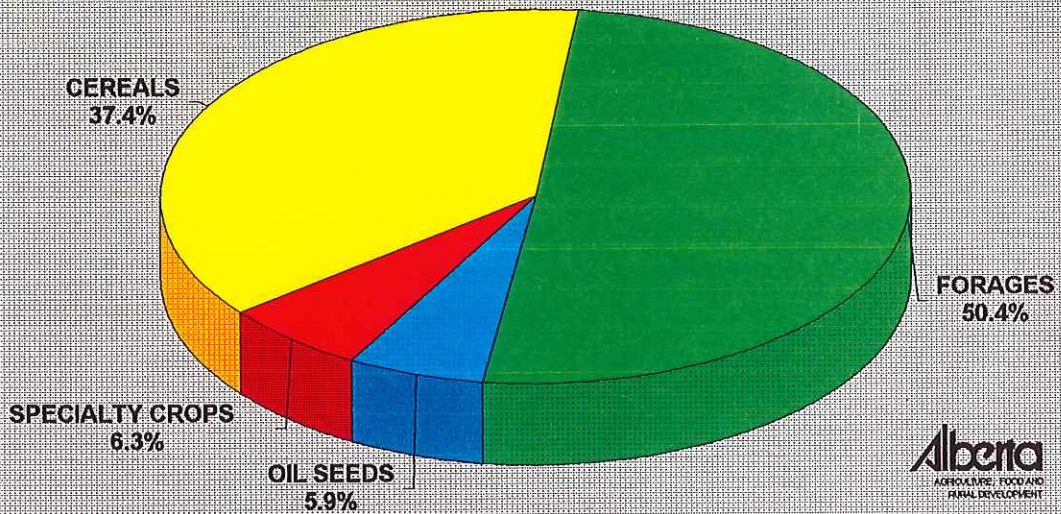
IRRIGATED CROPS - 1996

Bow River Irrigation District



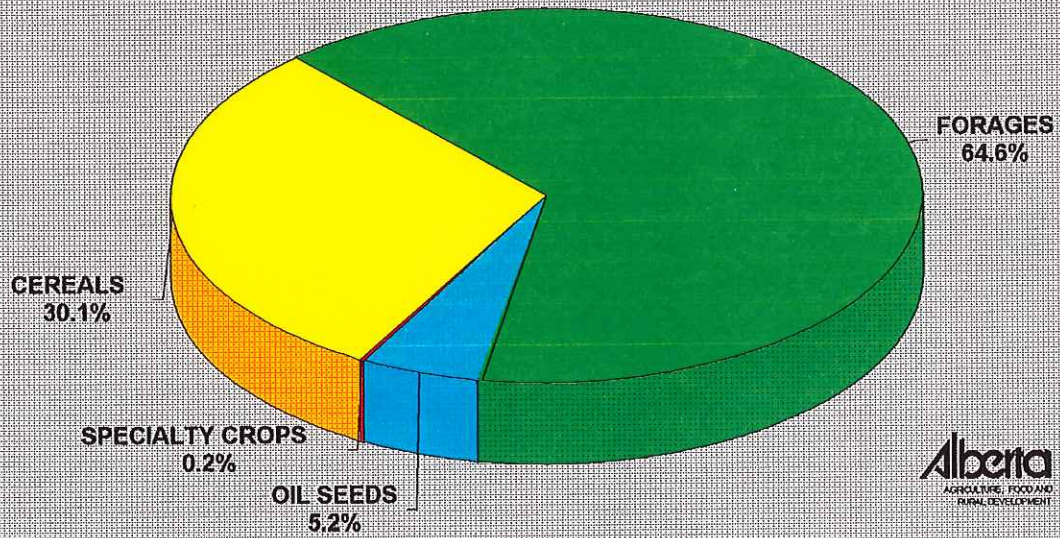
IRRIGATED CROPS - 1996

Eastern Irrigation District



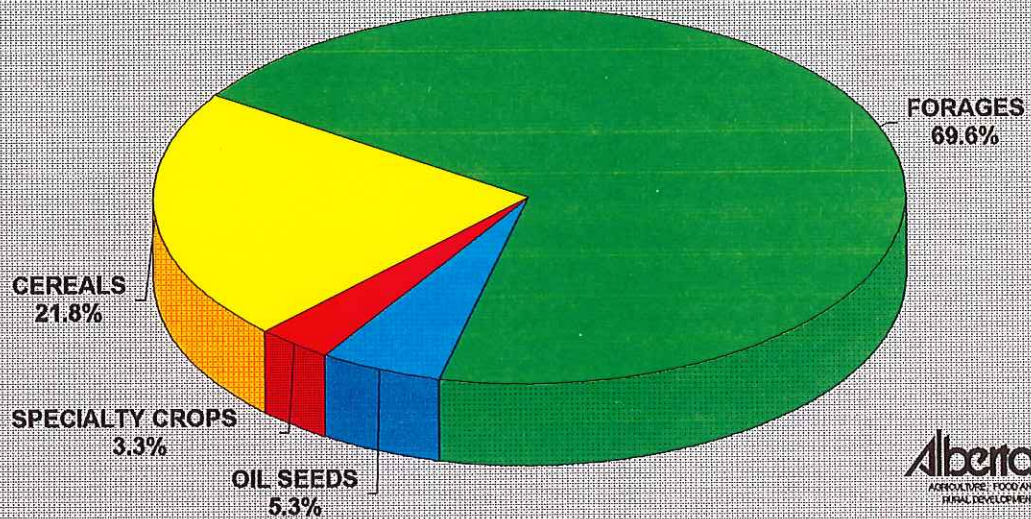
IRRIGATED CROPS - 1996

United Irrigation District



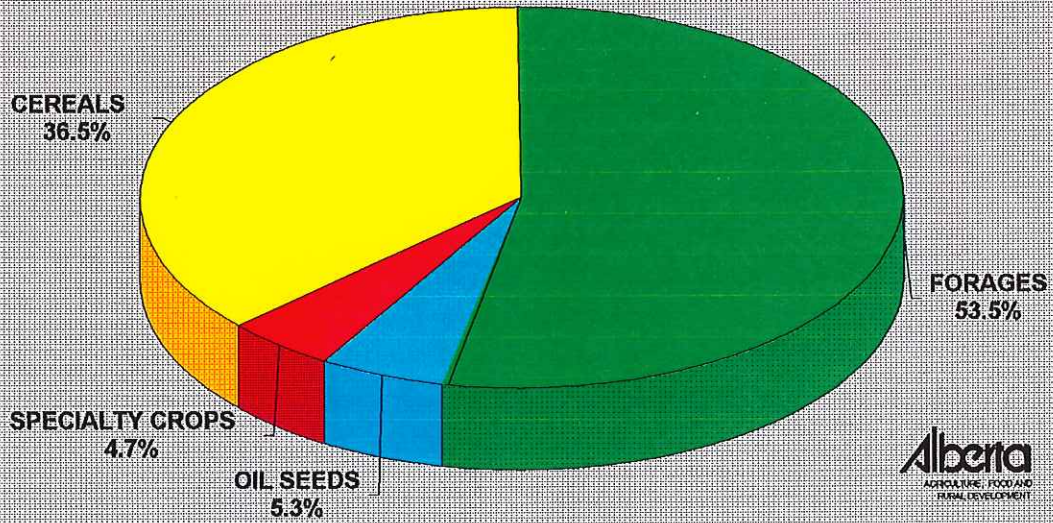
IRRIGATED CROPS - 1996

Western Irrigation District



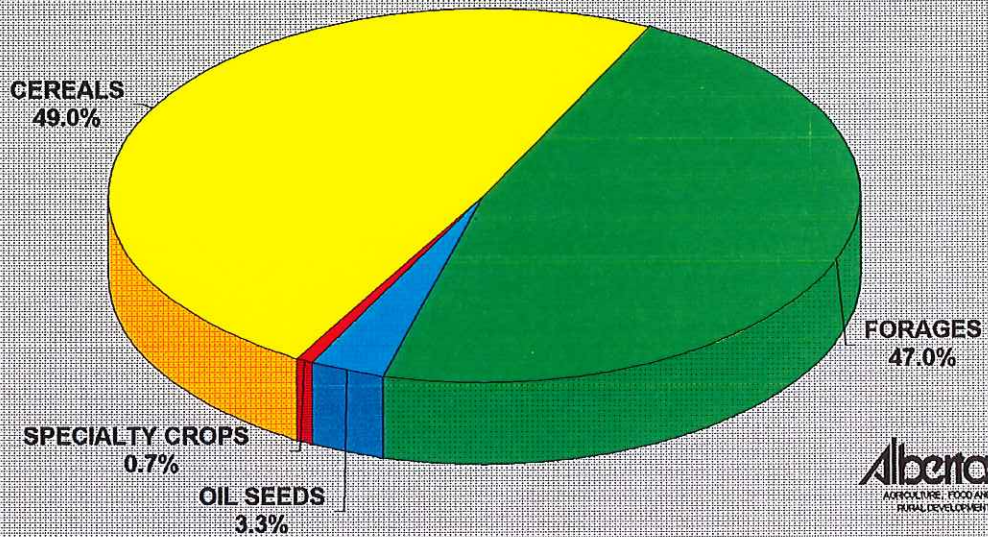
IRRIGATED CROPS - 1996

Lethbridge Northern Irrigation District



IRRIGATED CROPS - 1996

Raymond Irrigation District



**ASSESSED ACREAGE WITHIN THE THIRTEEN IRRIGATION DISTRICTS
OF SOUTHERN ALBERTA**

YEAR	AID	BRID	EID	LID	LNID	MID	MVID	RID	RCID	SMRID	TID	UID	WID	TOTAL
1970	6,673	23,783	199,729	4,523	89,360	8,506	3,719	20,847	2,068	197,540	57,484	33,353	44,066	691,651
71	6,548	24,071	200,459	4,343	89,883	8,105	3,719	20,349	2,068	199,572	59,172	33,353	43,949	695,591
72	3,131	24,196	202,225	4,305	89,379	9,042	3,719	20,269	2,068	204,051	59,833	33,353	43,899	699,470
73	3,081	26,756	205,481	4,305	98,206	9,182	3,719	20,647	2,068	216,136	61,692	33,353	43,919	728,545
74	3,081	118,741	207,245	4,421	105,958	9,077	3,717	23,257	2,068	237,244	63,823	34,034	44,219	856,885
1975	3,081	131,764	212,982	4,430	108,106	8,871	3,720	26,920	2,068	252,019	62,692	33,358	45,311	895,322
76	3,081	139,665	219,405	4,430	109,629	9,069	3,720	28,350	2,069	262,231	66,423	33,358	52,190	933,620
77	3,081	147,795	224,967	4,430	111,735	9,480	3,720	31,626	1,319	274,301	68,178	33,617	68,549	982,798
78	3,104	153,120	227,202	4,431	111,947	10,737	3,717	31,570	1,776	284,151	68,175	33,651	71,603	1,005,824
79	3,104	150,160	227,254	4,477	111,924	10,797	3,710	31,524	1,776	287,329	69,828	33,546	74,525	1,009,954
1980	3,104	164,889	229,110	4,477	112,562	10,797	3,710	33,681	1,776	293,126	70,368	33,544	76,029	1,037,173
81	3,096	174,641	230,553	4,457	113,845	10,963	3,710	35,385	1,776	299,548	70,819	33,417	79,633	1,061,843
82	3,127	179,613	239,651	4,423	114,919	11,647	3,710	39,130	1,716	301,446	71,529	33,383	81,864	1,086,158
83	2,916	181,174	244,099	4,440	116,745	12,357	3,710	39,148	1,776	313,728	72,623	33,448	81,480	1,107,644
84	3,051	183,529	244,243	4,440	117,869	13,047	3,710	41,729	1,776	319,712	72,971	33,534	82,974	1,122,585
1985	3,399	185,034	246,658	4,460	118,883	14,218	3,710	44,990	1,319	328,063	73,063	33,854	84,245	1,141,896
86	3,444	189,202	247,804	4,460	126,307	14,579	3,690	44,950	1,210	331,493	73,314	34,336	83,924	1,158,713
87	3,444	190,263	249,372	4,479	128,867	14,885	3,690	44,407	1,210	334,285	73,654	34,450	85,405	1,168,411
88	3,435	192,424	252,432	4,709	131,565	15,030	3,690	44,196	1,210	339,091	73,602	34,615	86,198	1,182,197
89	3,500	194,977	256,353	4,729	133,620	15,569	3,700	44,144	1,210	342,451	74,898	34,818	87,242	1,197,211
1990	3,500	199,980	260,523	4,742	135,632	15,099	3,728	44,044	1,210	349,849	74,568	34,769	88,480	1,216,124
91	3,527	201,070	263,889	4,762	137,719	16,665	3,728	44,305	1,210	350,108	77,740	34,687	88,112	1,227,522
92	3,519	202,499	269,462	4,800	139,688	16,391	3,734	44,279	1,210	351,393	78,177	34,868	87,949	1,237,969
93	3,519	204,466	270,008	4,780	138,095	16,775	3,737	44,229	1,210	353,039	78,412	34,772	87,453	1,240,495
94	3,519	205,983	272,024	4,780	141,517	16,785	3,727	44,219	1,210	353,466	78,629	34,438	86,725	1,247,022
1995	3,519	207,652	273,848	4,780	143,608	17,908	3,727	43,678	1,210	356,618	78,676	34,428	86,942	1,256,594
96	3,519	209,560	276,405	4,760	147,241	18,169	3,727	44,315	1,210	358,399	79,069	34,506	87,258	1,268,138

NOTE: BRID increased 94,000 acres in 1974 with the amalgamation of the BRID and the Bow River Project (Federal).

PREPARED BY: ALBERTA AGRICULTURE, FOOD AND RURAL DEVELOPMENT, IRRIGATION BRANCH, LETHBRIDGE

IRRIGATION DISTRICTS ANNUAL WATER RATES

YEAR	AID	AID pipelines	BRID	EID	LID	LID pipelines	LNID	MID	MVID	RID	RCID	SMRID	TID	UID	WID
1982	\$2.50		\$6.50	\$6.50	\$5.00		\$12.00	\$6.00	\$3.00	\$6.25	\$3.00	\$12.00	\$10.75	\$3.25	\$6.30
83	\$5.00		\$9.00	\$6.75	\$8.00		\$12.50	\$6.00	\$5.20	\$6.50	\$3.00	\$12.00	\$11.00	\$3.25	\$6.50
84	\$6.00		\$10.00	\$7.00	\$8.00		\$12.50	\$6.00	\$5.20	\$6.50	\$3.00	\$12.00	\$11.00	\$3.25	\$6.75
1985	\$6.00		\$10.00	\$7.00	\$7.50		\$12.50	\$6.00	\$5.20	\$6.50	\$4.00	\$12.00	\$11.00	\$3.25	\$7.25
86	\$6.00		\$10.00	\$7.25	\$7.50		\$12.50	\$6.00	\$5.20	\$6.50	\$6.00	\$13.00	\$11.00	\$3.25	\$7.47
87	\$6.00		\$10.00	\$7.50	\$7.50	\$9.50	\$12.50	\$6.00	\$5.20	\$6.50	\$6.00	\$13.00	\$11.00	\$3.25	\$7.47
88	\$7.00	\$9.00	\$10.00	\$7.50	\$8.00	\$10.00	\$12.50	\$6.00	\$5.20	\$6.50	\$6.00	\$13.00	\$12.00	\$3.25	\$7.70
89	\$7.00	\$9.00	\$10.00	\$8.00	\$8.00	\$10.00	\$13.50	\$6.00	\$6.20	\$6.50	\$6.00	\$13.25	\$12.00	\$3.50	\$8.00
1990	\$8.00	\$10.00	\$10.00	\$8.50	\$8.00	\$10.00	\$13.50	\$6.00	\$6.20	\$6.50	\$6.00	\$14.00	\$12.00	\$3.75	\$11.00
91	\$8.00	\$10.00	\$10.00	\$8.50	\$7.00	\$10.00	\$13.50	\$6.00	\$6.20	\$6.50	\$6.00	\$14.00	\$12.00	\$4.00	\$13.00
92	\$8.00	\$10.00	\$11.00	\$8.50	\$7.00	\$10.00	\$14.00	\$6.00	\$6.20	\$6.50	\$6.00	\$14.00	\$12.00	\$4.25	\$13.50
93	\$8.00	\$10.00	\$11.00	\$8.50	\$7.00	\$10.00	\$14.00	\$6.00	\$6.20	\$6.50	\$6.00	\$14.25	\$12.00	\$4.50	\$13.50
94	\$8.00	\$10.00	\$12.00	\$8.50	\$7.00	\$10.00	\$14.00	\$6.50	\$6.20	\$7.00	\$6.00	\$15.25	\$12.00	\$4.50	\$14.75
95	\$8.00	\$10.00	\$13.00	\$8.50	\$8.00	\$11.00	\$14.00	\$7.00	\$8.00	\$7.00	\$8.50	\$16.15	\$12.00	\$4.50	\$14.75
96	\$8.00	\$10.00	\$13.00	\$8.50	\$8.00	\$11.00	\$14.00	\$7.00	\$8.00	\$7.00	\$8.50	\$16.15	\$12.00	\$6.50	\$15.25

NOTE: Districts charge an additional pressure charge above this rate on pipelines

PREPARED BY: ALBERTA AGRICULTURE, FOOD AND RURAL DEVELOPMENT, IRRIGATION BRANCH, LETHBRIDGE

SOUTH SASKATCHEWAN RIVER BASIN ANNUAL IRRIGATION DELIVERIES

DISTRICT	OLDMAN RIVER BASIN										BOW RIVER BASIN					TOTALS
	AID	LID	LND	MID	MVD	RCID	RID	SMRID	TID	UID	BRID	EID	WID			
WATER SOURCE	diversion from Belly River	diversion from Belly River	diversion from Oldman River	diversion from SMRID main canal	diversion from Belly River	diversion from Gros Ventre Ck. and Ross Ck	diversion from SMRID main	diversion from Belly Waterion and St Mary Rivers	diversion from SMRID main canal	diversion from Belly and Waterion Rivers	diversion from Bow River	diversion from Bow River	diversion from Bow River			
EXPANSION LIMITS (acres)	3,530	4,770	167,000	16,300	3,700	1,200	46,500	372,000	82,200	34,000	210,000	281,000	85,000	1,319,200		
WATER LICENCES (acres)	9,000	12,000	317,000	54,000	8,000	3,000	81,000	722,000	156,000	86,000	450,000	762,000	160,400	2,764,400		
YEAR	VOLUME OF WATER DIVERTED															
1975	154,844	7,800	1,981	36,414	338,188	86,330	14,968	309,000	565,100	1,688,677						
77	189,436	14,300	48,317	423,508	122,209	31,050	304,600	572,100	1,822,531							
78	85,934	3,900	2,489	12,848	202,088	35,303	204,268	387,100	1,047,487							
79	139,630	9,500	5,561	24,521	303,097	94,736	266,539	542,848	1,546,577							
1980	134,576	8,100	19,944	340,254	17,754	17,754	287,882	545,688	1,588,262							
81	132,955	5,910	22,162	379,075	108,427	12,242	307,452	577,968	1,655,086							
82	142,663	9,404	3,551	27,697	19,133	19,133	281,000	461,258	1,289,712							
83	150,790	9,800	1,354	14,955	361,537	24,078	313,897	580,298	1,518,773							
84	177,543	14,106	87	17,544	492,674	101,643	322,335	657,540	1,870,785							
1985	184,029	13,457	3,827	27,302	425,583	24,193	337,409	655,188	1,943,406							
86	182,408	13,515	1,852	22,045	408,536	101,597	309,580	680,592	1,883,668							
87	181,597	11,761	1,321	40,599	428,434	98,621	275,841	639,928	1,838,948							
88	222,943	23,414	6,066	55,411	563,621	121,688	388,165	730,274	2,331,477							
89	198,622	10,795	122	34,540	504,255	78,398	301,442	605,148	1,884,958							
1990	192,138	16,188	298	487,244	98,572	16,133	334,304	689,178	1,986,524							
91	184,640	16,521	1,775	30,702	391,634	94,958	284,340	529,872	1,789,878							
92	137,008	12,261	0	32,070	441,745	16,628	336,878	525,650	1,888,253							
93	61,775	5,792	3,300	13,574	216,375	8,107	210,340	423,551	1,123,339							
94	180,000	8,073	758	28,328	415,162	16,827	384,126	559,478	1,819,636							
1995	110,200	2,180	861	17,600	385,280	82,385	244,160	602,098	1,572,306							
96	209,600	15,539	1,085	49,527	499,483	121,456	331,542	615,478	1,758,908							
Avg. Volume (acre ft.)	3,880	5,626	158,693	11,054	3,114	1,431	28,765	396,100	85,048	18,848	299,759	589,021	134,296	1,729,078		

NOTES: Data is obtained from Water Survey of Canada (WSC), Alberta Environmental Protection (AEP) and Irrigation Districts' annual reports.

- MID has another turnout which diverts water from the SMRID main canal. There is no data recorded at this site.

- RCID has a second supply from Ross Creek, but no data has been consistently recorded

PREPARED BY: ALBERTA AGRICULTURE, FOOD AND RURAL DEVELOPMENT, IRRIGATION BRANCH, LETHBRIDGE

PROCESSED VEGETABLES IN SOUTHERN ALBERTA

CROP	SEEDED (acres)	HARVESTED (acres)
BEANS	418	417
CARROTS		
dicer	58	58
slicer	300	260
CORN	3869	3535
PEAS	2775	2791
TOTAL	7420	7061

NOTES: Data is obtained from the Alberta Vegetable Growers' Marketing Board

-processing is defined as canned or frozen vegetables for human consumption

IRRIGATION DISTRICT RESERVOIRS

Oldman River Basin			
Location	Reservoir Name	Useable Storage (acre-feet)	Sub-Total (acre-feet)
SMRID	Chin Reservoir	154,320	314,645
	Cross Coulee Reservoir	2,100	
	Forty Mile Reservoir	70,000	
	Murray Reservoir	24,830	
	North East Reservoir	1,650	
	Raymond Reservoir	1,314	
	Sauder Reservoir	30,640	
	Seven Persons Reservoir	1,065	
	Sherburne Reservoir	9,826	
	Stafford Reservoir	18,900	

Sub - total = 314,645 acre-feet

IRRIGATION DISTRICT RESERVOIRS

Oldman River Basin			
Location	Reservoir Name	Useable Storage (acre-feet)	Sub-Total (acre-feet)
Waterton - St. Mary's Headworks	Waterton Reservoir	92,728	511,741
	St. Mary Reservoir	299,386	
	Jensen Reservoir	15,400	
	Milk River Ridge Reservoir	104,227	
AID, LID, MVID	Payne Lake	7,050	7,050
LNID Headworks	Oldman Reservoir	400,000	477,500
	Keho Lake	77,500	
LNID	Park Lake	600	1,900
	Picture Butte Reservoir	1,300	
RCID	Cavan Lake	4,000	4,000
RID	Corner Lake	400	1,200
	Craddock Reservoir	500	
	Factory Lake	300	
TID	Fincastle Reservoir	2,530	15,180
	Horsefly Reservoir	7,450	
	Taber Lake	5,200	
UID	Cochrane Lake	2,430	2,430

Sub - total = 1,021,001 acre-feet

IRRIGATION DISTRICT RESERVOIRS

Bow River Basin			
Location	Reservoir Name	Useable Storage (acre-feet)	Sub-Total (acre-feet)
BRID Headgates	Little Bow Reservoir	17,080	363,015
	McGregor Reservoir	261,135	
	Traverse Reservoir	84,800	
BRID	Badger Reservoir	43,500	65,434
	H Reservoir	1,848	
	Lost Lake	4,086	
	Scope Reservoir	16,000	
EID	Cowoki Reservoir	16,000	499,253
	Crawling Valley Reservoir	105,780	
	J Reservoir	500	
	Kitsim Reservoir	21,500	
	Lake Newell	259,600	
	One Tree Reservoir	1,926	
	Rock Lake Reservoir	7,500	
	Rolling Hills Reservoir	14,200	
	Snake Lake Reservoir	14,247	
	Tilley "A" Reservoir	27,000	
Tilley "B" Reservoir	31,000		
WID	Chestermere Lake	4,174	10,574
	Langdon Reservoir	6,400	

Sub - total = 938,276 acre-feet

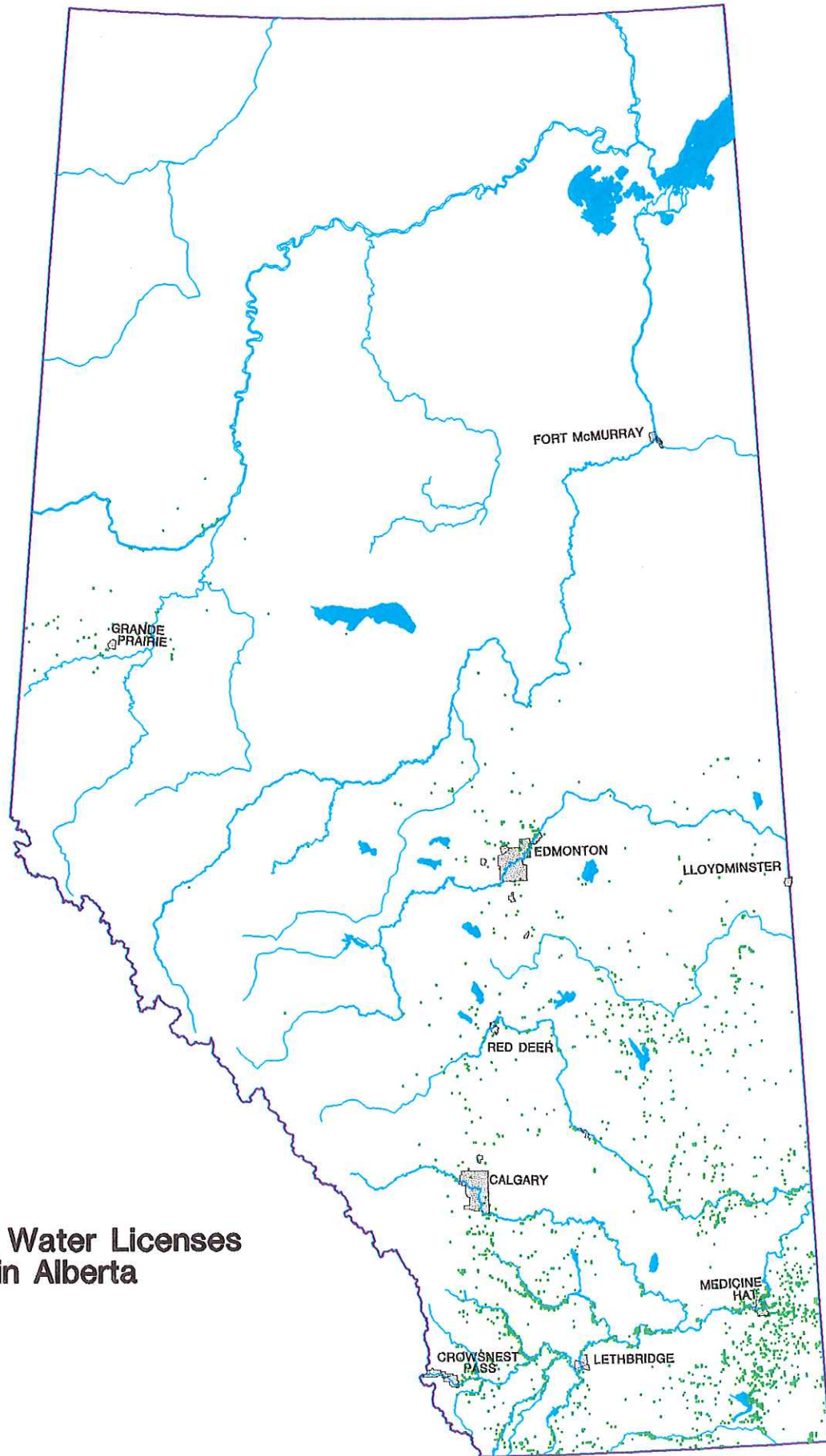
Total Storage = 2,273,922 acre-feet

PRIVATE WATER LICENCES FOR IRRIGATION IN ALBERTA
(MARCH 1997)

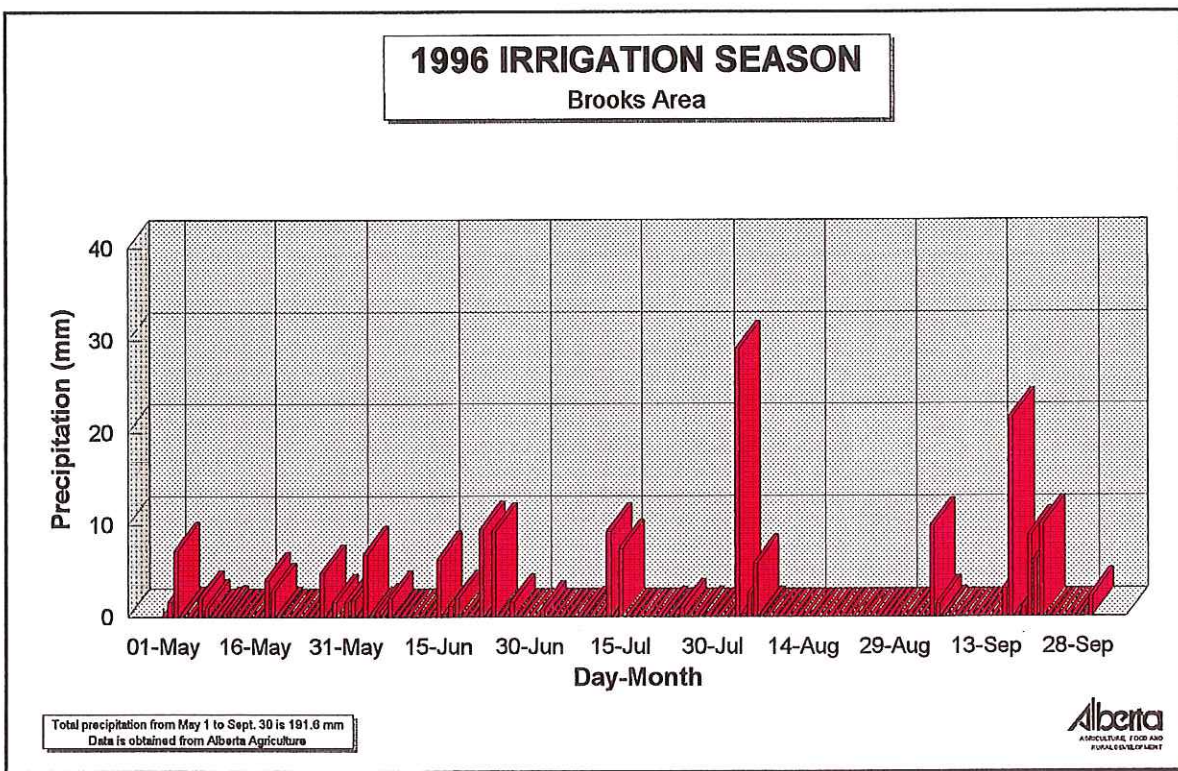
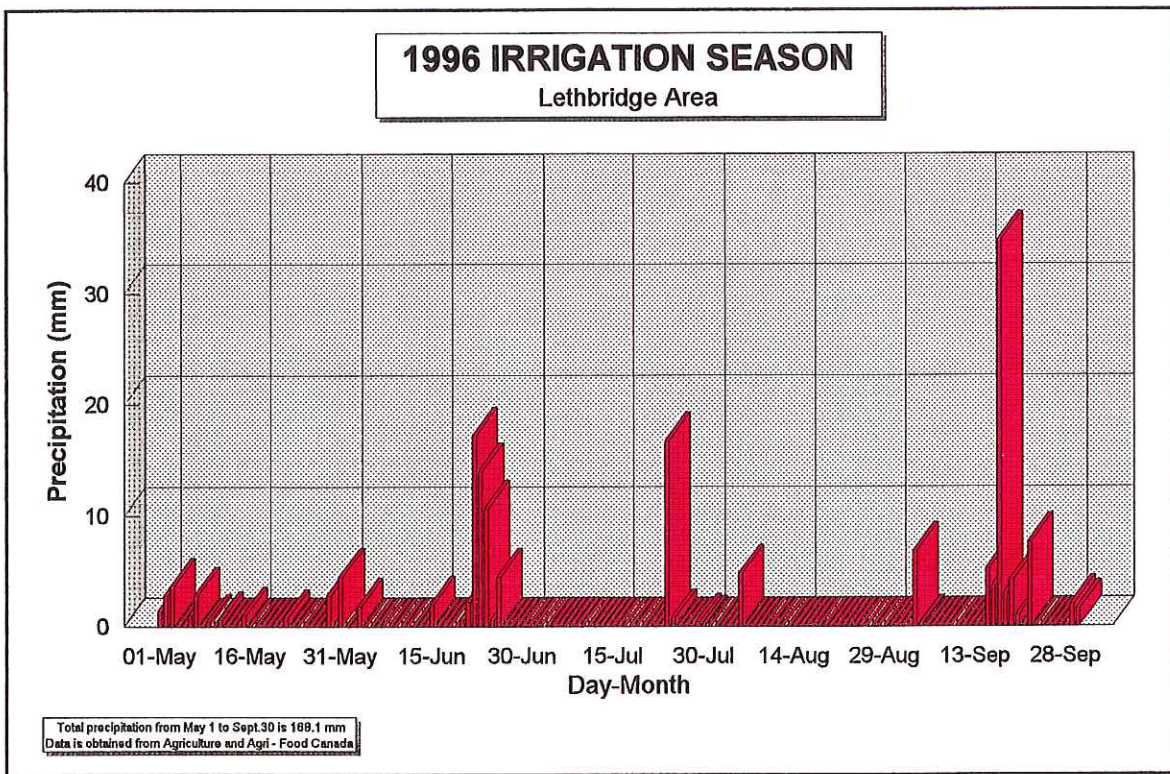
RIVER BASIN	Total Acres Irrigated	No. of Licences 1 to 100 ac.	No. of Licences 101 to 300 ac.	No. of Licences over 300 ac.
ATHABASCA RIVER	1,413	36	1	1
MILK RIVER	18,550	97	43	14
NORTH SASKATCHEWAN RIVER	20,679	252	40	11
PEACE RIVER	2,382	60	5	0
SOUTH SASKATCHEWAN RIVER *				
- Bow River	22,341	117	46	14
- Little Bow River	16,728	107	36	11
- Lower Oldman River	13,460	17	25	11
- Red Deer River	40,282	422	102	19
- South Saskatchewan River	47,469	524	82	27
- Upper Oldman River	13,820	99	16	3
- Waterton / Belly / St. Mary Rivers	45,932	100	52	15
- Willow Creek	10,812	62	38	3
TOTAL	253,868	1,893	486	129

* Does not include irrigation licences issued to irrigation districts

- Notes:
- Upper Oldman reach is defined as upstream of the Belly River confluence
 - Lower Oldman reach is defined as downstream of the Belly River confluence
 - data is obtained from Alberta Environmental Protection

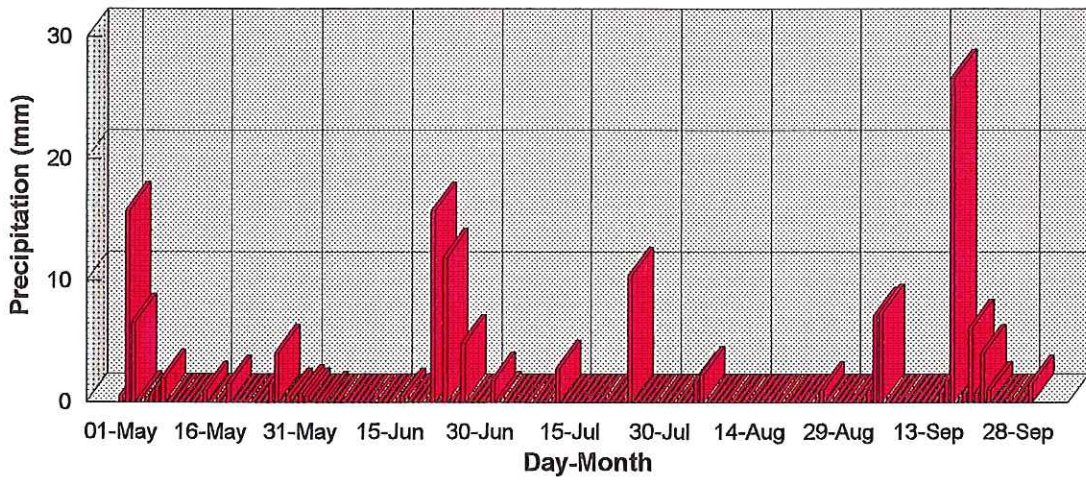


**Private Water Licenses
in Alberta**



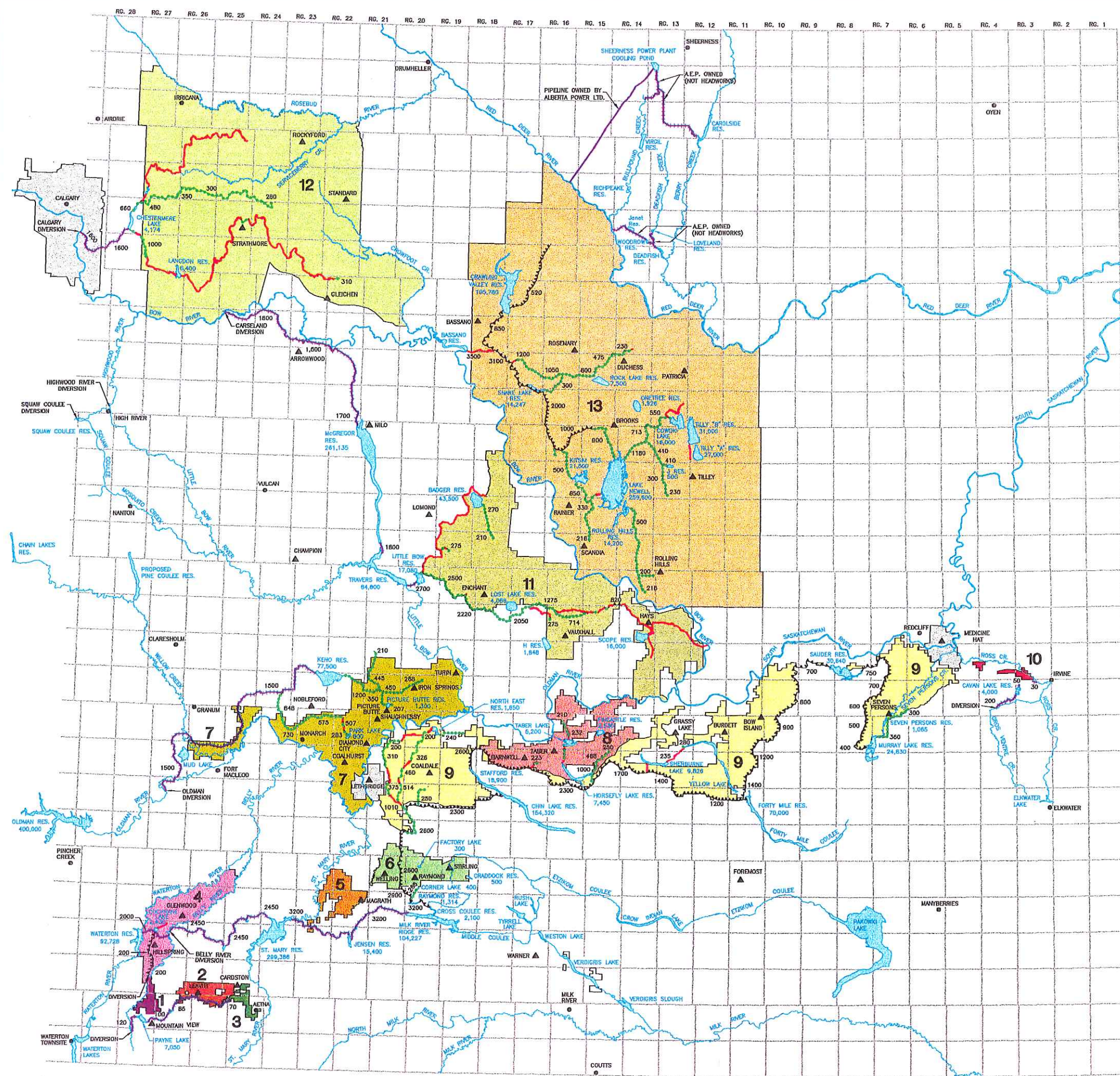
1996 IRRIGATION SEASON

Bow Island Area



Total precipitation from May 1 to Sept. 30 is 149.6 mm
Data is obtained from Alberta Agriculture





IRRIGATION DISTRICTS

- 1 MOUNTAIN VIEW IRRIGATION DISTRICT
- 2 LEAVITT IRRIGATION DISTRICT
- 3 AETNA IRRIGATION DISTRICT
- 4 UNITED IRRIGATION DISTRICT
- 5 MAGRATH IRRIGATION DISTRICT
- 6 RAYMOND IRRIGATION DISTRICT
- 7 LETHBRIDGE NORTHERN IRRIGATION DISTRICT
- 8 TABER IRRIGATION DISTRICT
- 9 ST. MARY RIVER IRRIGATION DISTRICT
- 10 ROSS CREEK IRRIGATION DISTRICT
- 11 BOW RIVER IRRIGATION DISTRICT
- 12 WESTERN IRRIGATION DISTRICT
- 13 EASTERN IRRIGATION DISTRICT

LEGEND

- CITIES, TOWNS AND VILLAGES THAT DO NOT RECEIVE IRRIGATION WATER
- ▲ CITIES, TOWNS AND VILLAGES THAT RECEIVE IRRIGATION WATER
- HEADWORKS OWNED AND OPERATED BY A.E.P.
- - - CANALS REHABILITATED BY I.R.P. (200 cfs AND OVER) (DISTRICT OWNED AND OPERATED)
- - - CANALS REHABILITATED BY A.E.P. (200 cfs AND OVER) (DISTRICT OWNED AND OPERATED)
- CANALS REMAINING TO BE REHABILITATED (200 cfs AND OVER) (DISTRICT OWNED AND OPERATED)

ALBERTA ENVIRONMENTAL PROTECTION. (A.E.P.)
IRRIGATION REHABILITATION PROGRAM (I.R.P.)

- NOTE:
- MAJOR WORKS ARE CLASSIFIED AS CANALS 200 CFS AND OVER
 - RESERVOIR VOLUMES ARE IN (ACRE-FEET)
 - CANAL CAPACITIES ARE IN (CFS)

There are 13 irrigation districts in Southern Alberta providing water to 1,268,138 acres of farmland. The infrastructure of these irrigation districts comprises over 7,200 kilometers of conveyance system, of which 1,500 are classified as major works.

IRRIGATION DISTRICTS AND MAJOR IRRIGATION WORKS WITHIN SOUTHERN ALBERTA