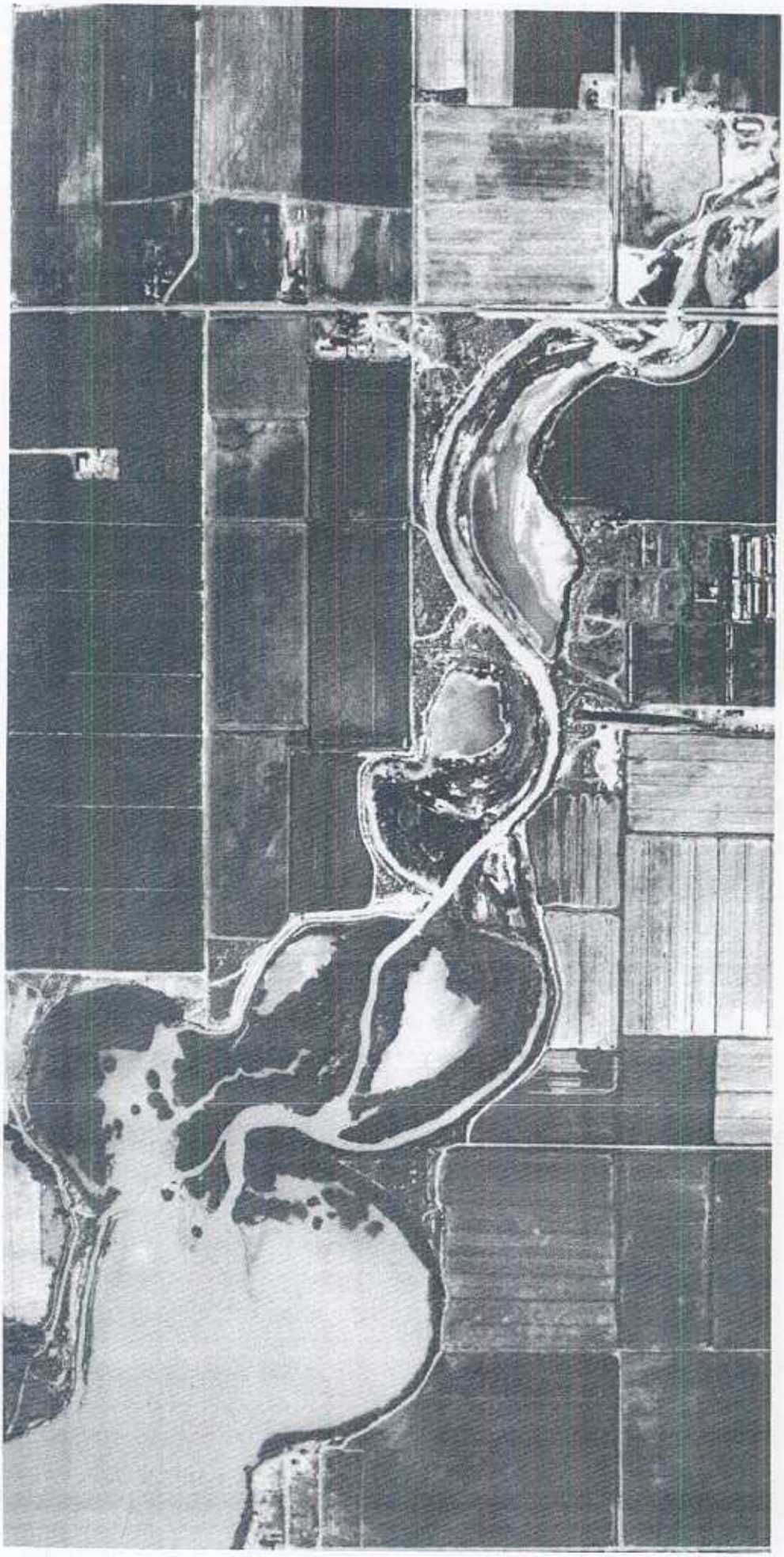

Water-Related Land Use Inventories

Utah

Uinta Study Unit

UTAH
NATURAL RESOURCES
Water Resources

A WATER-RELATED LAND USE INVENTORY REPORT of the UINTA STUDY UNIT

Aerial Photography and Field Mapping
Conducted in 1992

Prepared by

Utah Department of Natural Resources
Division of Water Resources

May 1994

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D. Larry Anderson, Director

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SUMMARY

This Water-Related Land Use Inventory Report of the Uinta Study Unit is another in a series of land use reports prepared by the Division of Water Resources from data collected under its water-related land use inventory program. The land use inventory program of the division was set up to provide the land use data needed in the preparation of water budgets, hydrologic inventory reports and other state water planning activities. The division has collected land use data since 1966.

The water-related land use data for the Uinta Study Unit were collected in 1992 by the Division of Water Resources. The report displays the data by subarea (see Figures 5 through 60) and tabulates it by subarea and county in Tables 2 and 3, respectively. The tables are presented in this summary as Tables i and ii, respectively.

The division inventoried over 330,475 acres of land in the Uinta Study Unit. This represents only about 4.7 percent of the entire Basin. Areas not inventoried are mainly rangeland and national forests. Of the inventoried acres, 212,211 were irrigated land (including land that was fallow, idle or sub-irrigated), 94,445 were wet/open water areas (including reservoirs and mountain lakes), and 18,169 were residential/industrial areas (including farmsteads and rural housing).

In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agricultural lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are often not mapped. Acres shown for this category reflect only the number of acres mapped, not the number of acres that may be in this

Table i. Summary of land cover by subarea for the Uinta Basin (acres).

Code	Cover	Upr Blacks Fk. 07-01-001	Blacks Fork 07-01-002	W. Smiths Fk. 07-01-003	E. Smiths Fk. 07-01-004	Marsh & Bridger 08-01-005	Henry's Fk. 07-01-006	W. Fk. Beaver 07-01-007	M. Fk. Beaver 07-01-008
IA1a	Fruit	0	0	0	0	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	0	0	0	0
IA2a1	Corn	0	0	0	0	0	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	0	0	0	0	0	0	0	0
IA3b	Grass Hay	0	0	0	0	0	0	0	0
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	0	0	0	0	0	0	0	0
IA4a	Fallow	0	0	0	0	0	0	0	0
IA4b	Idle Overgrown	0	0	0	0	0	0	0	0
IIA1a	Pasture (surf. & sub.)	0	0	0	0	0	0	0	0
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		0	0	0	0	0	0	0	0
IIA2a	Sub. Irr. Pasture	0	0	0	0	0	0	0	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		0	0	0	0	0	0	0	0
Irrigated Croplands Subtotal		0	0	0	0	0	0	0	0
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	0	0	0
IIE	Riparian	0	0	0	0	0	0	0	0
IIF	Open Water	0	0	0	0	0	0	0	0
IIF2	Reservoirs	0	0	0	0	0	0	0	0
IIF3	Ponds & Lakes	159	51	9	378	88	227	32	119
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		159	51	9	378	88	227	32	119
VA	Farmsteads	0	0	0	0	0	0	0	0
VB	Residential	0	0	0	0	0	0	0	0
VB3	Open Spaces	0	0	0	0	0	0	0	0
VC	Commercial/Industrial	0	0	0	0	0	0	0	0
Residential/Industrial Subtotal		0	0	0	0	0	0	0	0
Land Use/Land Cover Totals		159	51	9	378	88	227	32	119

Table i. Continued.

Code	Cover	Hoop Lake 07-01-009	Lone Tree 07-01-010	Fish Lake 07-01-011	Burnt Fk. 07-01-012	Henry's Fk. 07-01-013	Sheep Creek 07-01-014	Carter Creek 07-01-015	Flaming Gorge 07-01-016
IA1a	Fruit	0	0	0	0	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	0	0	0	7
IA2a1	Corn	0	0	0	0	0	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	0	0	0	0	125	0	0	1,943
IA3b	Grass Hay	0	0	0	34	1,471	343	0	2,965
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	0	739	0	0	75	152	0	2,368
IA4a	Fallow	0	0	0	0	0	0	0	0
IA4b	Idle Overgrown	0	0	0	0	0	0	0	14
IIA1a	Pasture (surf. & sub.)	0	1,339	0	0	0	12	0	447
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	172
Surface Irr. Cropland Subtotal		0	2,078	0	34	1,671	507	0	7,916
IIA2a	Sub. Irr. Pasture	0	62	0	0	0	0	0	364
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		0	62	0	0	0	0	0	364
Irrigated Croplands Subtotal		0	2,140	0	34	1,671	507	0	8,280
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	0	0	0
IIE	Riparian	0	483	0	0	45	242	0	0
IIF	Open Water	0	0	0	0	0	0	1	40
IIF2	Reservoirs	0	0	106	0	0	70	0	13,732
IIF3	Ponds & Lakes	179	66	260	0	0	414	212	17
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	55
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		179	549	366	0	45	726	213	13,844
VA	Farmsteads	0	12	0	0	37	1	0	212
VB	Residential	0	0	0	0	0	0	0	443
VB3	Open Spaces	0	0	0	0	0	6	0	196
VC	Commercial/Industrial	0	0	0	0	0	0	0	52
Residential/Industrial Subtotal		0	12	0	0	37	7	0	903
Land Use/Land Cover Totals		179	2,701	366	34	1,753	1,240	213	23,027

Table i. Continued.

Code	Cover	Pot Creek 07-01-017	Vermillion 07-01-018	Up. Dry Fk. 07-02-001	N. Dry Fk. 07-02-002	E. Dry Fk. 07-02-003	Ashley Dry Fk. 07-02-004	Vernal 07-02-005	Big Brush Crk 07-02-006
IA1a	Fruit	0	0	0	0	0	0	10	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	0	5	860	0
IA2a1	Corn	0	86	0	0	0	1	921	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	2	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	0	377	0	0	0	410	10,352	59
IA3b	Grass Hay	0	47	0	0	0	44	793	0
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	92	23	0	0	0	576	7,821	10
IA4a	Fallow	0	0	0	0	0	0	353	0
IA4b	Idle Overgrown	0	0	0	0	0	32	1,108	0
IIA1a	Pasture (surf. & sub.)	42	341	0	0	0	0	2,045	0
IIA1b	Grass Hay (surf. & sub.)	0	10	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		134	884	0	0	0	1,068	24,265	69
IIA2a	Sub. Irr. Pasture	29	407	0	0	0	0	829	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		29	407	0	0	0	0	829	0
Irrigated Croplands Subtotal		163	1,291	0	0	0	1,068	25,094	69
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	71	0
IIC	Wet Flats	0	0	0	0	0	0	112	0
IIE	Riparian	23	164	0	0	0	355	364	19
IIF	Open Water	0	1,860	0	0	0	0	250	0
IIF2	Reservoirs	563	42	0	0	0	45	877	338
IIF3	Ponds & Lakes	2	5	167	0	0	183	286	45
IIF4a	Temporary Flooded	33	23	0	0	0	5	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	236	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		621	2,094	167	0	0	588	2,196	402
VA	Farmsteads	4	40	0	0	0	79	835	1
VB	Residential	0	34	0	0	0	26	4,646	0
VB3	Open Spaces	0	0	0	0	0	3	356	0
VC	Commercial/Industrial	0	3	0	0	0	2	551	0
Residential/Industrial Subtotal		4	77	0	0	0	110	6,388	1
Land Use/Land Cover Totals		788	3,462	167	0	0	1,766	33,678	472

Table i. Continued.

Code	Cover	Brush Crk 07-02-007	Strawberry Res. 07-03-001	Strawberry 07-03-002	Currant Crk 07-03-003	Red Creek 07-03-004	Fruitland 07-03-005	Lwr Strawberry 07-03-006	Upr Duchesne 07-03-007
IA1a	Fruit	0	0	0	0	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	58	0	0	0	134	0	54	0
IA2a1	Corn	21	0	0	0	0	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	818	0	0	0	43	157	289	0
IA3b	Grass Hay	90	0	0	75	1,149	136	611	24
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	186	0	0	89	534	232	391	3
IA4a	Fallow	36	0	0	0	0	0	76	0
IA4b	Idle Overgrown	56	0	44	0	272	0	25	0
IIA1a	Pasture (surf. & sub.)	0	0	0	0	5	84	206	0
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		1,265	0	44	164	2,137	609	1,652	27
IIA2a	Sub. Irr. Pasture	10	0	0	0	0	0	2	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		10	0	0	0	0	0	2	0
Irrigated Croplands Subtotal		1,275	0	44	164	2,137	609	1,654	27
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	39	0	0	0	0	0	0	0
IIE	Riparian	176	0	128	216	113	127	1,096	0
IIF	Open Water	0	0	0	0	0	0	3,389	2
IIF2	Reservoirs	643	12,189	0	629	180	9	37	0
IIF3	Ponds & Lakes	4	11	3	39	10	3	0	487
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		862	12,200	131	884	303	139	4,522	489
VA	Farmsteads	86	0	1	0	43	10	26	4
VB	Residential	2	0	0	0	48	8	35	38
VB3	Open Spaces	0	0	0	0	0	0	9	0
VC	Commercial/Industrial	0	0	0	0	8	5	7	0
Residential/Industrial Subtotal		88	0	1	0	99	23	77	42
Land Use/Land Cover Totals		2,225	12,200	176	1,048	2,539	771	6,253	558

Table i. Continued.

Code	Cover	W. Fk. Duchesne 07-03-008	Tabiona 07-03-009	Upr Rock Crk 07-03-010	Lwr Rock River 07-03-011	Utahn 07-03-012	Antelope Crk 07-03-013	Moon Lake 07-03-014	Yellowstone Riv 07-03-015
IA1a	Fruit	0	0	0	0	3	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	206	715	0	0	182	45	0	0
IA2a1	Corn	6	0	0	0	46	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	3	2	0	0	2	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	267	1,749	0	0	1,829	382	0	0
IA3b	Grass Hay	56	55	0	0	583	0	0	0
IA3c	Grass/Turf	0	0	0	0	5	0	0	0
IA3d	Pasture	539	2,375	48	102	1,605	93	0	31
IA4a	Fallow	43	19	0	0	67	0	0	0
IA4b	Idle Overgrown	172	328	0	0	88	38	0	0
IIA1a	Pasture (surf. & sub.)	0	0	0	0	278	0	0	90
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		1,292	5,243	48	102	4,688	558	0	121
IIA2a	Sub. Irr. Pasture	0	0	0	0	0	0	0	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		0	0	0	0	0	0	0	0
Irrigated Croplands Subtotal		1,292	5,243	48	102	4,688	558	0	121
IIB	Cattail/Bullrush Aspect	0	2	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	0	0	0
IIE	Riparian	366	1,103	346	938	1,462	134	0	571
IIF	Open Water	0	0	14	0	0	0	0	0
IIF2	Reservoirs	0	2	3	0	21	9	0	9
IIF3	Ponds & Lakes	38	9	1,189	6	4	1	1,299	755
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	4	0	0	23	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	4	0	0	0
Wet/Open Water Subtotal		404	1,120	1,552	944	1,514	144	1,299	1,335
VA	Farmsteads	32	119	0	3	137	44	0	22
VB	Residential	7	163	0	0	521	0	0	0
VB3	Open Spaces	19	0	0	0	0	0	0	22
VC	Commercial/Industrial	0	21	0	0	136	0	0	4
Residential/Industrial Subtotal		58	303	0	3	794	44	0	48
Land Use/Land Cover Totals		1,754	6,666	1,600	1,049	6,996	746	1,299	1,504

Table i. Continued.

Code	Cover	Uinta Riv 07-03-016	Farm Creek 07-03-017	Whiterocks Riv 07-03-018	Roosevelt/Du 07-03-019	Ouray 07-03-020	Jensen 07-04-001	Up Minnie Maude 07-04-002	Argyle Creek 07-04-003
IA1a	Fruit	0	0	0	20	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	6,293	72	336	0	0
IA2a1	Corn	0	0	0	3,574	0	391	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	12	0	0	0	0
IA3a	Alfalfa	0	0	0	29,294	2,132	5,824	0	208
IA3b	Grass Hay	0	0	0	21,998	13	349	0	4
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	0	0	0	55,628	1,152	1,640	75	192
IA4a	Fallow	0	0	0	708	201	763	0	20
IA4b	Idle Overgrown	0	0	0	4,683	274	771	0	51
IIA1a	Pasture (surf. & sub.)	0	0	0	5,294	125	286	133	281
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	4	40	0	0
Surface Irr. Cropland Subtotal		0	0	0	127,504	3,973	10,400	208	756
IIA2a	Sub. Irr. Pasture	0	0	0	639	332	99	0	39
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	36
Sub. Irr. Cropland Subtotal		0	0	0	639	332	99	0	75
Irrigated Croplands Subtotal		0	0	0	128,143	4,305	10,499	208	831
IIB	Cattail/Bullrush Aspect	0	0	0	107	0	1,459	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	695	0	0
IIE	Riparian	0	0	0	9,860	3,814	4,211	0	342
IIF	Open Water	0	0	0	0	0	4,907	0	0
IIF2	Reservoirs	0	0	149	2,830	120	28	1	0
IIF3	Ponds & Lakes	1,096	0	719	727	3	1,596	1	0
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	219	0	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		1,096	0	868	13,743	3,937	12,896	2	342
VA	Farmsteads	0	0	0	2,517	96	222	0	13
VB	Residential	0	0	0	3,898	58	17	0	0
VB3	Open Spaces	0	0	0	260	0	11	0	0
VC	Commercial/Industrial	0	0	0	1,768	2	32	0	0
Residential/Industrial Subtotal		0	0	0	8,443	156	282	0	13
Land Use/Land Cover Totals		1,096	0	868	150,329	8,398	23,677	210	1,186

Table i. Continued.

Code	Cover	Nine Mile 07-04-004	Upper Willow 07-04-005	Willow 07-04-006	Range Creek 07-04-007	Desolation 07-04-008	Evacuation Crk 07-05-001	Lwr White Riv 07-05-002	Subareas Total
IA1a	Fruit	0	0	0	0	0	0	0	34
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	1,033	0	0	10,000
IA2a1	Corn	5	0	0	0	523	0	0	5,575
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	9
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	12
IA3a	Alfalfa	287	0	580	31	4,126	0	722	62,006
IA3b	Grass Hay	0	0	125	0	175	0	127	31,267
IA3c	Grass/Turf	0	0	0	0	0	0	0	5
IA3d	Pasture	127	0	295	77	499	0	178	77,948
IA4a	Fallow	16	0	0	32	41	0	0	2,376
IA4b	Idle Overgrown	61	0	29	64	555	0	0	8,663
IIA1a	Pasture (surf. & sub.)	0	0	61	0	153	0	0	11,222
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	227
Surface Irr. Cropland Subtotal		496	0	1,090	204	7,105	0	1,027	209,344
IIA2a	Sub. Irr. Pasture	0	0	0	0	19	0	0	2,831
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	36
Sub. Irr. Cropland Subtotal		0	0	0	0	19	0	0	2,867
Irrigated Croplands Subtotal		496	0	1,090	204	7,124	0	1,027	212,211
IIB	Cattail/Bullrush Aspect	0	0	44	0	149	0	0	1,760
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	71
IIC	Wet Flats	0	0	0	0	15	0	0	860
IIE	Riparian	297	0	111	83	1,173	0	2,442	30,803
IIF	Open Water	0	0	0	0	4,327	216	1,029	16,036
IIF2	Reservoirs	0	0	90	7	474	0	16	33,217
IIF3	Ponds & Lakes	0	1	78	0	43	0	79	11,097
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	61
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	536
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	4
Wet/Open Water Subtotal		297	1	323	90	6,181	216	3,566	94,445
VA	Farmsteads	12	0	7	5	126	0	3	4,749
VB	Residential	0	0	0	0	0	0	1	9,945
VB3	Open Spaces	0	0	0	0	0	0	0	882
VC	Commercial/Industrial	0	0	1	0	1	0	0	2,593
Residential/Industrial Subtotal		12	0	8	5	127	0	4	18,169
Land Use/Land Cover Totals		805	1	1,421	299	13,432	216	4,597	324,825

Table ii. Summary of land cover by county for the Uinta Basin (acres).

Code	Cover	Carbon	Daggett	Emery	Duchesne	Grand	Summit	Uintah	Utah	Wasatch	Counties Total
IA1a	Fruit	0	0	0	3	0	0	31	0	0	34
IA1e	Other Horticulture	0	0	0	0	0	0	0	0	0	0
IA2a	Grain	0	7	0	6,583	0	0	3,356	0	54	10,000
IA2a1	Corn	5	0	0	2,550	0	0	3,019	0	0	5,575
IA2b	Vegetables	0	0	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	7	0	0	2	0	0	9
IA2b2	Onions	0	0	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	12	0	0	0	0	0	12
IA3a	Alfalfa	248	2,318	31	28,106	0	1	31,013	0	289	62,006
IA3b	Grass Hay	4	4,526	0	18,853	0	334	6,864	0	687	31,267
IA3c	Grass/Turf	0	0	0	5	0	0	0	0	0	5
IA3d	Pasture	187	2,705	77	44,827	0	739	28,908	0	504	77,948
IA4a	Fallow	20	0	32	621	0	0	1,627	0	76	2,376
IA4b	Idle Overgrown	9	14	64	4,206	0	0	4,346	0	25	8,663
IIA1a	Pasture (surf. & sub.)	0	843	0	4,092	0	1,339	4,743	0	206	11,222
IIA1b	Grass Hay (surf. & sub.)	0	182	0	0	0	0	45	0	0	227
Surface Irr. Cropland Subtotal		473	10,595	204	109,865	0	2,413	83,954	0	1,841	209,344
IIA2a	Sub. Irr. Pasture	0	758	0	39	0	62	1,970	0	2	2,831
IIA2b	Sub. Irr. Grass Hay	0	0	0	36	0	0	0	0	0	36
Sub. Irr. Cropland Subtotal		0	758	0	75	0	62	1,970	0	2	2,867
Irrigated Croplands Subtotal		473	11,353	204	109,940	0	2,475	85,924	0	1,843	212,211
IIB	Cattail/Bullrush Aspect	0	0	0	22	0	0	1,738	0	0	1,760
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	71	0	0	71
IIC	Wet Flats	0	0	0	15	0	0	846	0	0	860
IIE	Riparian	376	358	83	12,408	0	483	15,748	0	1,346	30,803
IIF	Open Water	666	1,099	329	17	636	0	9,901	0	3,389	16,036
IIF2	Reservoirs	0	14,374	7	2,122	24	106	3,730	0	12,855	33,217
IIF3	Ponds & Lakes	0	645	0	6,069	0	1,569	2,651	0	163	11,097
IIF4a	Temporary Flooded	0	55	0	0	0	0	6	0	0	61
IIF4b	Sewage Lagoon	0	55	0	86	0	0	395	0	0	535
IIF4c	Evaporation Pond	0	0	0	4	0	0	0	0	0	4
Wet/Open Water Subtotal		1,042	16,586	419	20,743	660	2,158	35,087	0	17,753	94,445
VA	Farmsteads	8	276	5	2,268	0	16	2,157	0	28	4,749
VB	Residential	0	477	0	3,308	0	0	6,125	0	35	9,945
VB3	Open Spaces	0	202	0	247	0	0	424	0	9	882
VC	Commercial/Industrial	0	55	0	1,480	0	0	1,047	0	12	2,593
Residential/Industrial Subtotal		8	1,010	5	7,293	0	16	9,753	0	84	18,169
Land Use/Land Cover Totals		1,523	28,949	628	137,976	660	4,649	130,764	0	19,680	324,825

category in the basin. Dry land agriculture (grain, beans, safflowers, etc.) represents only a small part of the total agriculture in this area of the state. The division mapped 4,698 acres under dry land agriculture in the Uinta Study Unit.

This report also discusses the Division of Water Resources previous and present methodology of collecting and processing water-related land use data. It discusses the various land use classification codes used in past studies, and what is now considered the Standard Land Use Codes, which the division adopted in 1988 for all land use/land cover studies.

The information should be valuable to a variety of users, including county and city planners, state and federal agencies and private land owners. The division will use the data in water budget reports and in state water planning reports.

INTRODUCTION

The Division of Water Resources has been charged by the Utah State Legislature with the responsibility of developing a state water plan. This plan would coordinate and give direction to the activities of state and federal agencies concerned with Utah's water resources. To accomplish this objective, an assessment of the land use and available water resources is being made on a continuing basis. As a basis for planning and further development, the state has been divided into 11 natural drainage basins or study units shown in Figure 1. The South and East Colorado River Basin (originally designated basin No. 9) has been divided into the Southeast Colorado River Basin, retaining designation No. 9, and the Kanab Creek/Virgin River Basin (Lower Colorado River Basin), which is now basin No. 10.

While land use inventories contain information on land use in the state, water budget reports contain climate, hydrologic, and general information on the water resources within specific basins or study units. The water budgets provide an accounting of water inflow, outflow, yield, storage, evaporation, transpiration and uses in the study area. Hydrologic inventories and water budget reports currently published by the division are listed in Appendix A.

A major consideration in preparing water budgets is the quantity of water depleted through evaporation and transpiration. Estimates of these depletions are obtained by preparing water budgets from data gathered in the water-related land use inventories. This data includes the kinds and extent of irrigated crops, as well as similar information on phreatophytes, wet/open water areas and residential/industrial areas. Since 1966, the division has conducted water-related land use and prepared hydrologic inventories in conjunction with other state water planning activities.

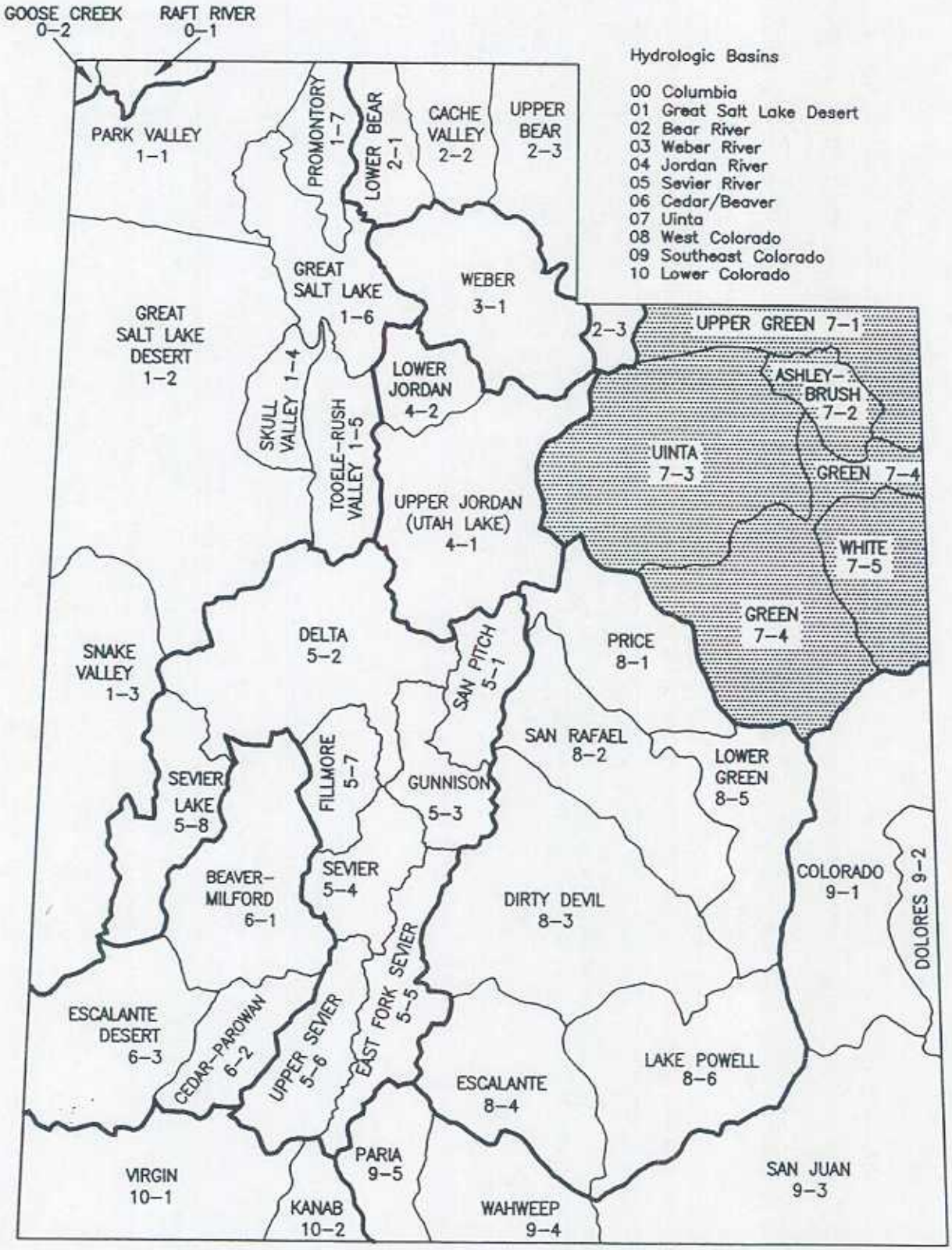

Figure 1. State of Utah hydrologic study areas with the Uinta Study Unit highlighted.

This land use report should assist in promoting the coordinated and orderly development, conservation, use and management of water and land resources in the Uinta Study Unit.

UINTA STUDY UNIT WATER-RELATED LAND USE INVENTORY

The Uinta Water-Related Land Use Inventory Study Unit was shown in Figure 1. Figure 2 shows the Uinta Study Unit divided into separate hydrologic subareas. The study unit includes approximately 10,890 square miles of land lying between Green River, Utah on the south and the Utah, Wyoming border on the north and includes the eastern portion of Summit County, the northeastern portion of Wasatch County, all of Daggett and Uintah Counties, part of Grand County and a small part of Carbon County. Figure 3 shows the Uinta Study Unit overlaid with a template showing the 7-1/2 min. USGS quadrangle maps used in the inventory. The state Automated Geographic Reference Center's (AGRC) reference numbers are cross-referenced with the division's reference number and the quadrangle name.

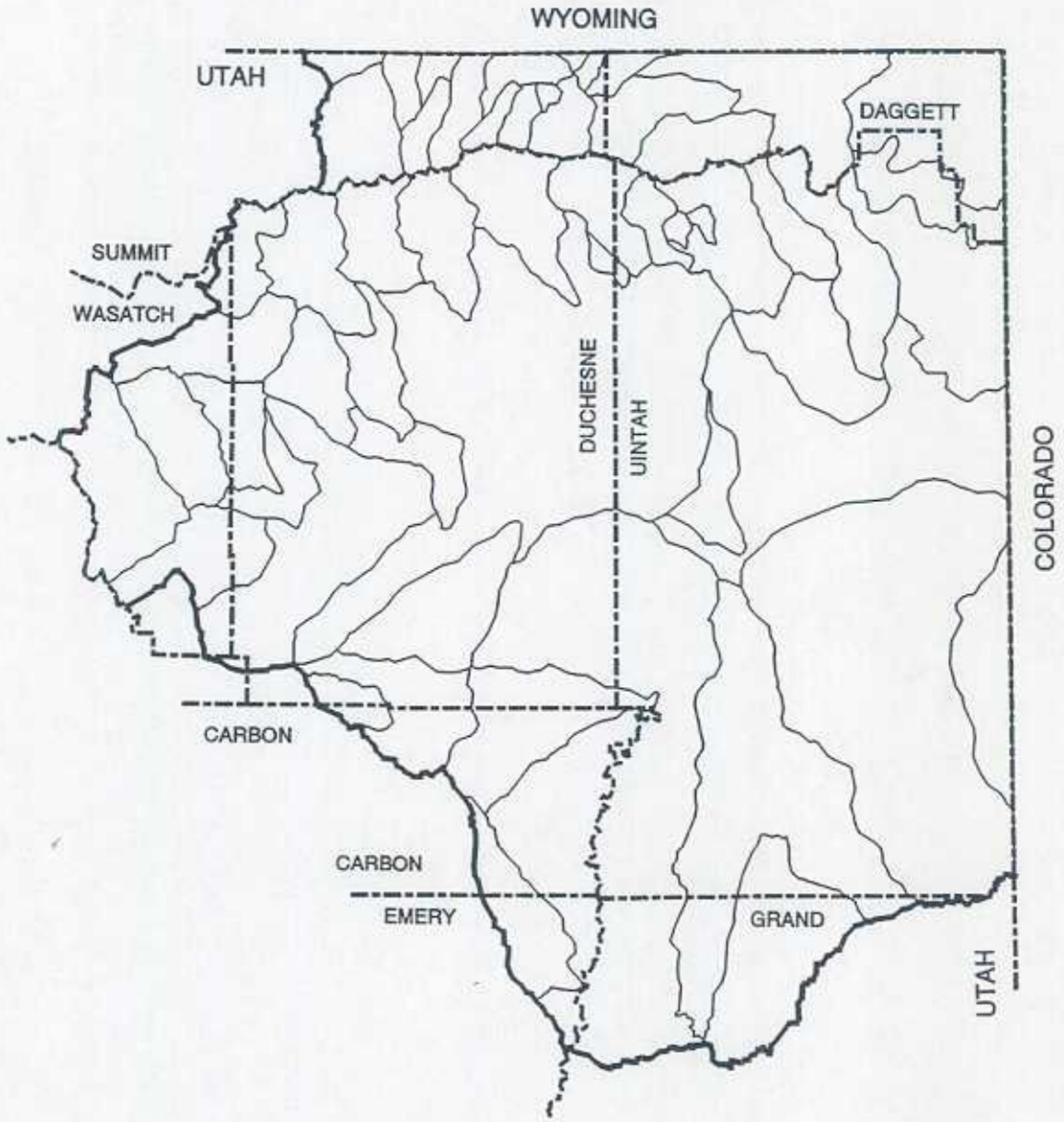

Figure 2. Hydrologic subareas of the Uinta Study Unit.

List of 7-1/2 Minute Quadrangles by Name for Figure 3.

List No.	Quadrangle Name	AGRC Code	DWR Code	List No.	Quadrangle Name	AGRC Code	DWR Code	List No.	Quadrangle Name	AGRC Code	DWR Code	List No.	Quadrangle Name	AGRC Code	DWR Code
1	Elizabeth Mtn.	1129	G-03	55	Dry Fork	1437	H-27	109	Windy Ridge	1735	H-49	163	Big Pack Mtn. SE	2038	M-12
2	Lyman Lake	1130	G-04	56	Steinaker Resr.	1438	H-28	110	Randlett	1736	H-50	164	Buck Camp Canyon	2039	M-13
3	Bridger Lake	1131	G-05	57	Donkey Flat	1439	H-29	111	Pelican Lake	1737	H-51	165	Archy Bench SE	2040	M-14
4	Gilbert Peak NE	1132	G-06	58	Jensen Ridge	1440	H-30	112	Brennan Basin	1738	H-52	166	Rainbow	2041	M-15
5	Hole In the Rock	1133	G-07	59	Island Park	1441	H-31	113	Red Wash NW	1739	H-53	167	Dragon	2042	M-16
6	Hoop Lake	1134	G-08	60	Jones Hole	1442	H-32	114	Red Wash	1740	H-54	168	Pine Canyon	2130	L-20
7	Phil Pico Mtn.	1135	H-01	61	Heber Mountain	1525	F-39	115	Dinosaur NW	1741	H-55	169	Mount Bartles	2131	L-21
8	Jessen Butte	1136	H-02	62	Wolf Creek Summit	1526	F-40	116	Dinosaur	1742	H-56	170	Bruin Point	2132	L-22
9	Manila	1137	H-03	63	Wolf Creek	1527	G-33	117	Strawberry Resr. SW	1825	F-63	171	Twin Hollow	2133	L-23
10	Flaming Gorge	1138	H-04	64	Hanna	1528	G-34	118	Strawberry Resr. SE	1826	F-64	172	Cedar Ridge Canyon	2134	L-24
11	Dutch John	1139	H-05	65	Farm Creek Peak	1529	G-35	119	Strawberry Peak	1827	G-57	173	Firewater Canyon N	2135	M-17
12	Goslin Mountain	1140	H-06	66	Dry Mountain	1530	G-36	120	Avintaquin Canyon	1828	G-58	174	Dog Knoll	2136	M-18
13	Clay Basin	1141	H-07	67	Mountain Home	1531	G-37	121	Sams Canyon	1829	G-59	175	Agency Draw NW	2137	M-19
14	Willow Ck. Butte	1142	H-08	68	Altonah	1532	G-38	122	Buck Knoll	1830	G-60	176	Agency Draw NE	2138	M-20
15	Red Knob	1229	G-11	69	Neola NW	1533	G-39	123	Duchesne SW	1831	G-61	177	Bates Knolls	2139	M-21
16	Mount Lovenia	1230	G-12	70	Neola	1534	G-40	124	Duchesne SE	1832	G-62	178	Cooper Canyon	2140	M-22
17	Mount Powell	1231	G-13	71	Whiterocks	1535	H-33	125	Myton SW	1833	G-63	179	Burnt Timber Canyon	2141	M-23
18	Kings Peak	1232	G-14	72	Lapoint	1536	H-34	126	Myton SE	1834	G-64	180	Davis Canyon	2142	M-24
19	Fox Lake	1233	G-15	73	Vernal NW	1537	H-35	127	Parlette Draw SW	1835	H-57	181	Patmos Head	2232	L-30
20	Chepeta Lake	1234	G-16	74	Vernal NE	1538	H-36	128	Uteland Butte	1836	H-58	182	Summerhouse Ridge	2233	L-31
21	Whiterocks Lake	1235	H-09	75	Naples	1539	H-37	129	Ouray	1837	H-59	183	Steer Ridge Canyon	2234	L-32
22	Leidy Peak	1236	H-10	76	Dinosaur Quarry	1540	H-38	130	Ouray SE	1838	H-60	184	Firewater Canyon S	2235	M-31
23	Elk Park	1237	H-11	77	Split Mountain	1541	H-39	131	Red Wash SW	1839	H-61	185	Wolf Flat	2236	M-32
24	East Park Resr.	1238	H-12	78	Stuntz Resr.	1542	H-40	132	Red Wash SE	1840	H-62	186	Flat Rock Mesa	2237	L-38
25	Mount Lena	1239	H-13	79	Twin Peaks	1624	F-47	133	Bonanza	1841	H-63	187	Wolf Point	2238	L-39
26	Jackson Draw	1240	H-14	80	Co-Op Creek	1625	F-47	134	Walsh Knolls	1842	H-64	188	Pine Spring Canyon	2239	L-40
27	Warren Draw	1241	H-15	81	Jimmies Point	1626	F-48	135	Tucker	1925	K-07	189	Seep Canyon	2240	M-25
28	Swallow Canyon	1242	H-16	82	Raspberry Knoll	1627	G-41	136	Soldier Summit	1926	K-08	190	Tom Patterson Canyon	2241	M-26
29	Mirror Lake	1327	G-17	83	Tabby Mountain	1628	G-42	137	Flat Ridge	1927	L-01	191	Rat Hole Ridge	2242	M-27
30	Hayden Peak	1328	G-18	84	Tablona	1629	G-43	138	Gray Head Peak	1928	L-02	192	Lila Point	2332	M-28
31	Explorer Peak	1329	G-19	85	Blacktail Mtn.	1630	G-44	139	Jones Hollow	1929	L-03	193	Lighthouse Canyon	2333	M-29
32	Oweep Creek	1330	G-20	86	Talmage	1631	G-45	140	Lance Canyon	1930	L-04	194	Chandler Falls	2334	M-30
33	Garfield Basin	1331	G-21	87	Altamont	1632	G-46	141	Anthro Mountain	1931	L-05	195	Moonwater Point	2335	M-33
34	Mount Emmons	1332	G-22	88	Bluebell	1633	G-47	142	Anthro Mtn. NE	1932	L-06	196	Chicken Fork	2336	M-34
35	Bollie Lake	1333	G-23	89	Hancock Cove	1634	G-48	143	Gilsonite Draw	1933	L-07	197	Black Knolls	2337	M-35
36	Rasmussen Lakes	1334	G-24	90	Roosevelt	1635	H-41	144	Wilkin Ridge	1934	L-08	198	Tenmile Canyon N	2338	M-36
37	Paradise Park	1335	H-17	91	Fort Duchesne	1636	H-42	145	Crow Knoll	1935	M-01	199	Cedar Camp Canyon	2339	M-37
38	Marsh Peak	1336	H-18	92	Vernal SW	1637	H-43	146	Moon Bottom	1936	M-02	200	P R Spring	2340	M-38
39	Taylor Mountain	1337	H-19	93	Vernal SE	1638	H-44	147	Big Pack Mtn. NW	1937	M-03	201	San Arroyo Ridge	2341	M-39
40	Dyer Mountain	1338	H-20	94	Rasmussen Hollow	1639	H-45	148	Big Pack Mtn. NE	1938	M-04	202	Jim Canyon	2342	M-40
41	Burnt Cabin Grg.	1339	H-21	95	Jensen	1640	H-46	149	Archy Bench	1939	M-05	203	Turtle Canyon	2433	L-47
42	Blair Basin	1340	H-22	96	Cliff Ridge	1641	H-47	150	Asphalt Wash	1940	M-06	204	Three Fords Canyon	2434	L-48
43	Crouse Resr.	1341	H-23	97	Snake John Reef	1642	H-48	151	Southam Canyon	1941	M-07	205	Lion Canyon	2435	M-41
44	Hoy Mountain	1342	H-24	98	Two Tom Hill	1724	F-54	152	Weaver Ridge	1942	M-08	206	Walker Point	2436	M-42
45	Iron Mine Mtn.	1427	G-25	99	Strawberry Resr. NW	1725	F-55	153	Matts Summit	2028	L-10	207	Supply Canyon	2437	M-43
46	Grandaddy Lake	1428	G-26	100	Strawberry Resr. NE	1726	F-56	154	Minnie Maud Ck. W	2029	L-11	208	Tenmile Canyon S	2438	M-44
47	Tworoose Pass	1429	G-27	101	Deep Creek Canyon	1727	G-49	155	Minnie Maud Ck. E	2030	L-12	209	Preacher Canyon	2439	M-45
48	Kidney Lake	1430	G-28	102	Fruitland	1728	G-50	156	Wood Canyon	2031	L-13	210	Jenny Canyon	2533	L-55
49	Lake Fork Mtn.	1431	G-29	103	Strawberry Pinnacles	1729	G-51	157	Currant Canyon	2032	L-14	211	Butler	2534	L-56
50	Burnt Mill Spr.	1432	G-30	104	Rabbit Gulch	1730	G-52	158	Cowboy Bench	2033	L-15	212	Bobby Canyon N	2535	M-49
51	Heller Lake	1433	G-31	105	Duchesne	1731	G-53	159	Pinnacle Canyon	2034	L-16	213	Floy Canyon N	2536	M-50
52	Pole Creek Cave	1434	G-32	106	Duchesne NE	1732	G-54	160	Duches Hole	2035	M-09	214	Bogart Canyon	2537	M-51
53	Ice Cave Peak	1435	H-25	107	Bridgeland	1733	G-55	161	Nutters Hole	2036	M-10	215	Tepee Canyon	2538	M-52
54	Lake Mountain	1436	H-26	108	Myton	1734	G-56	162	Big Pack Mtn.	2037	M-11				

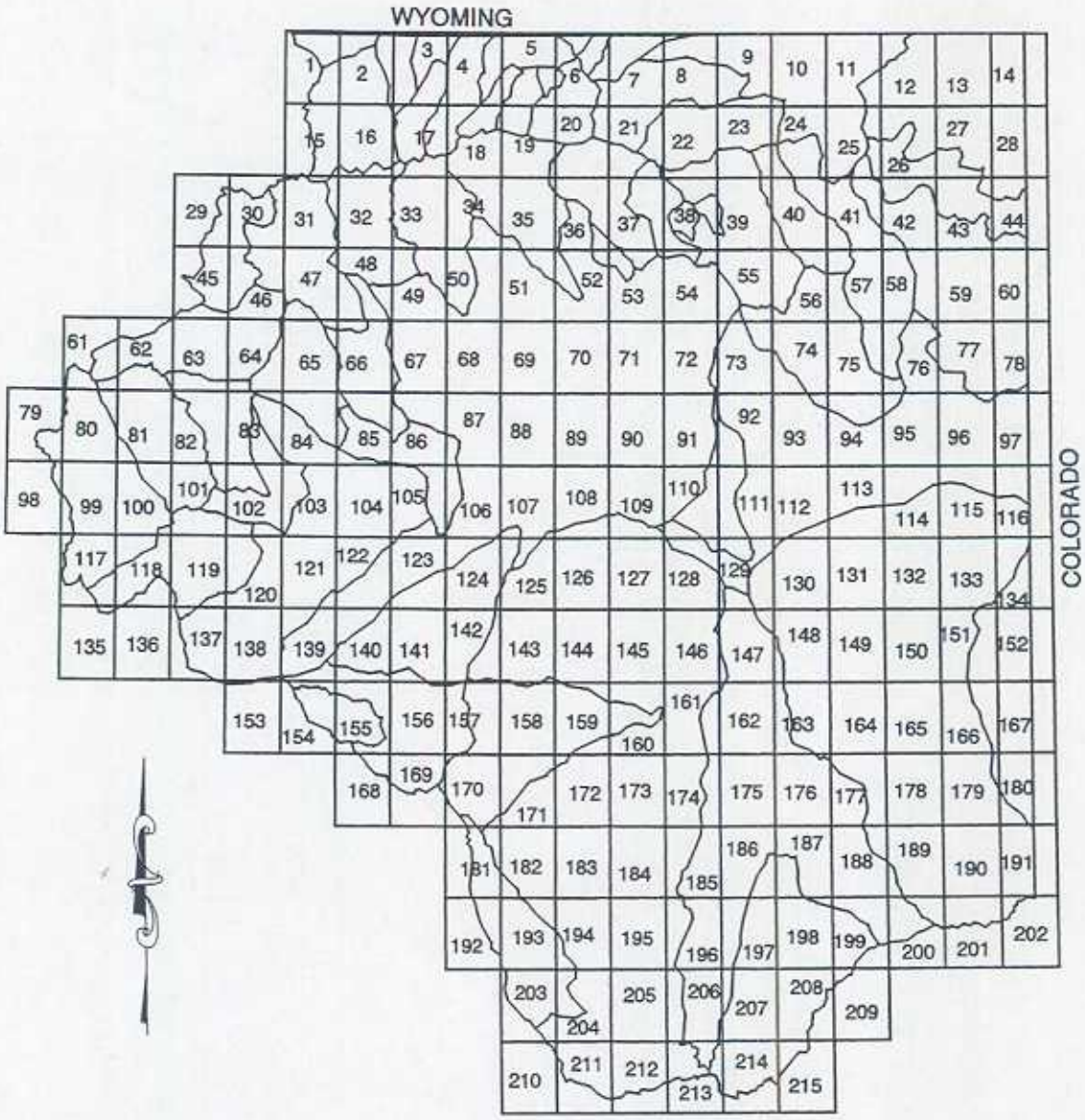

Figure 3. Uinta Study Unit with hydrologic study area boundaries overlaid by a template showing 7-1/2 minute USGS quadrangle maps.

OPERATIONS USED IN LAND USE DATA ACQUISITION

Aerial Photography

Aerial photography of the study area was conducted from June to August 1992. Wojcik Technical Services, Salt Lake City, Utah, photographed the study area using a Cessna 172 aircraft specially modified for aerial photography. A special navigation system consisting of an ARNAV R-21 Loran C coupled to an on board computer running Wojcik proprietary programs kept the plane on line, logged the time, latitude and longitude of each photo, and electronically triggered the camera. An Olympus OM-4T auto exposure, auto winding 35mm camera fitted with a 24mm f/2.8 lens and a 250 exposure film magazine was situated in the photo well. All slides were taken on 35mm Ektachrome film and processed by Kodak labs. Slides were identified according to flight line number, cross-referenced on a special location map, and delivered to the division at different times between June and August 1992. The actual flight date was written on each slide frame by the division. Approximately 1500 slides were delivered to the division covering the water-related land use in the study unit. These slides may be viewed at, or copies purchased from, the offices of the Division of Water Resources, Planning Section, 1636 West North Temple, Salt Lake City, Utah.

Field Mapping and Checking

Transferring information from 35mm slides to the field maps was accomplished between June and August, 1992. Slide cataloging, filing and mapping were done concurrently. Field checking and mapping was completed between July 10, and September 1, 1992. This process involved six people from the Division of Water Resources and two from the U.S. Geological Survey.

Digitizing and Processing

The data resulting from digitizing the field maps was processed at the division offices during 1992-94. The Uinta Study Unit data are maintained at both the AGRC and the Division of Water Resources. Maps and data can be obtained from the AGRC at the Office of Planning and Budget, State Office Building, Salt Lake City, Utah.

A draft map of the cropland cover types was printed for each 7-1/2 min. quad. map for the purpose of checking the data. Each map was laid over the corresponding field map on a light table, and the cropland types and boundaries were double-checked for accuracy. Any corrections or additions were marked in red on the draft map for future updating. The corrected maps were updated and stored on the AGRC system.

UINTA STUDY UNIT LAND USE DATA

The list of cover types and codes used in the 1992 Water Related Land Use Inventory for the Uinta Study Unit is shown in Table 1. This list was standardized in 1988 and is further discussed in the land use categories of this report (page 90). Figure 4 shows the general location of the water-related land use areas mapped in the Uinta Study Unit. Figures 5-50 show the water-related land use for each hydrologic subarea. The explanation opposite each of these figures shows the land cover categories and the number of acres of land in each category.

Division policy is to publish its land use data in these types of reports. Detailed maps will not be included. With the establishment of the AGRC for the state of Utah, the division policy is to supply the land use data to them for further distribution. Detailed maps can be obtained from the AGRC.

Table 1. List of cover types and codes used in the 1992 Water-Related Land Use Inventory for the Uinta Study Unit.

Code	Cover Type	Comments/Explanations
I	Cropland	(Rotation Crops)
IA	Irrigated Cropland	
IA1	Horticulture & Specialty Crops	
IA1a	Fruit	(Orchards)
IA1a1	Cherry	
IA1a2	Apple	
IA1a3	Peach	
IA1a4	Pear	
IA1a5	Apricot	
IA1a6	Other	
IA1b	Nuts	(Groves)
IA1b1	Walnut	
IA1b2	Pecan	
IA1b3	Other	
IA1c	Vineyard	(Grapes)
IA1d	Bush Fruit	
IA1e	Berries	
IA1f	Other Horticulture	(Nurseries)
IA1g	Other Specialty Crops	
IA2	Row and Close Grown Crops	
IA2a	Grain	
IA2a1	Corn	
IA2a2	Sorghum	
IA2a3	Wheat	
IA2a4	Barley	
IA2a5	Oats	
IA2a6	Other Grains	
IA2b	Vegetables	
IA2b1	Potatoes	
IA2b2	Onions	
IA2b3	Beans	
IA2b4	Tomatoes	
IA2b5	Sweet Corn	
IA2b6	Other	(Melons, Squash, Etc.)

Table 1. Continued.

Code	Cover Type	Comments/Explanations
IA3	Forage Crops	
IA3a	Alfalfa	
IA3b	Grass Hay	
IA3c	Grass/Turf	
IA3d	Pasture	(Turf Farms)
IA3e	Other	
IA4	Other	
IA4a	Fallow	(Plowed or disked.)
IA4b	Idle	(Overgrown more than one season.)
IB	Non-Irrigated Cropland	(Rotation Crops)
IB1	Row and Close-Grown Crops	
IB1a	Grain, Beans, Seeds	
IB1a1	Wheat	
IB1a2	Other Grains	(Barley, Etc.)
IB1a3	Dry Beans	
IB1a4	Safflower	
IB1a5	Other	
IB2	Hayland Crops	
IB2a	Alfalfa	
IB2b	Pasture	
IB2c	Other	
IB3	Other	
IB3a	Fallow	(Plowed, Stubble, Mulch)
IB3b	Idle	(Overgrown more than one season.)
II	Grassy/Phreato./Open Water Areas	
IIA	Grassy Aspect	
IIA2a	Irrigated	
IIA2a1	Pasture	(Subject to spring flooding.)
IIA2a2	Hayland	(Subject to spring flooding.)
IIA2b	Non-Irrigated	
IIA2b1	Pasture	(Receives subsurface water.)
IIA2b2	Hayland	(Receives subsurface water.)
IIA2c	Non-Agricultural Use	(Receives subsurface water.)
IIB	Cattail/Bulrush Aspect	

Table 1. Continued.

Code	Cover Type	Comments/Recommendations
IIC	Wet Flats	(Mud flats w/little or no vgttn.)
IID	Shrub Aspect	(Salt Brush, Sagebrush)
IIE	Riparian	
IIE1	Forested Aspect	(Cottonwoods, Birch)
IIE2	Shrub Aspect	(Willows)
IIF	Open Water	
IIF1	Streams	
IIF2	Reservoirs	(Includes livestock ponds)
IIF3	Ponds & Lakes	(Includes some high mnt. res.)
IIF4	Other	
IIF4a	Temporary Flooded	(Not normally flooded)
IIF4b	Sewage Lagoon	(Lagoon/Pond from sewage system)
IIF4c	Evaporation Pond	(Tailing, Salt/Mineral Ponds)
IIF5	Salt Water	(Great Salt Lake, etc.)
III	Range Land and Forest Land	
IIIA	Alpine Plant Communities	
IIIB	Conifer	
IIIB1	Douglas Fir - White Fir	
IIIB2	Ponderosa Pine	
IIIB3	Fir - Spruce	
IIIB4	Lodgepole Pine	
IIIB5	Pinion Pine - Juniper	
IIIB6	Other	
IIIC	Deciduous	
IIIC1	Aspen	
IIIC2	Mountain Brush	(Oak Brush, Maples, Chaparral)
IIIC3	Other	
IIID	Grass Aspect	
IIID1	Dry Pastures - Improved	(Chained and reseeded)
IIID2	Native Grasses	
IIID3	Other	(Forbs)
IIIE	Shrub Aspect	
IIIE1	Northern Desert Shrub	
IIIE1a	Sagebrush	(Shadscale, Greasewood, Halogeton)

Table 1. Continued.

Code	Cover Type	Comments/Explanations
IIIE1b	Other	
IIIE2	Southern Desert Shrubs	
IIIE2a	Creosote Bush	
IIIE2b	Other	(Forbs, Annual Grasses)
IIIE3	Salt Desert Shrubs	
IIIE3a	Shascale	
IIIE3b	Greasewood	
IIIE3c	Saltbrush	
IIIE3d	Desert Molley	
IIIE3e	Other	(Halogeton)
IV	Barren Lands	
IVA	Bare Soil/Sand	
IVA1	Dry Salt Flats	
IVA2	Beaches	
IVA3	Sandy Areas Other Than Beaches	(Desert Sand Dunes)
IVA4	Other	
IVB	Rock Outcrops	
IVC	Excavated Lands	(Strip Mines, Quarries, Gravel Pits)
IVD	Other	
V	Built-Up Land	
VA	Farmsteads	
VA1	Buildings/Homes	
VA2	Open Spaces	(Feed Lots, Etc.)
VB	Residential	
VB1	Buildings/Homes	(High Density)
VB2	Buildings/Homes	(Low Density)
VB3	Open Spaces	(Parks, Golf Courses)
VB4	Idle Spaces	(Not Irrigated)
VC	Commercial/Industrial	
VC1	Commercial	
VC2	Industrial	
VC3	Open Spaces	
VD	Transportation, Communications, Utilities	
VE	Other	

Land Cover Area Summary for Figure 4.
Uinta Study Unit.

State Code	Cover Type	Acres
IA1a	Fruit	33.79
IA2a	Grain	10,000.21
IA2a1	Corn	5471.06
IA2a2	Sorgum	103.63
IA2b1	Potatoes	8.89
IA2c	Other Row Crops	11.69
IA3a	Alfalfa	62,005.60
IA3b	Grass Hay	31,267.00
IA3c	Grass/Turf	5.32
IA3d	Pasture	77,947.93
IA4a	Fallow	2,376.31
IA4b	Idle	8,663.43
IB1a	Grain/Beans/Seeds (dry)	2,294.60[1]
IB1a3	Beans (dry)	45.37[1]
IB1a4	Safflower (dry)	583.37[1]
IB2b	Pasture (dry)	1,748.79[1]
IB3b	Idle (dry)	609.14[1]
IIA1a	Pasture (surf. & sub irr.)	11,221.87
IIA1b	Hayland (surf. & sub irr.)	226.65
IIA2a	Pasture (sub-irr.)	2,831.44
IIA2b	Hayland (sub-irr.)	35.90
IIB	Cattail/Bullrush Asp.	1,760.30
IIB-E	Wet/Vegetation Asp.	70.62
IIC	Wet Flats	860.38
IIE	Riparian	30,803.18
IIF	Open Water	87.75
IIF1	Streams	12,564.33
IIF2	Reservoirs	36,568.73
IIF3	Ponds & Lakes	11,134.46
IIF4a	Temporary Flooded	56.09
IIF4b	Sewage Lagoon	536.48
IIF4c	Evaporation Pond	3.57
IVC	Excavated Lands	571.35
VA1	Bldgs/Homes (rural)	3,746.91
VA2	Open Spaces (rural)	1,002.47
VB1	Bldgs/Homes (hi den)	2,782.18
VB2	Bldgs/Homes (lo den)	6,796.83
VB3	Open Spaces	881.61
VB4	Idle Spaces	366.25
VC1	Commercial	731.59
VC2	Industrial	1,604.61
VC3	M&I Open Spaces	257.06
VD	Transportation	380.09
Total Water-Related Land Use		330,475.46
R	All Other Land	6,639,289.24
Total Land In Uinta Study Unit		6,969,764.70

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

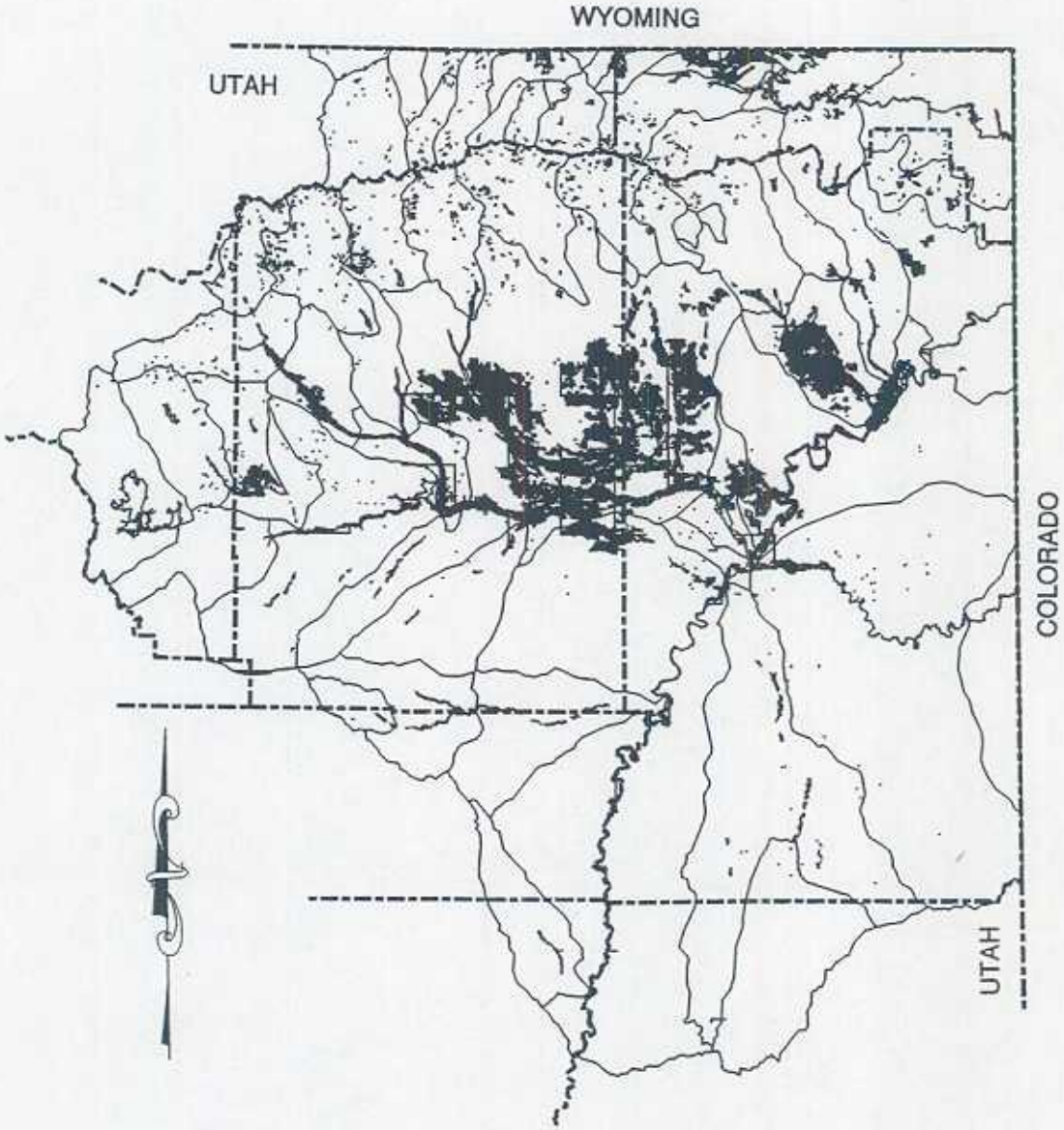

Figure 4. Water-related land use mapped areas for the Uinta Study Unit.

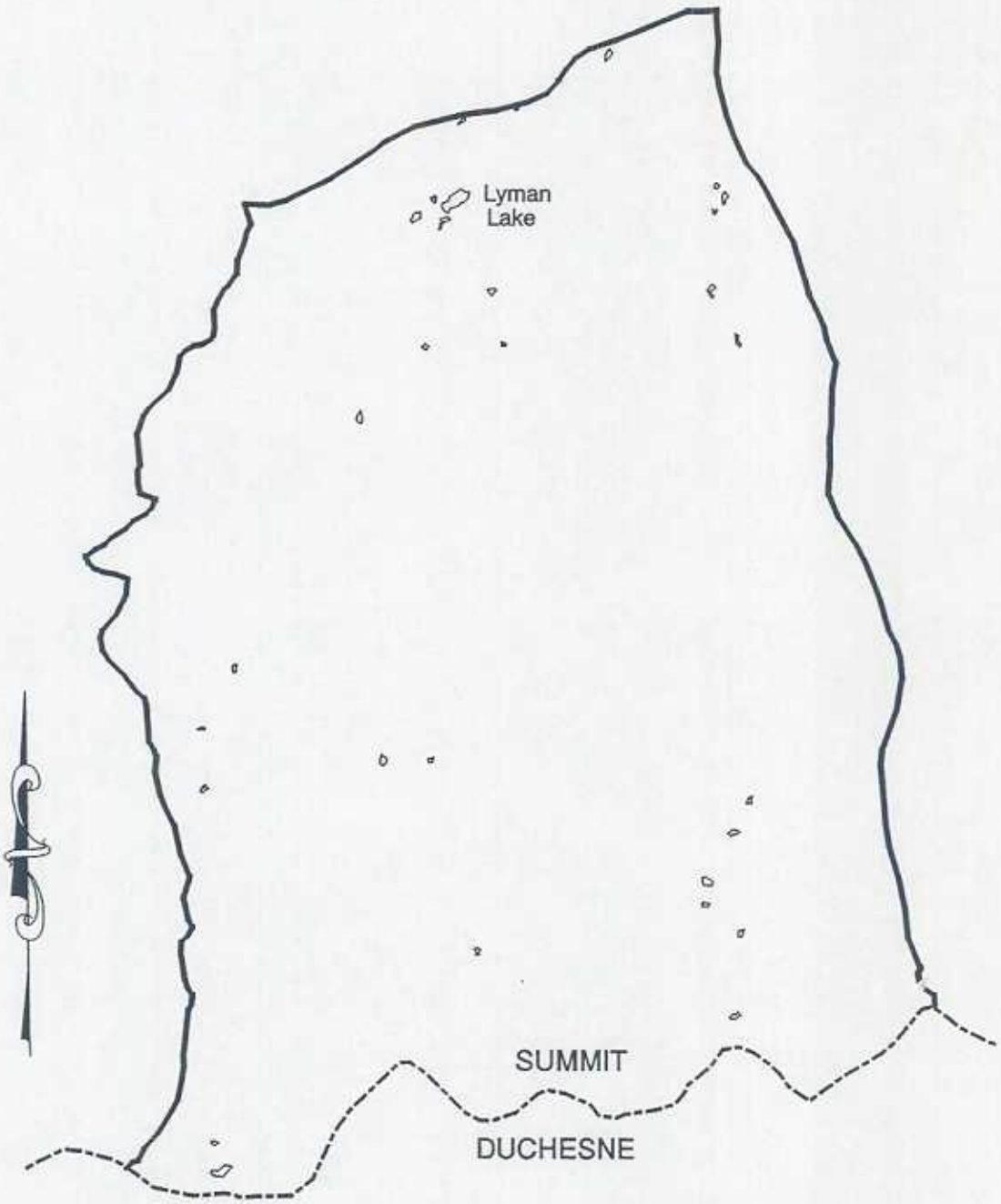

Figure 5. Water-related land use coverage of the Upper Blacks Fork 07-01-001 subarea.

Land Cover Area Summary for Figure 6.
Blacks Fork 07-01-002 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	51.32
Total Water-Related Land Use		51.32
R	All Other Land	16,087.82
Total Land In Subarea		16,139.14

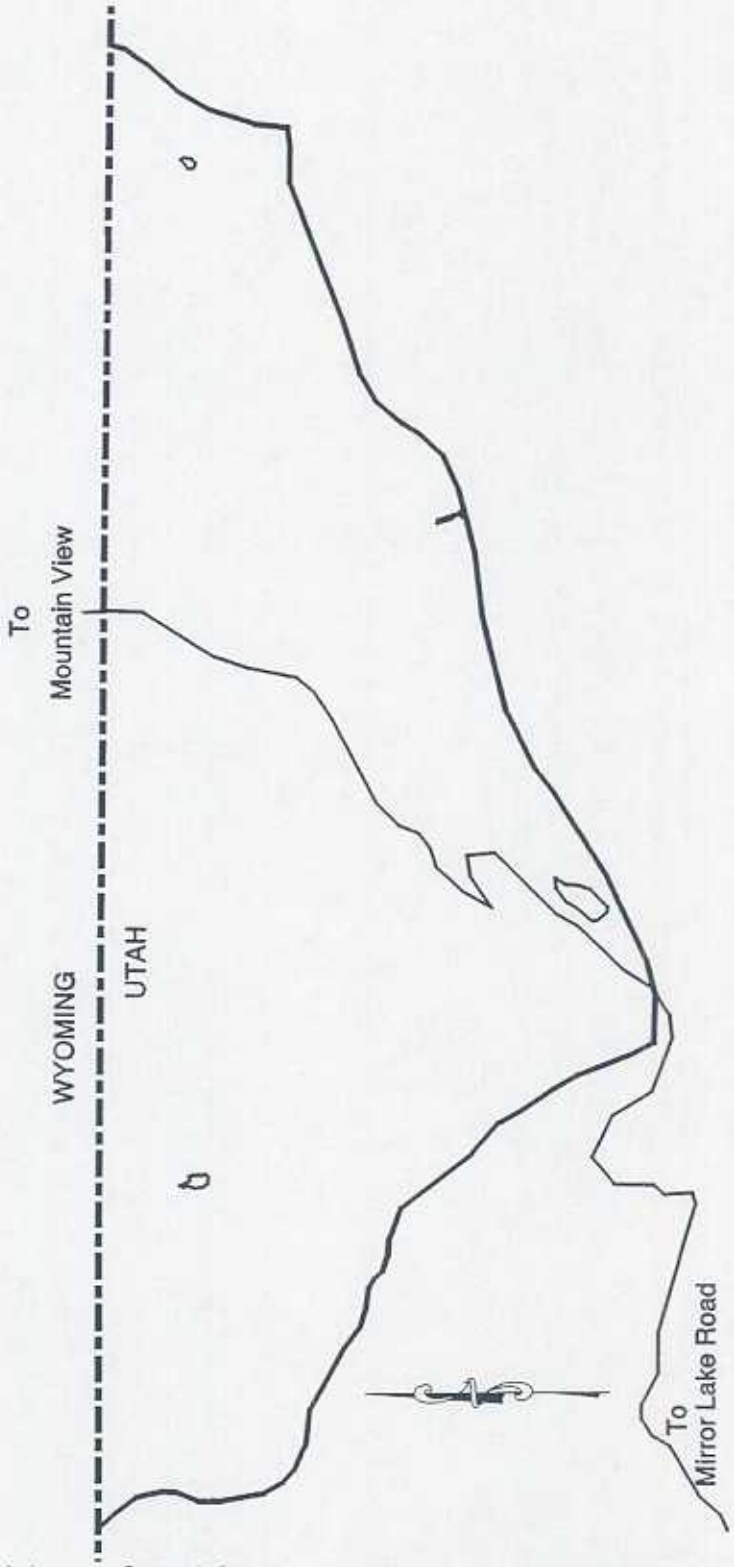

Figure 6. Water-related land use coverage of the Blacks Fork 07-01-002 subarea.

Land Cover Area Summary for Figure 7.
West Fork of Smiths Fork 07-01-003 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	8.85
Total Water-Related Land Use		8.85
R	All Other Land	21,131.07
Total Land In Subarea		21,139.92

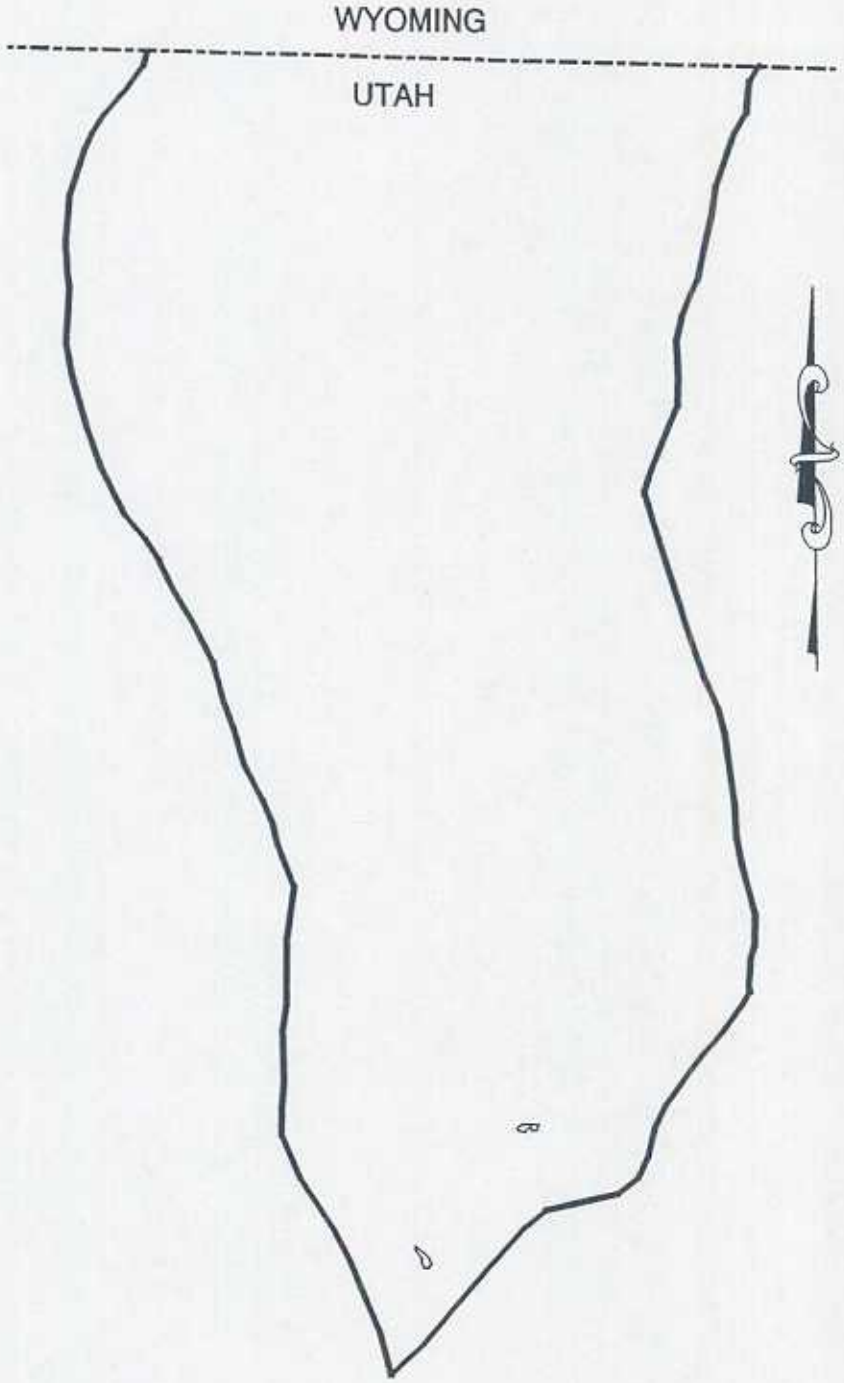

Figure 7. Water-related land use coverage of the West Fork of Smiths Fork 07-01-003 subarea.

Land Cover Area Summary for Figure 9.
Marsh & Bridger Lakes 07-01-005 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	88.22
Total Water-Related Land Use		88.22
R	All Other Land	12,256.82
Total Land In Subarea		12,345.04

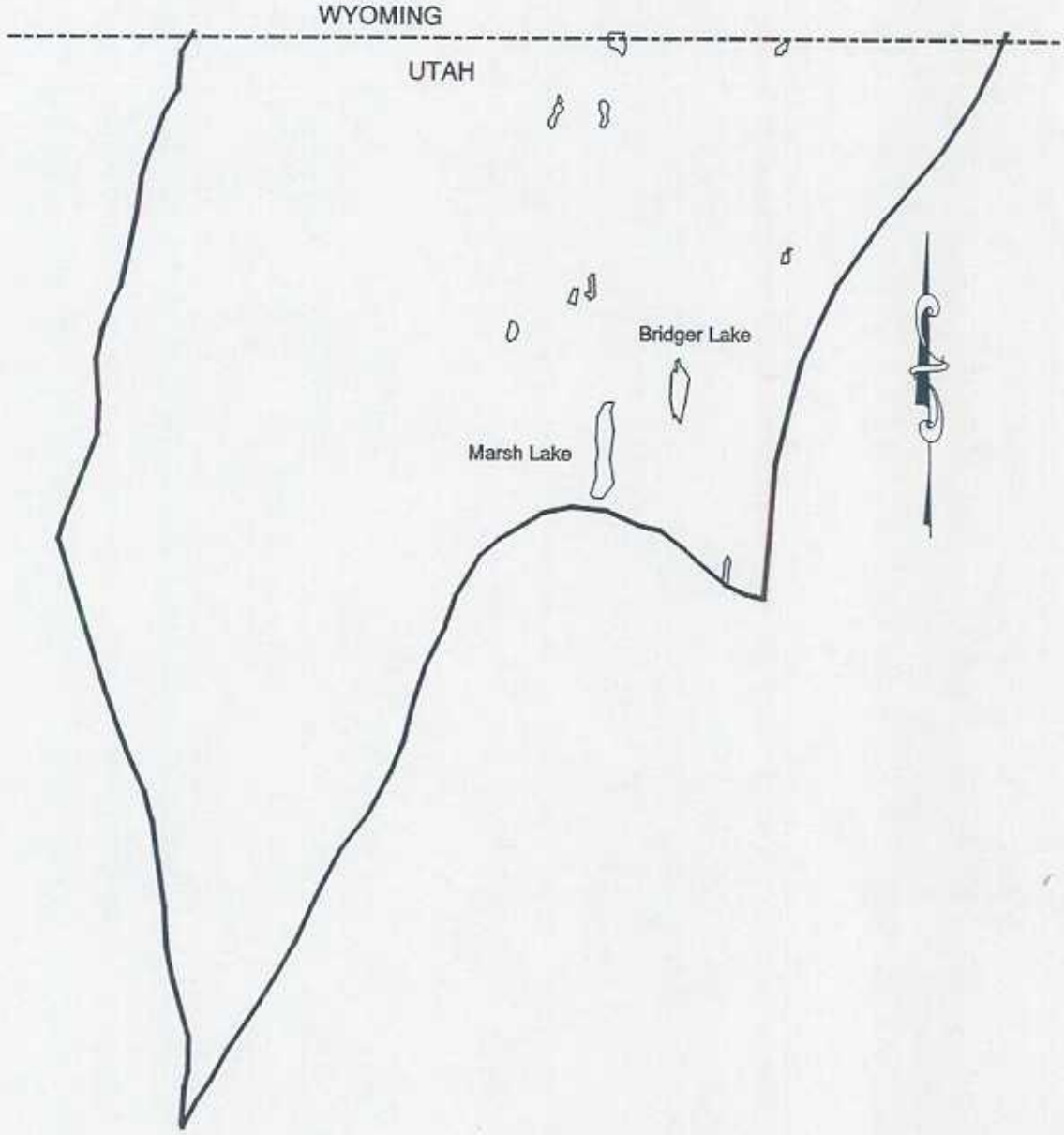

Figure 9. Water-related land use coverage of the Marsh & Bridger Lakes 07-01-005 subarea.

Land Cover Area Summary for Figure 10.
Henry's Fork Green River 07-01-006 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	227.05
Total Water-Related Land Use		227.05
R	All Other Land	37,765.98
Total Land In Subarea		37,993.03

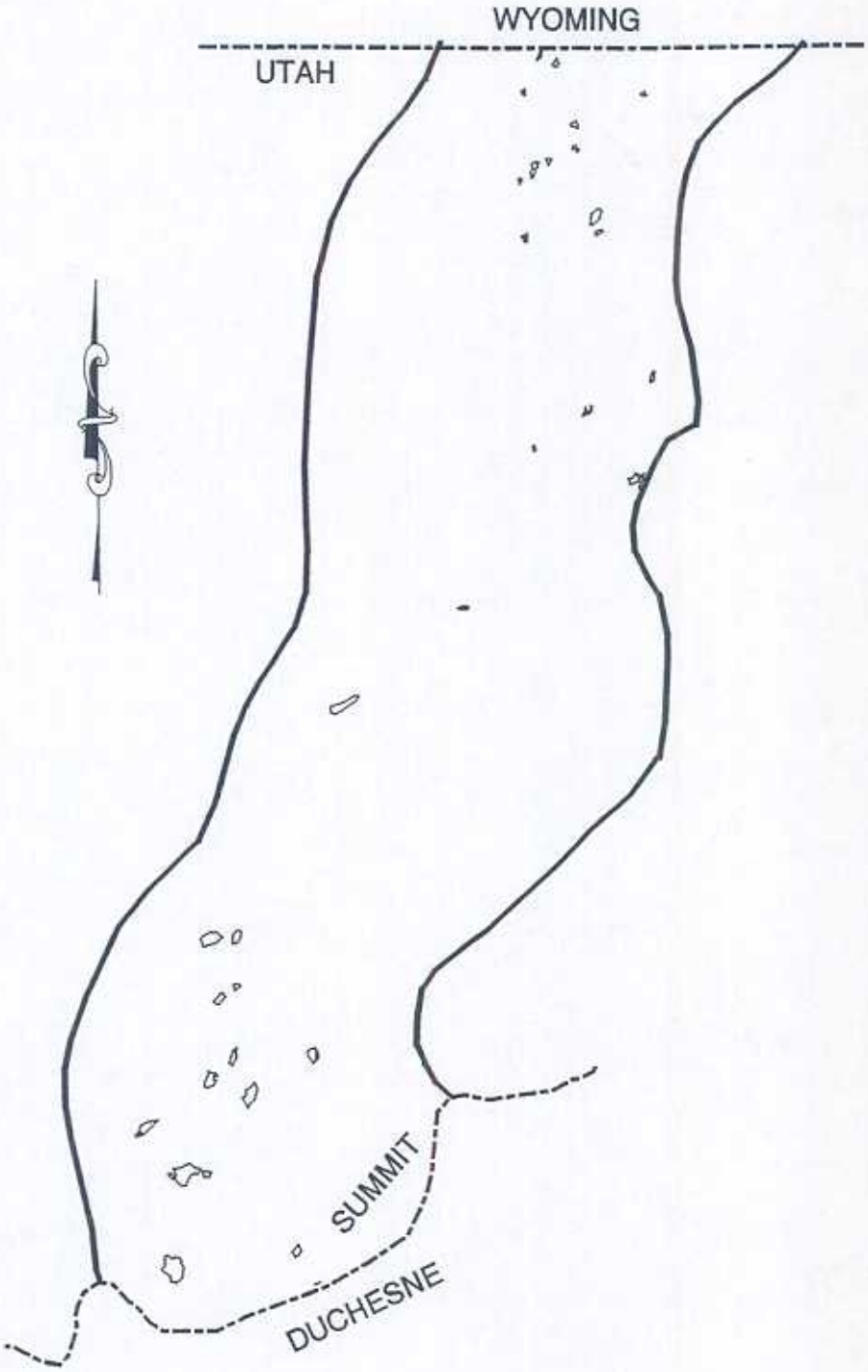

Figure 10. Water-related land use coverage of the Henry's Fork Green River 07-01-006 subarea.

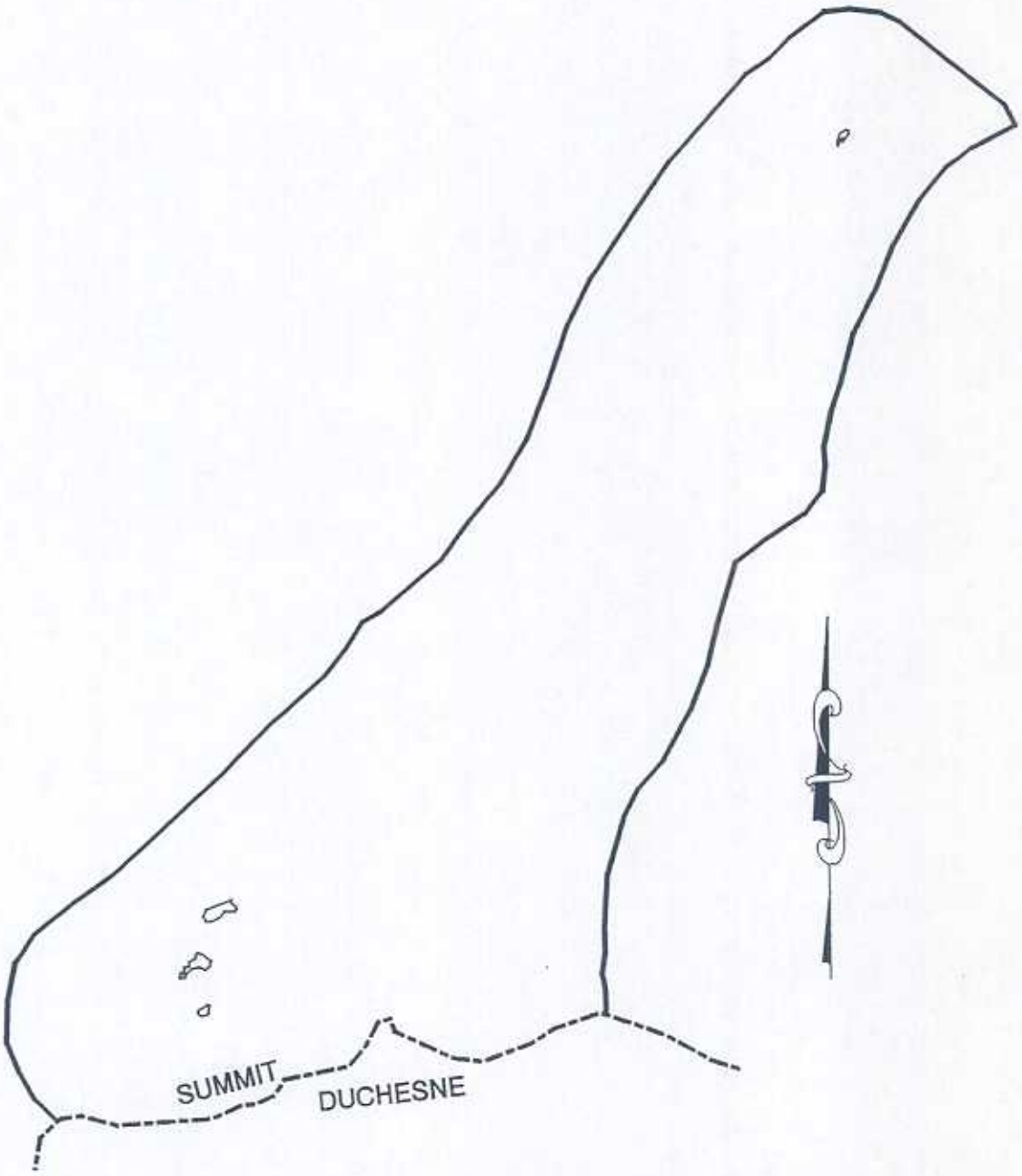

Figure 11. Water-related land use coverage of the West Fork of Beaver Creek 07-01-007 subarea.

Land Cover Area Summary for Figure 12.
Middle Fork of Beaver Creek 07-01-008 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	118.98
Total Water-Related Land Use		118.98
R	All Other Land	17,605.96
Total Land In Subarea		17,724.94

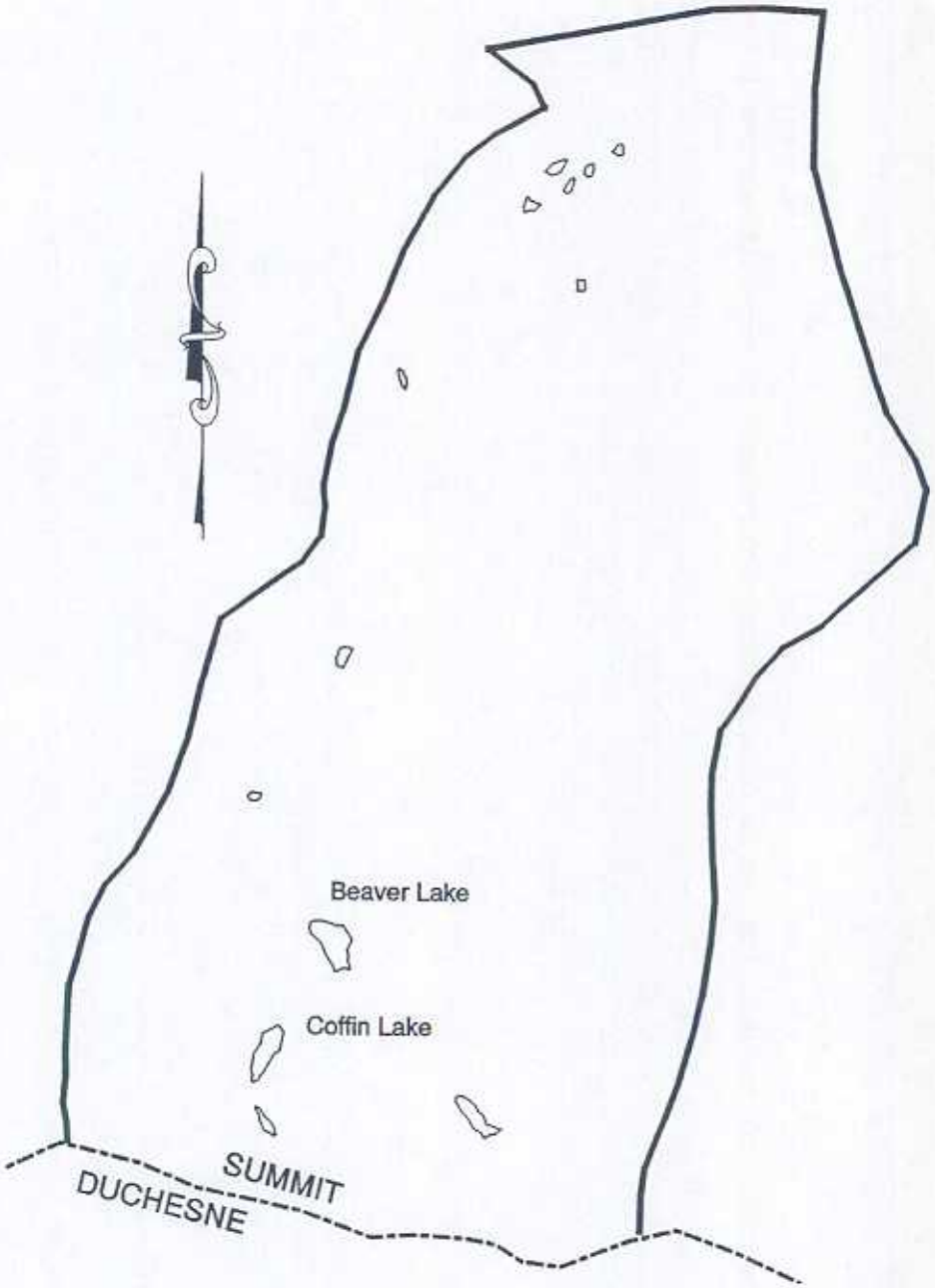

Figure 12. Water-related land use coverage of the Middle Fork of Beaver Creek 07-01-008 subarea.

Land Cover Area Summary for Figure 13.
Hoop Lake 07-01-009 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	179.28
Total Water-Related Land Use		179.28
R	All Other Land	4,751.61
Total Land In Subarea		4,930.89

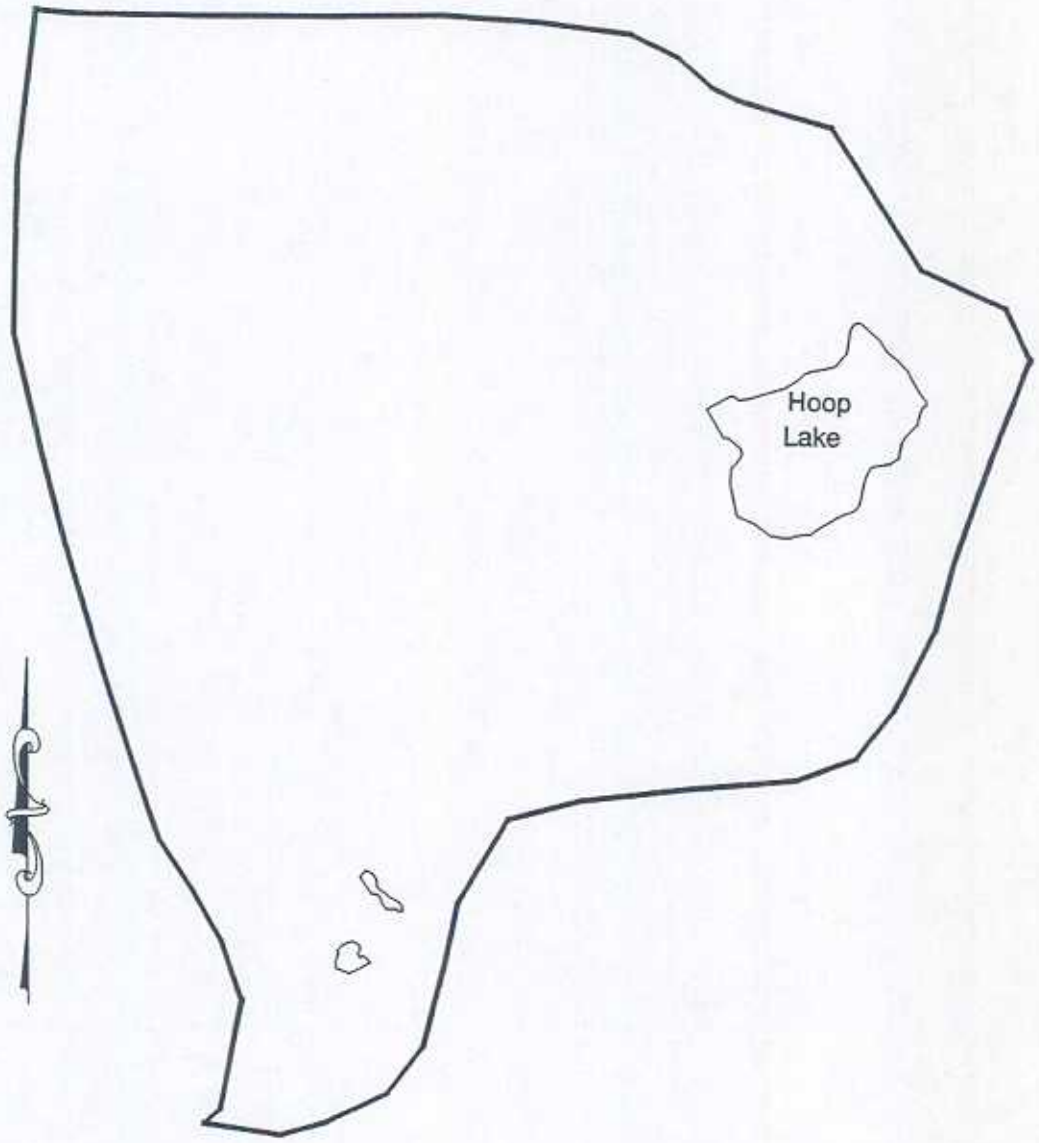

Figure 13. Water-related land use coverage of the Hoop Lake 07-01-009 subarea.

Land Cover Area Summary for Figure 14.
Lone Tree 07-01-010 subarea.

State Code	Cover Type	Acres
IA3d	Pasture	739.13
IIA1a	Pasture (surf. & sub irr.)	1,338.59
IIA2a	Pasture (sub-irr.)	62.26
IIE	Riparian	483.40
IIF3	Ponds & Lakes	65.77
VA1	Farmsteads	12.08
Total Water-Related Land Use		2,701.23
R	All Other Land	26,174.23
Total Land In Subarea		28,875.46

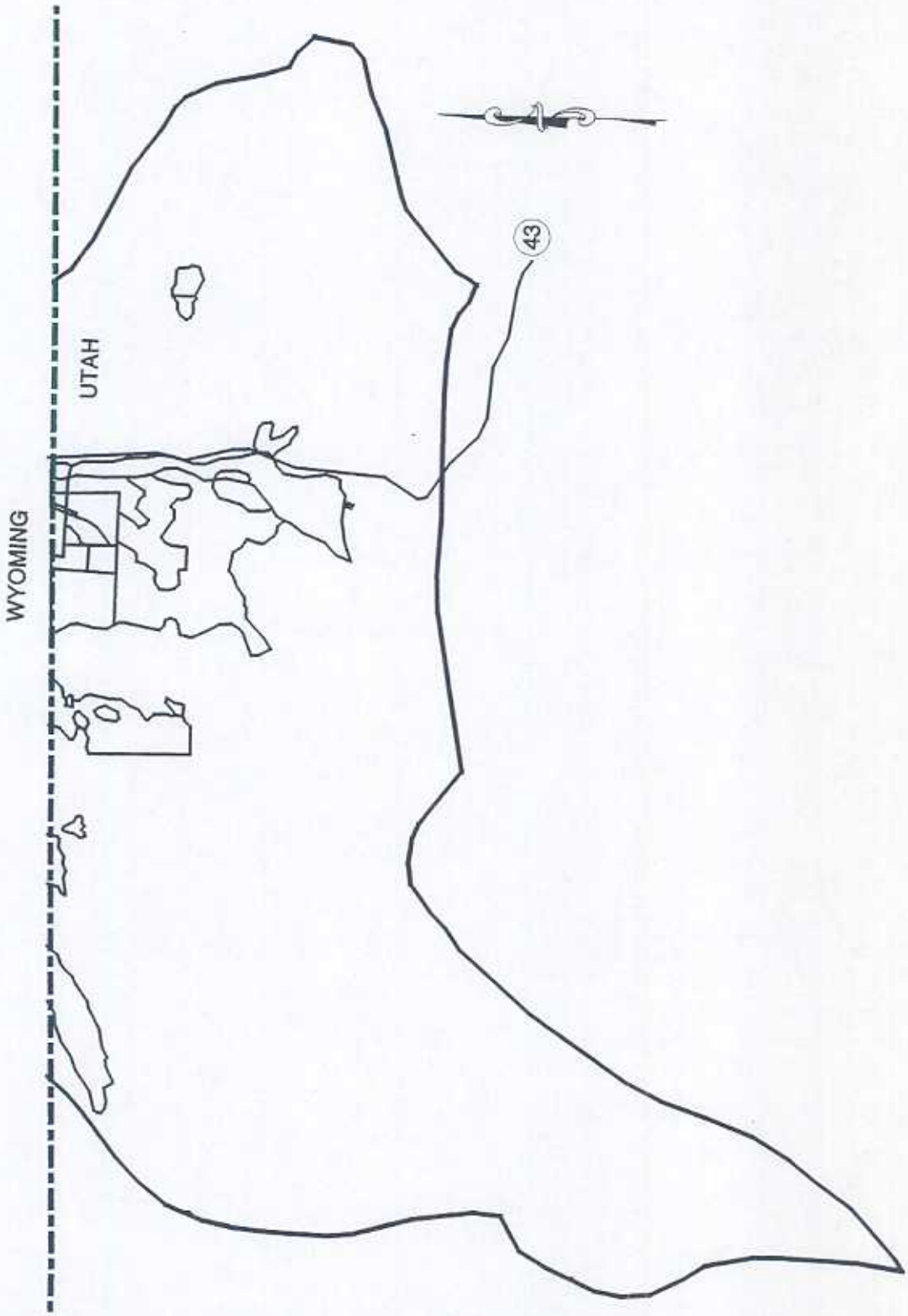

Figure 14. Water-related land use coverage of the Lonetree 07-01-010 subarea.

Land Cover Area Summary for Figure 15.
Fish Lake 07-01-011 subarea.

State Code	Cover Type	Acres
IIF2	Reservoirs	105.56
IIF3	Ponds & Lakes	259.58
Total Water-Related Land Use		365.14
R	All Other Land	36,293.92
Total Land In Subarea		36,659.06

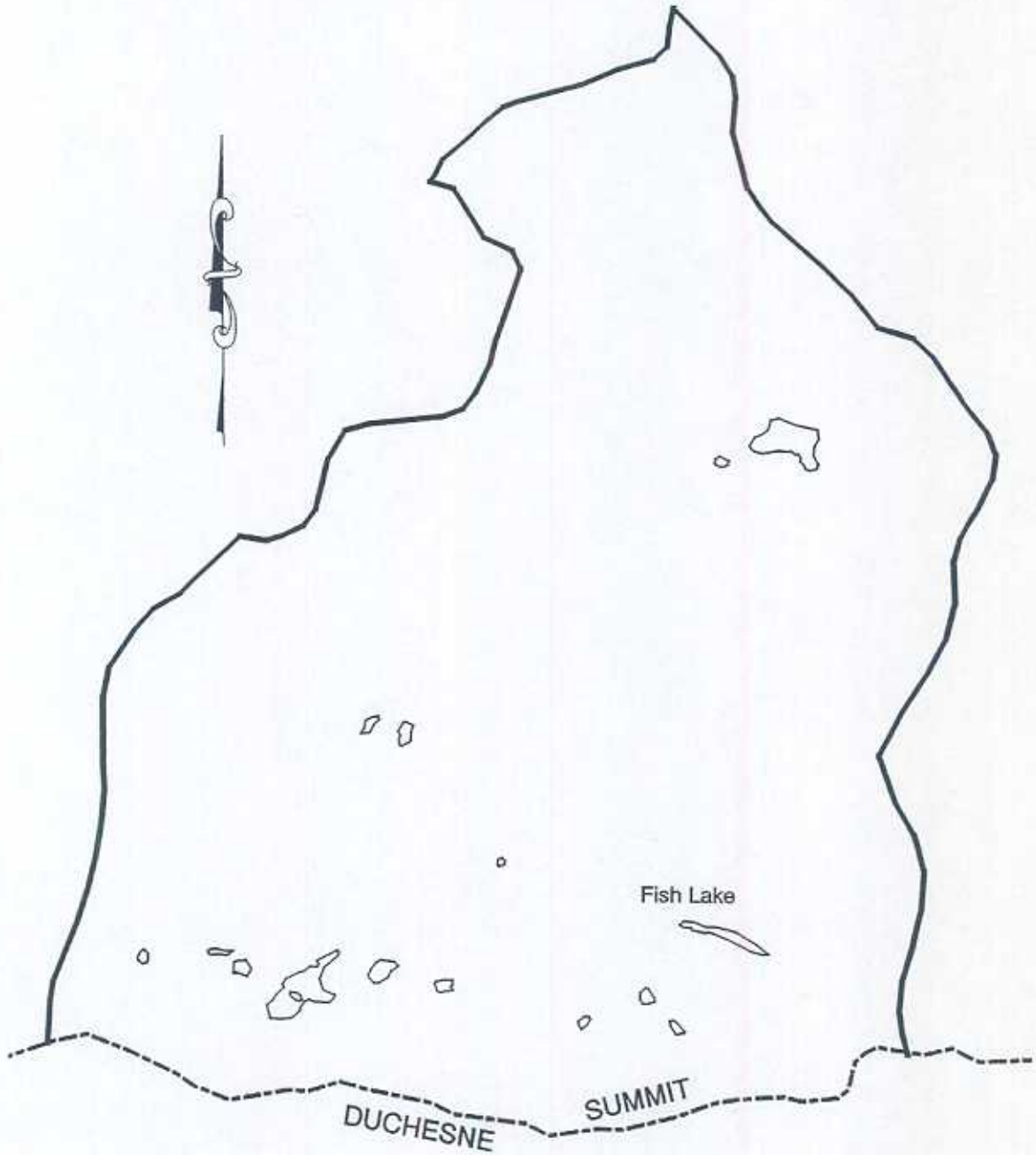

Figure 15. Water-related land use coverage of the Fish Lake 07-01-011 subarea.

Land Cover Area Summary for Figure 16.
Burnt Fork 07-01-012 subarea.

Code	Land Cover	Dagget Co. Acres	Summit Co. Acres	Total Acres
IA3b	Grass Hay	26.85	7.42	34.27
Total Water-Related Land Use		26.85	7.42	34.27
R	All Other Land	2.56	6,553.16	6,555.72
Total Land In Subarea		29.41	6,560.58	6,589.99

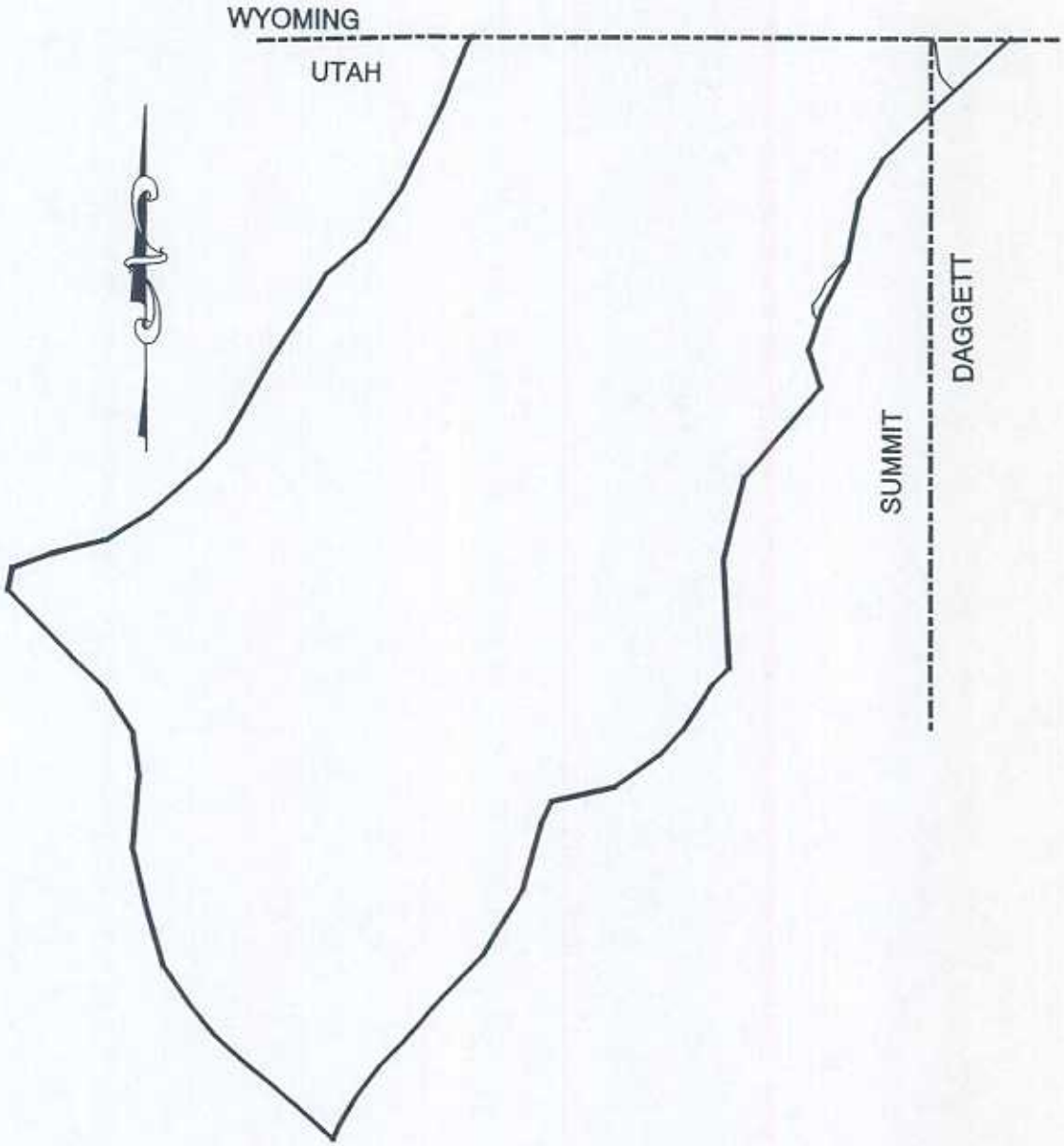

Figure 16. Water-related land use coverage of the Burnt Fork 07-01-012 subarea.

Land Cover Area Summary for Figure 17.
Henry's Fork 07-01-013 subarea.

Code	Land Cover		Dagget Co. Acres	Summit Co. Acres	Total Acres
IA3a	Alfalfa		123.53	1.31	124.84
IA3b	Grass Hay		1,145.12	326.24	1,471.36
IA3d	Pasture		74.69	0.00	74.69
IB2b	Pasture	(dry)	27.80	0.00	27.80[1]
IIE	Riparian		45.38	0.00	45.38
VA1	Farmsteads		20.12	2.68	22.80
VA2	Open Spaces (rural)		12.83	1.62	14.45
Total Water-Related Land Use			1,449.47	331.85	1,781.32
R	All Other Land		12,062.89	7,417.40	19,480.29
Total Land In Subarea			13,512.36	7,749.25	21,261.61

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

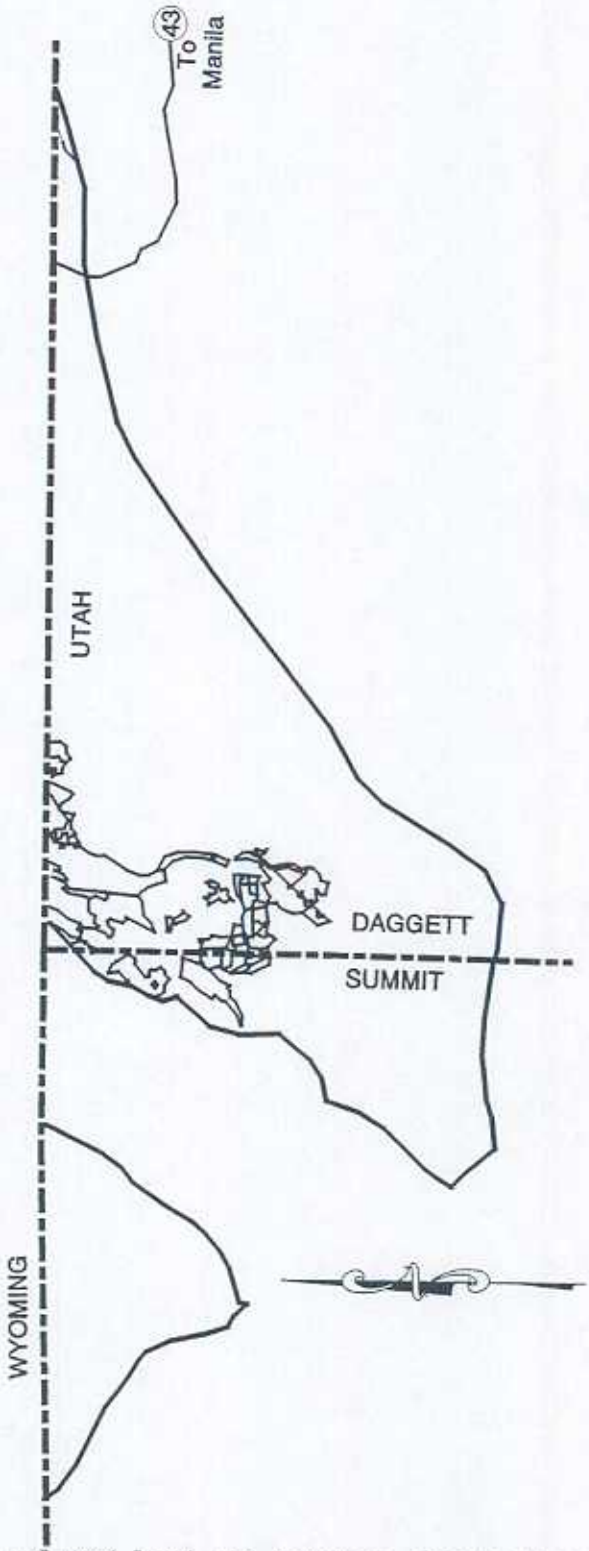

Figure 17. Water-related land use coverage of the Henry's Fork 07-01-013 subarea.

Land Cover Area Summary for Figure 18.
Sheep Creek 07-01-014 subarea.

State Code	Cover Type	Acres
IA3b	Grass Hay	342.84
IA3d	Pasture	152.05
IIA1a	Pasture (surf. & sub irr.)	12.28
IIE	Riparian	241.63
IIF2	Reservoirs	69.63
IIF3	Ponds & Lakes	414.16
VA1	Farmsteads	1.01
VB3	Open Spaces	6.05
Total Water-Related Land Use		1,239.65
R	All Other Land	71,130.31
Total Land In Subarea		72,369.96

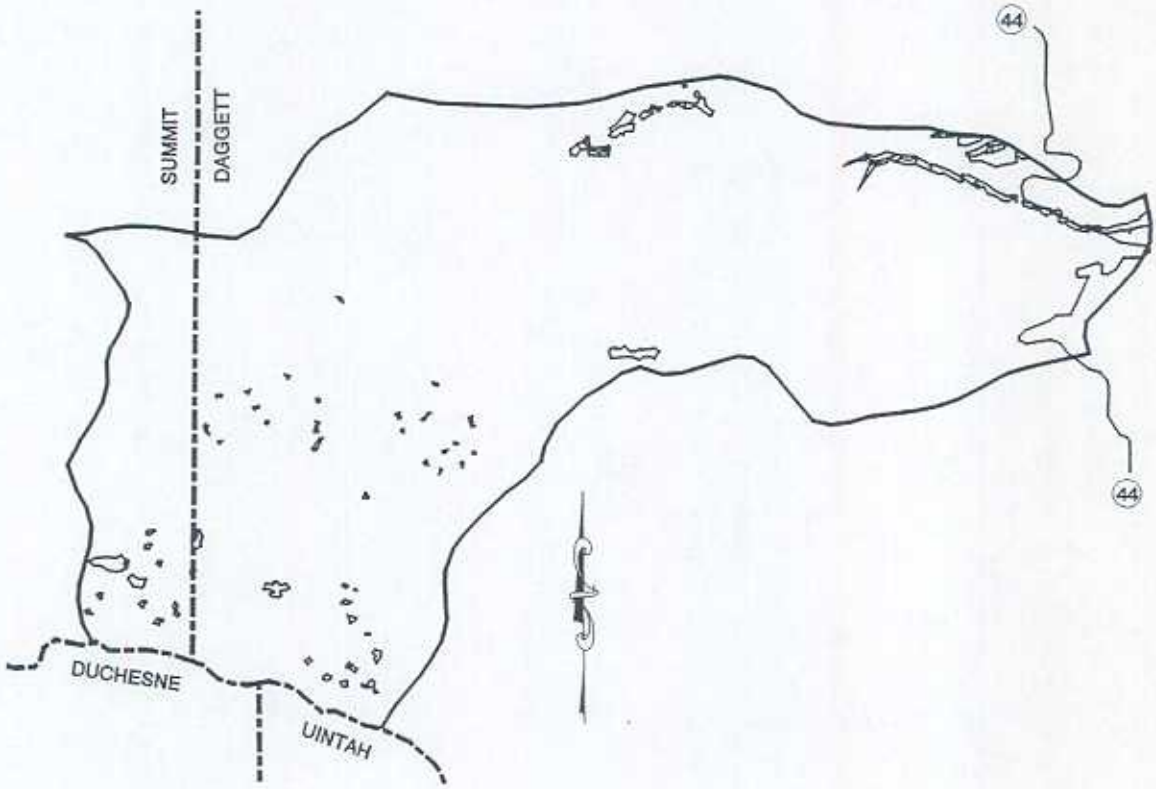

Figure 18. Water-related land use coverage of the Sheep Creek 07-01-014 subarea.

Land Cover Area Summary for Figure 19.
Carter Creek 07-01-015 subarea.

State Code	Cover Type	Acres
IIF	Open Water	1.05
IIF3	Ponds & Lakes	211.55
Total Water-Related Land Use		212.60
R	All Other Land	66,836.48
Total Land In Subarea		67,049.08

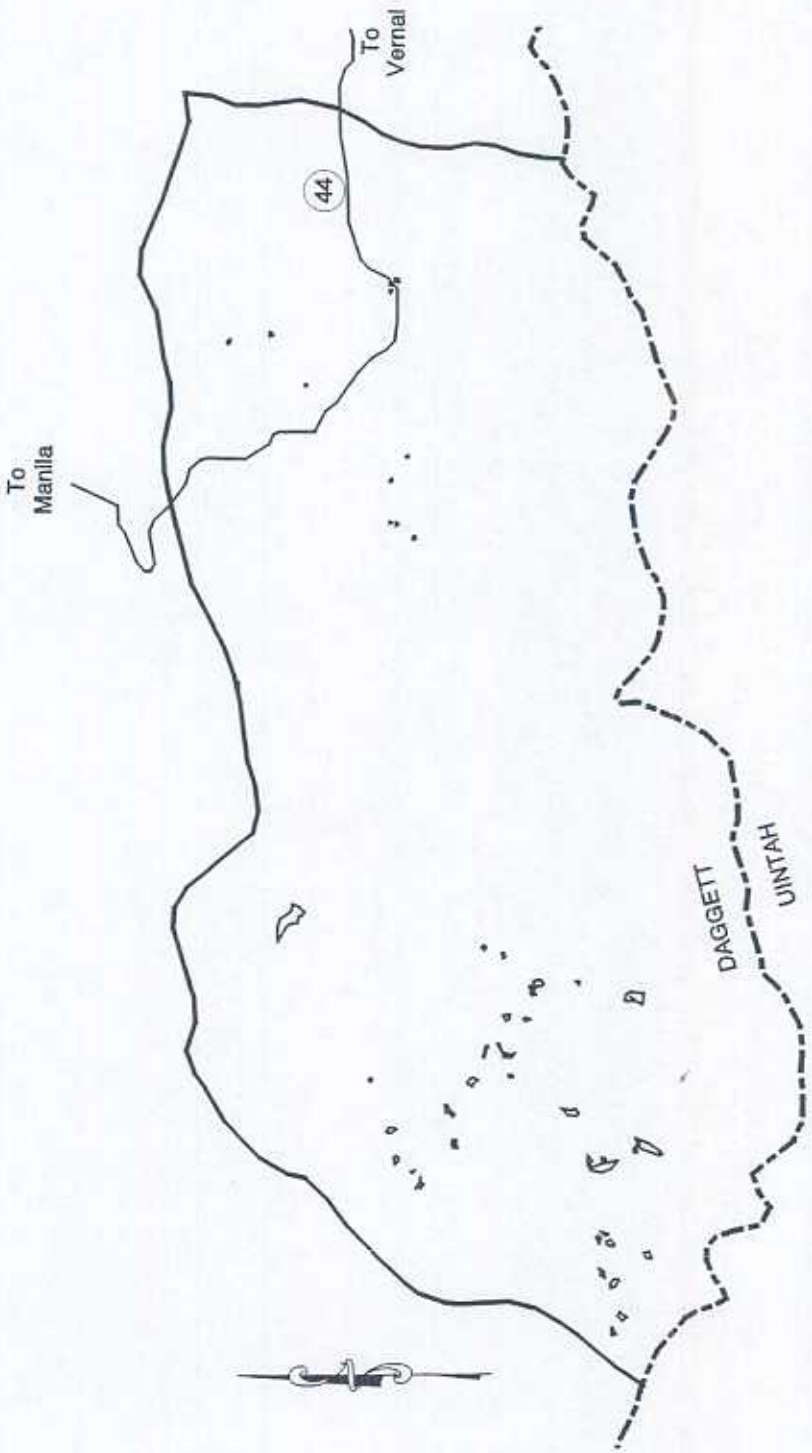

Figure 19. Water-related land use coverage of the Carter Creek 07-01-015 subarea.

Land Cover Area Summary for Figure 20.
Flaming Gorge 07-01-016 subarea.

State Code	Cover Type	Acres
IA2a	Grain	7.06
IA3a	Alfalfa	1,943.13
IA3b	Grass Hay	2,964.70
IA3d	Pasture	2,368.45
IA4b	Idle	13.61
IIA1a	Pasture (surf. & sub irr.)	447.35
IIA1b	Hayland (surf. & sub irr.)	171.65
IIA2a	Pasture (sub-irr.)	363.61
IIF	Open Water	38.37
IIF1	Streams	1.43
IIF2	Reservoirs	13,731.76
IIF3	Ponds & Lakes	17.20
IIF4b	Sewage Lagoon	55.27
VA1	Farmsteads	174.99
VA2	Open Spaces (rural)	37.35
VB2	Bldgs/Homes (lo den)	442.98
VB3	Open Spaces	195.56
VC1	Commercial	34.31
VC2	Industrial	14.97
VC3	M&I Open Spaces	3.08
VD	Transportation	75.65
Total Water-Related Land Use		23,102.48
R	All Other Land	127,484.83
Total Land In Subarea		150,587.31

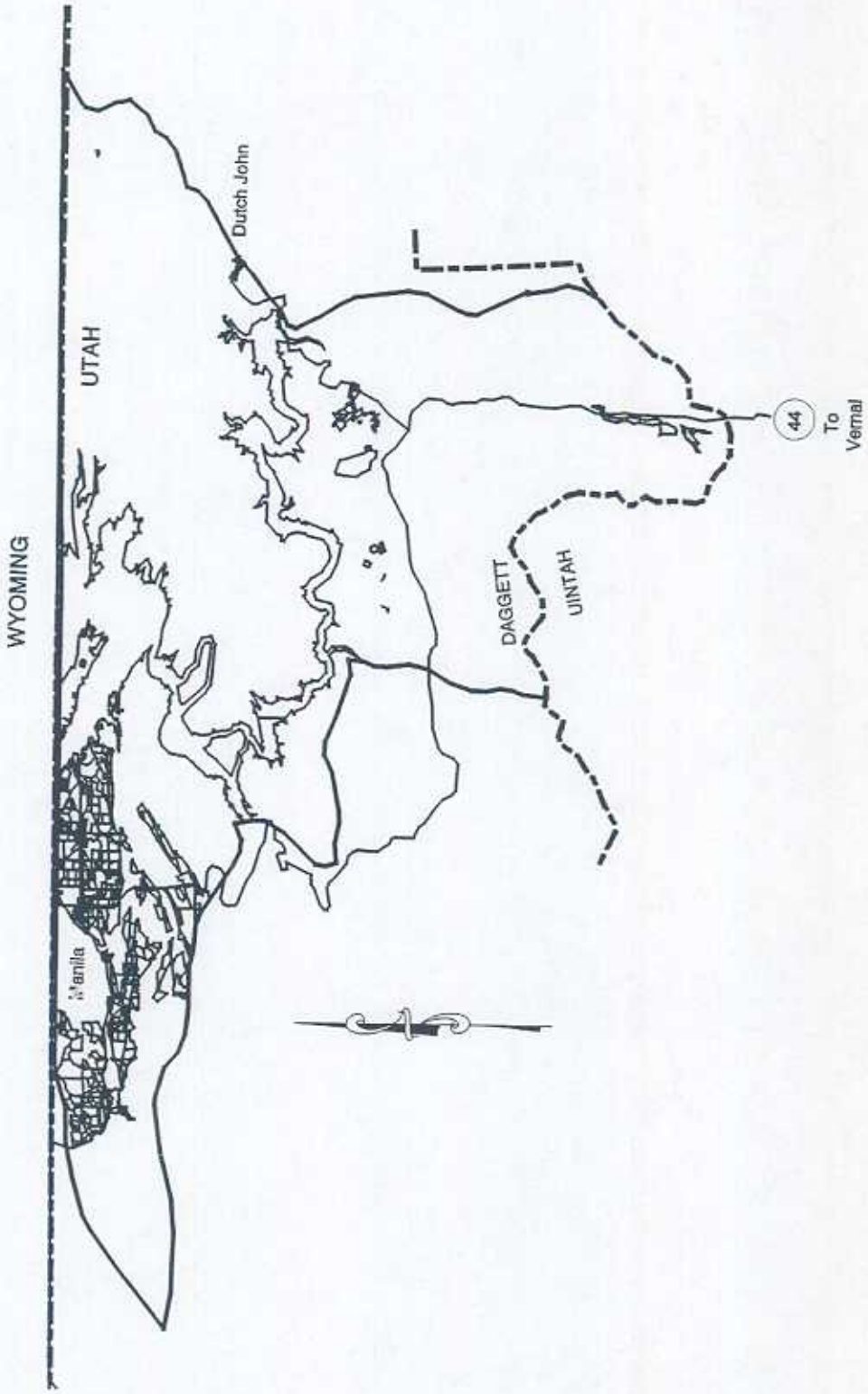

Figure 20. Water-related land use coverage of the Flaming Gorge Reservoir 07-01-016 subarea.

Land Cover Area Summary for Figure 21.
Pot Creek 07-01-017 subarea.

Code	Land Cover	Dagget Co. Acres	Uintah Co. Acres	Total Acres
IA3d	Pasture	0.00	91.92	91.92
IB2b	Pasture (dry)	0.00	587.41	587.41[1]
IIA1a	Pasture (surf. & sub irr.)	0.00	42.40	42.40
IIA2a	Pasture (sub-irr.)	0.00	29.22	29.22
IIE	Riparian	0.00	23.25	23.25
IIF2	Reservoirs	0.00	563.39	563.39
IIF3	Ponds & Lakes	0.00	1.76	1.76
IIF4a	Temporary Flooded	0.00	32.92	32.92
VA1	Farmsteads	0.00	4.01	4.01
Total Water-Related Land Use		0.00	1,376.28	1,376.28
R	All Other Land	15,963.54	51,780.80	67,744.34
Total Land In Subarea		15,963.54	53,157.08	69,120.62

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

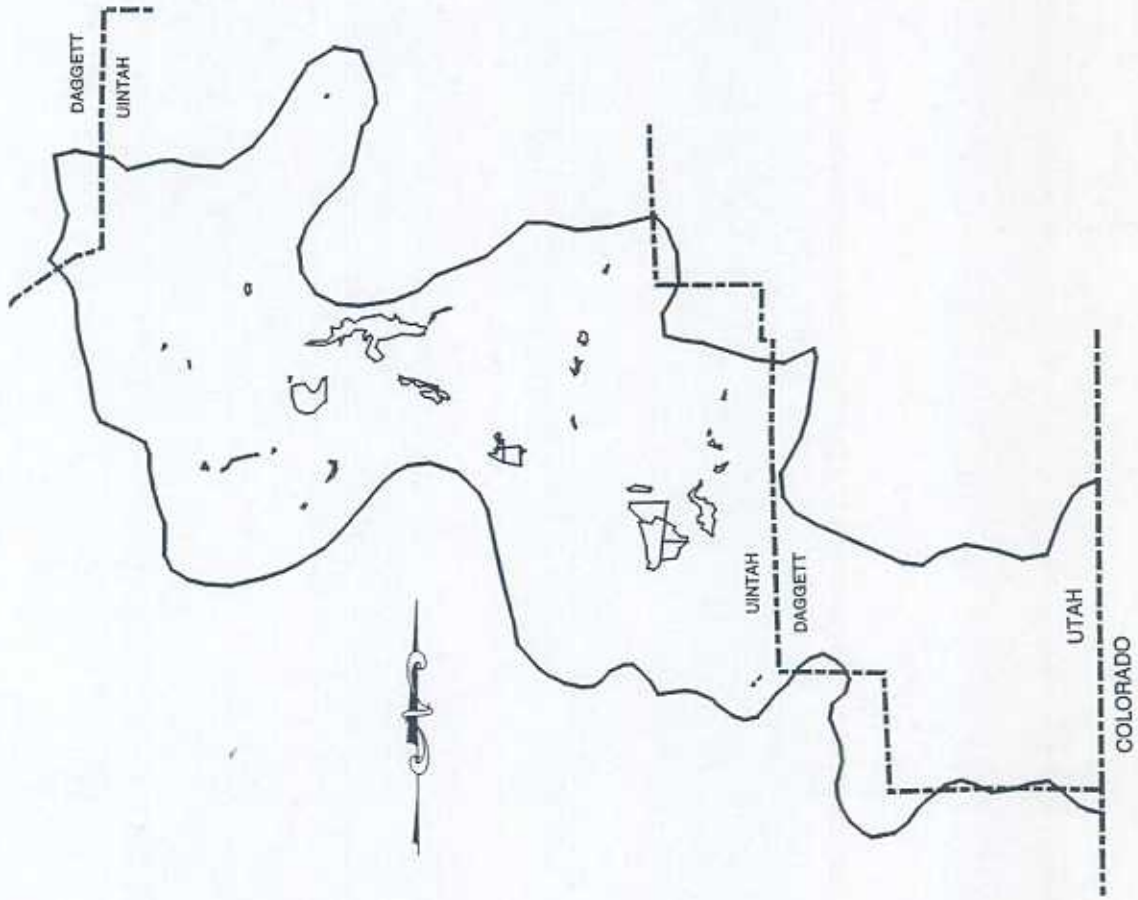

Figure 21. Water-related land use coverage of the Pot Creek 07-01-017 subarea.

Land Cover Area Summary for Figure 22.
Vermillion/Yampa Creek 07-01-018 subarea.

Code	Land Cover	Dagget Co. Acres	Uintah Co. Acres	Total Acres
IA2a1	Corn	0.00	86.49	86.49
IA3a	Alfalfa	251.30	126.15	377.45
IA3b	Grass Hay	46.79	0.00	46.79
IA3d	Pasture	18.33	5.16	23.49
IB1a	Grain/Beans/Seesds (dry)	0.00	2,290.00	2,290.00[1]
IB2b	Pasture (dry)	0.00	563.36	563.36[1]
IB3b	Idle (dry)	0.00	59.47	59.47[1]
IIA1a	Pasture (surf. & sub irr.)	341.09	0.00	341.09
IIA1b	Hayland (surf. & sub irr.)	10.46	0.00	10.46
IIA2a	Pasture (sub-irr.)	365.45	41.28	406.73
IIE	Riparian	47.72	116.74	164.46
IIF	Open Water	27.15	0.00	27.15
IIF1	Streams	1,030.88	802.45	1,833.33
IIF2	Reservoirs	9.67	32.77	42.44
IIF3	Ponds & Lakes	0.00	5.21	5.21
IIF4a	Temporary Flooded	21.97	1.20	23.17
VA1	Farmsteads	25.63	9.06	34.69
VA2	Open Spaces (rural)	0.00	4.83	4.83
VB2	Bldgs/Homes (lo den)	33.73	0.00	33.73
VC2	Industrial	2.57	0.00	2.57
Total Water-Related Land Use		2,232.74	4,144.17	6,376.91
R	All Other Land	151,720.80	203,037.11	354,757.91
Total Land In Subarea		153,953.54	207,181.28	361,134.82

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

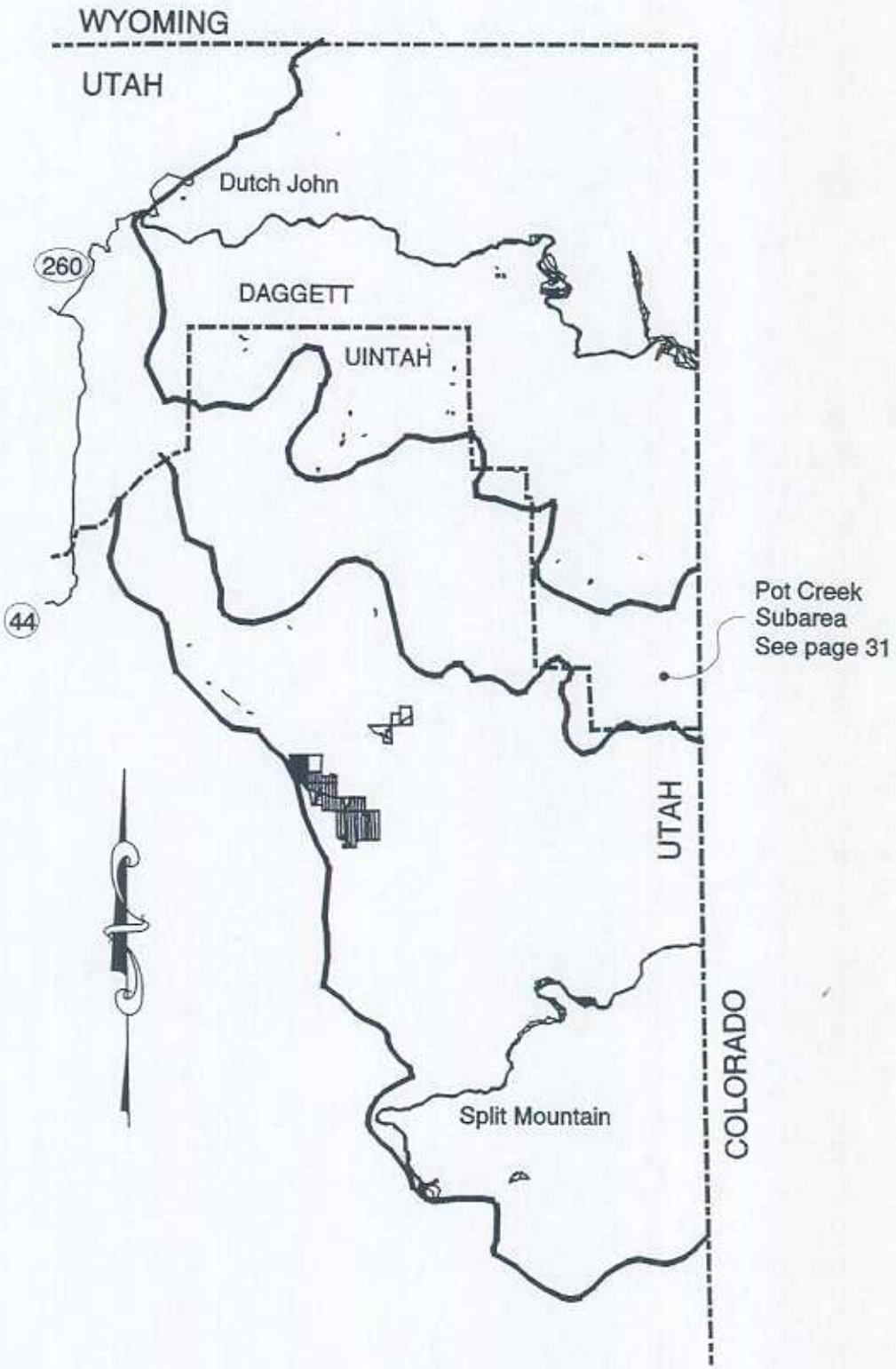

Figure 22. Water-related land use coverage of the Vermillion/Yampa Creek 07-01-018 subarea.

Land Cover Area Summary for Figure 23.
Upper Dry Fork 07-02-001 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	166.59
Total Water-Related Land Use		166.59
R	All Other Land	30,640.90
Total Land In Subarea		30,807.49

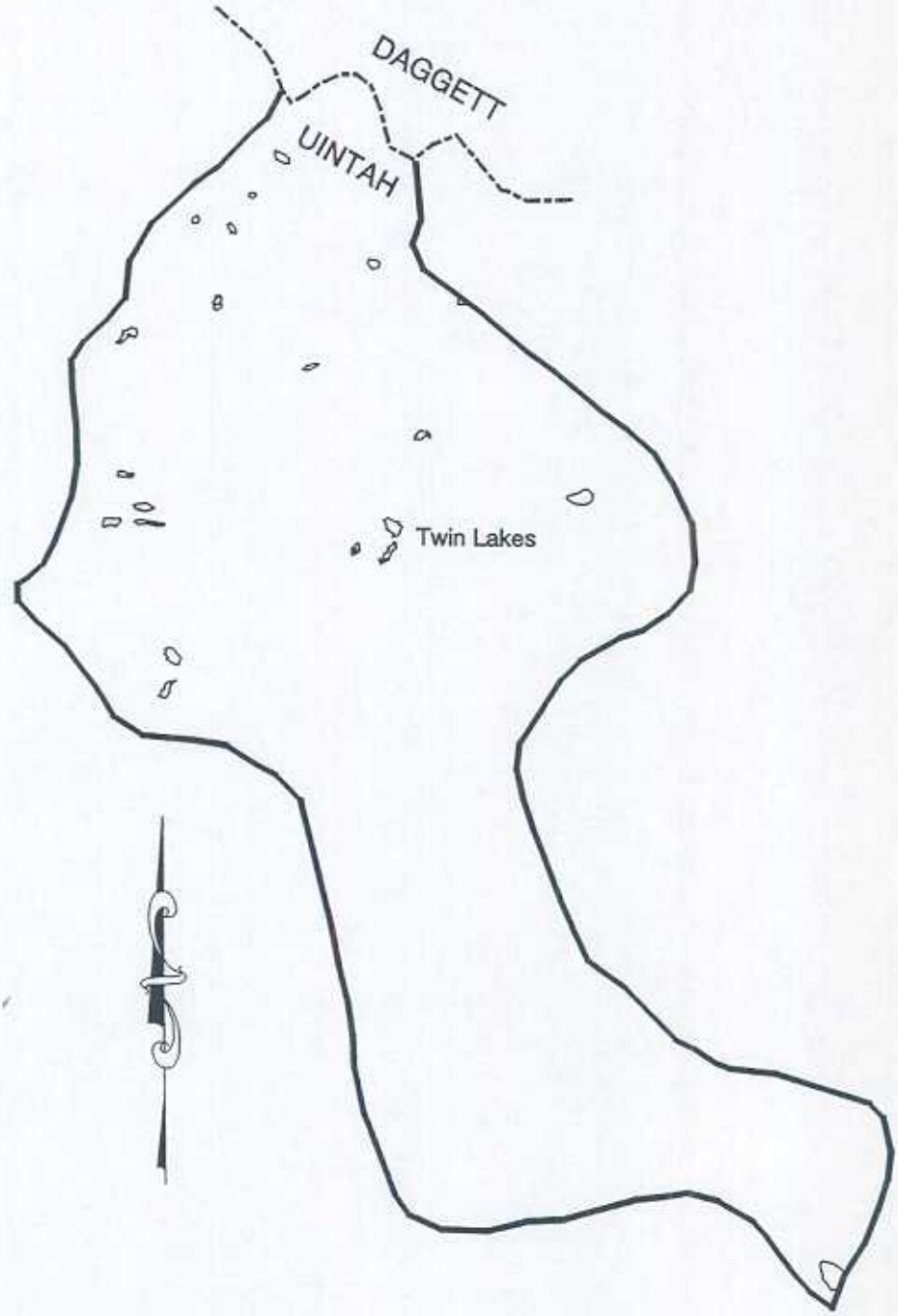

Figure 23. Water-related land use coverage of the Upper Dry Fork 07-02-001 subarea.

Land Cover Area Summary for Figure 24.
North Dry Fork 07-02-002 subarea.

State Code	Cover Type	Acres
Total Water-Related Land Use		0.00 0.00
R	All Other Land	7,065.68
Total Land In Subarea		7,065.68

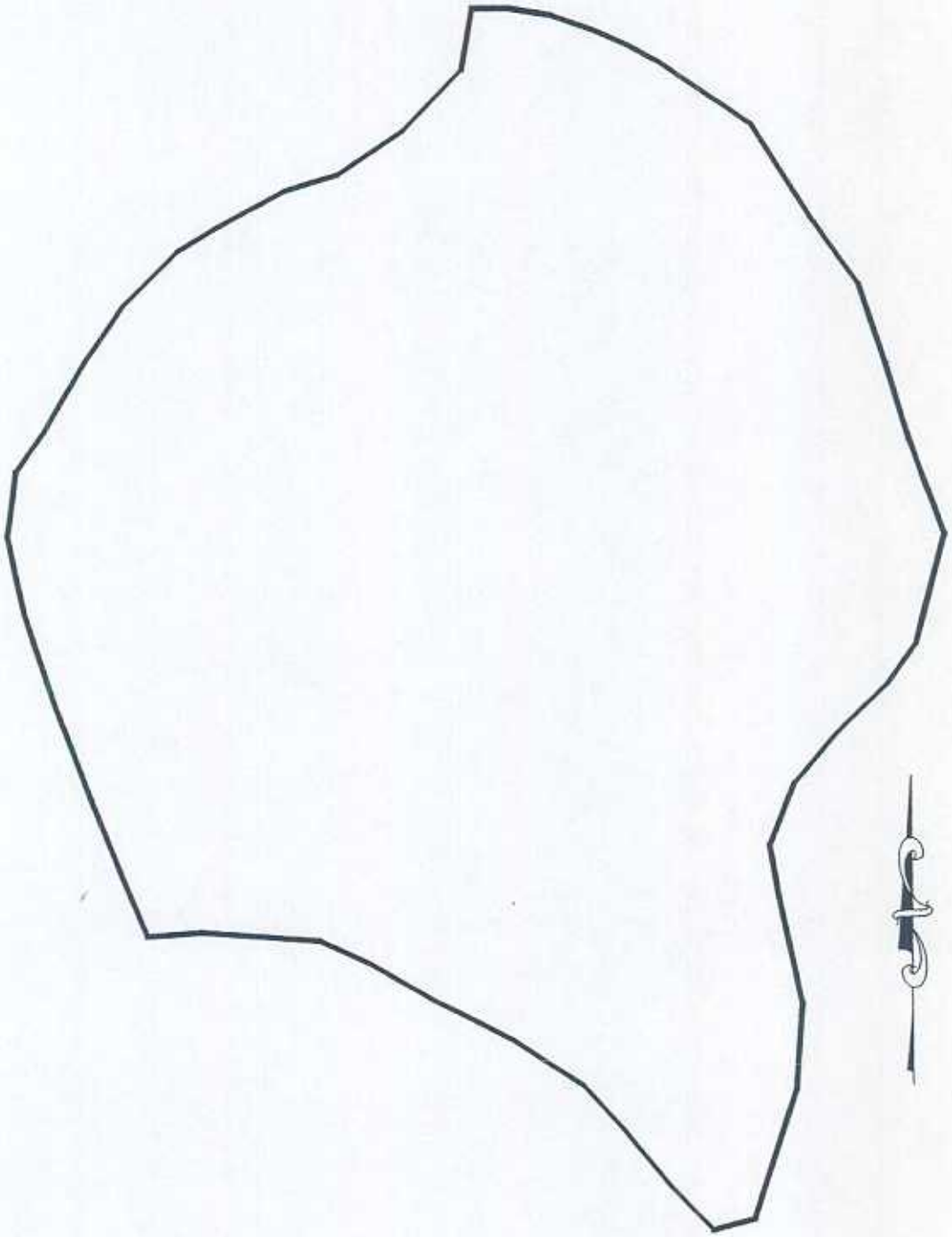

Figure 24. Water-related land use coverage of the North Dry Fork 07-02-002 subarea.

Land Cover Area Summary for Figure 25.
East Dry Fork 07-02-003 subarea.

State Code	Cover Type	Acres
	Total Water-Related Land Use	0.00 0.00
R	All Other Land	6,126.95
	Total Land In Subarea	6,126.95

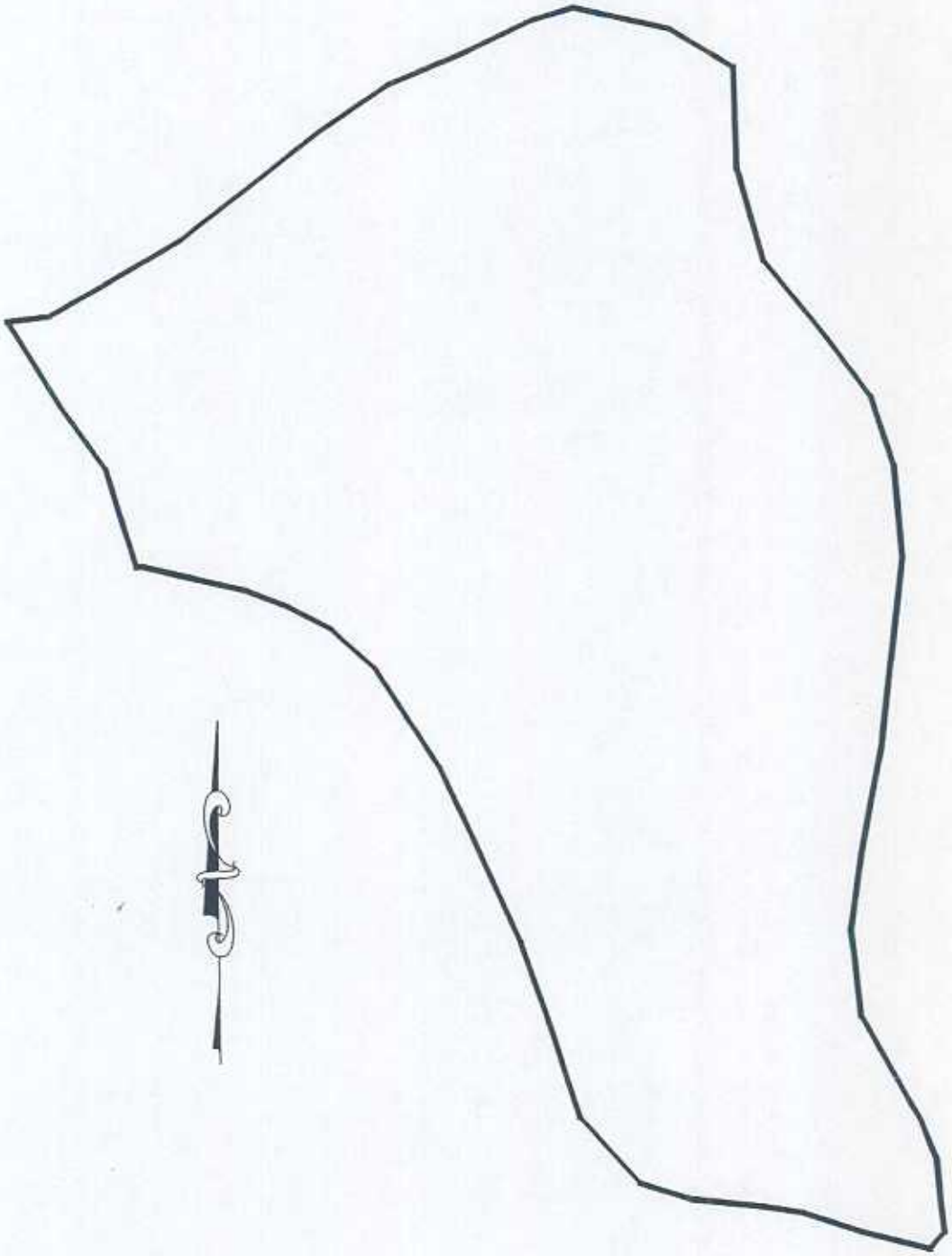

Figure 25. Water-related land use coverage of the East Dry Fork 07-02-003 subarea.

Land Cover Area Summary for Figure 26.
Ashley Dry Fork 07-02-004 subarea.

State Code	Cover Type		Acres
IA2a	Grain		5.02
IA2a1	Corn		1.02
IA3a	Alfalfa		409.79
IA3b	Grass Hay		44.14
IA3d	Pasture		576.13
IA4b	Idle		32.29
IB2b	Pasture	(dry)	47.68[1]
IIE	Riparian		355.05
IIF	Open Water		4.64
IIF2	Reservoirs		44.70
IIF3	Ponds & Lakes		182.51
VA1	Farmsteads		76.79
VA2	Open Spaces (rural)		2.18
VB2	Bldgs/Homes (lo den)		26.15
VB3	Open Spaces		3.13
VC2	Industrial		1.82
Total Water-Related Land Use			1,813.04
R	All Other Land		106,866.80
Total Land In Subarea			108,679.84

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

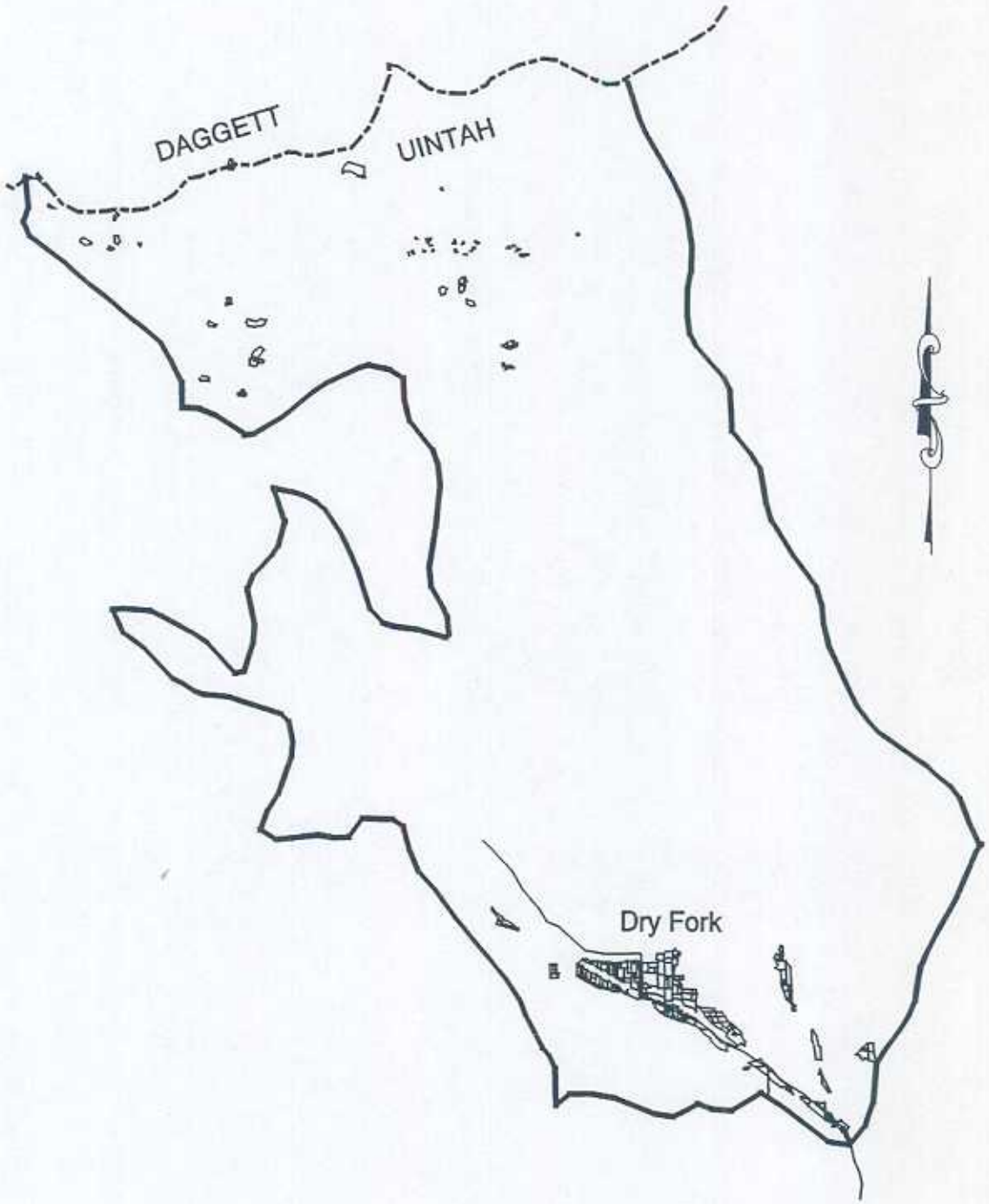

Figure 26. Water-related land use coverage of the Ashley Dry Fork 07-02-004 subarea.

Land Cover Area Summary for Figure 27.
Vernal 07-02-005 subarea.

State Code	Cover Type		Acres
IA1a	Fruit		10.26
IA2a	Grain		859.98
IA2a1	Corn		920.95
IA2b1	Potatoes		1.50
IA3a	Alfalfa		10,352.21
IA3b	Grass Hay		793.16
IA3d	Pasture		7,820.80
IA4a	Fallow		353.16
IA4b	Idle		1,108.10
IB1a3	Beans	(dry)	6.24[1]
IB2b	Pasture	(dry)	59.56[1]
IIA1a	Pasture (surf. & sub irr.)		2,044.83
IIA2a	Pasture (sub-irr.)		829.40
IIB-E	Wet/Vegetation Asp.		70.62
IIC	Wet Flats		111.53
IIE	Riparian		364.09
IIF1	Streams		249.88
IIF2	Reservoirs		877.04
IIF3	Ponds & Lakes		285.95
IIF4b	Sewage Lagoon		235.52
IVC	Excavated Lands		68.00
VA1	Farmsteads		713.44
VA2	Open Spaces (rural)		121.20
VB1	Bldgs/Homes (hi den)		2,780.48
VB2	Bldgs/Homes (lo den)		1,757.76
VB3	Open Spaces		356.21
VB4	Idle Spaces		107.90
VC1	Commercial		198.45
VC2	Industrial		328.14
VC3	M&I Open Spaces		24.57
VD	Transportation		257.95
Total Water-Related Land Use			34,068.88
R	All Other Land		81,807.18
Total Land In Subarea			115,876.06

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

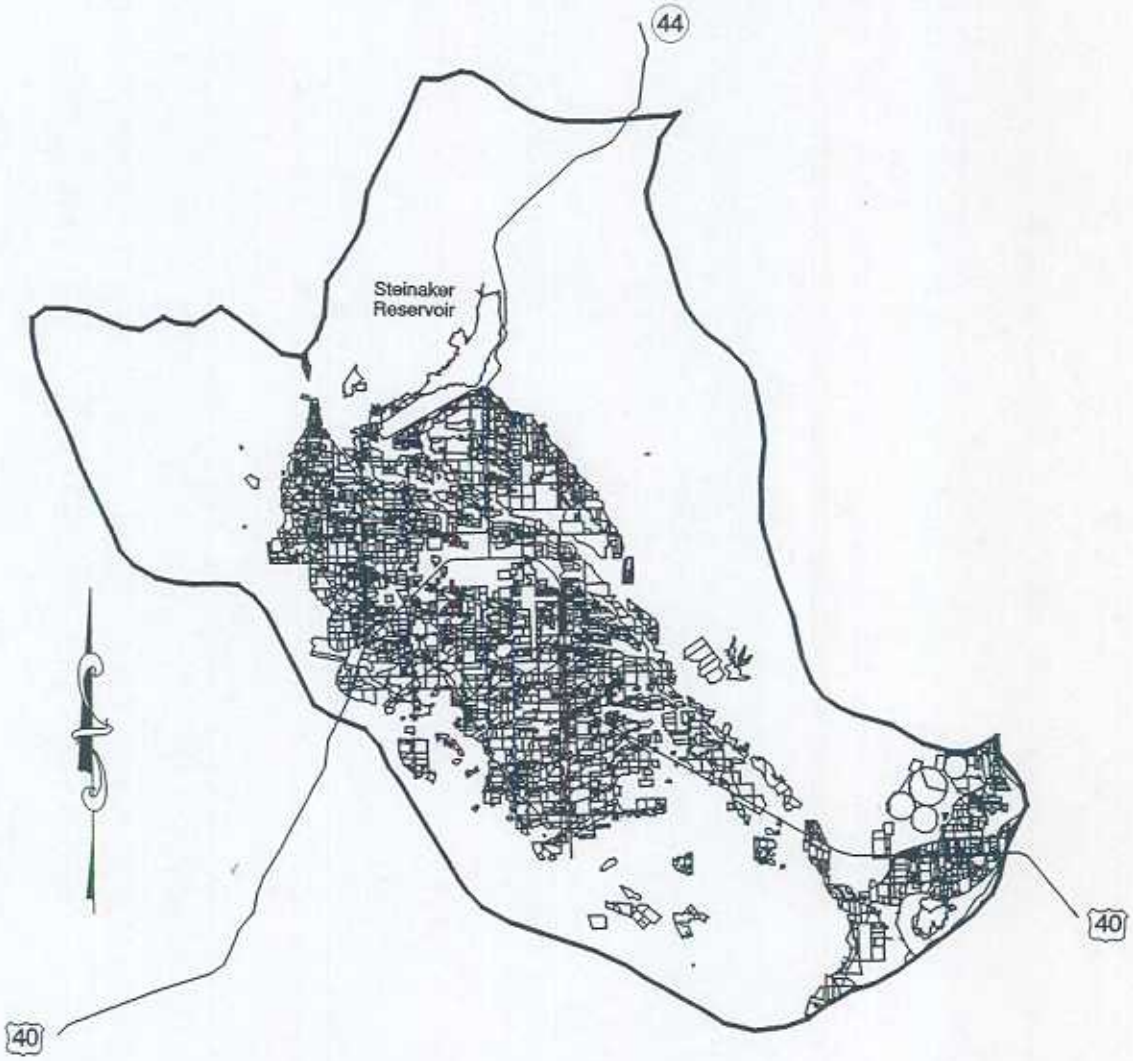

Figure 27. Water-related land use coverage of the Vernal 07-02-005 subarea.

Land Cover Area Summary for Figure 28.
Big Brush Creek 07-02-006 subarea.

State Code	Cover Type	Acres
IA3a	Alfalfa	59.33
IA3d	Pasture	10.01
IIE	Riparian	18.87
IIF2	Reservoirs	337.85
IIF3	Ponds & Lakes	44.68
IVC	Excavated Lands	276.43
VA2	Open Spaces (rural)	1.02
Total Water-Related Land Use		748.10
R	All Other Land	50,463.08
Total Land In Subarea		51,211.18

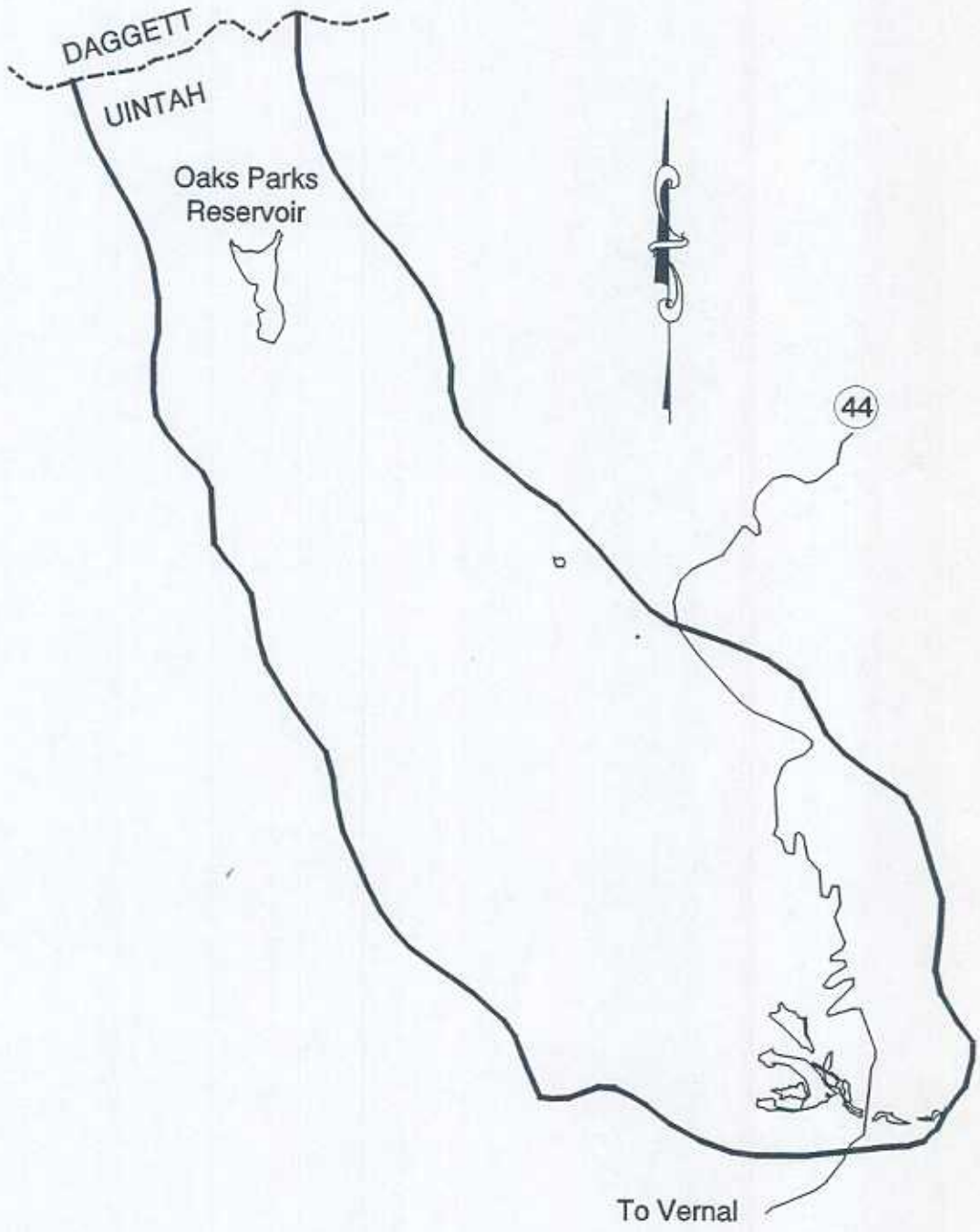

Figure 28. Water-related land use coverage of the Big Brush Creek 07-02-006 subarea.

Land Cover Area Summary for Figure 29.
Brush Creek 07-02-007 subarea.

State Code	Cover Type		Acres
IA2a	Grain		57.82
IA2a1	Corn		21.13
IA3a	Alfalfa		818.11
IA3b	Grass Hay		89.52
IA3d	Pasture		185.78
IA4a	Fallow		36.36
IA4b	Idle		56.30
IB1a	Grain/Beans/Seeds	(dry)	4.60[1]
IB3b	Idle	(dry)	7.12[1]
IIA2a	Pasture (sub-irr.)		10.17
IIC	Wet Flats		39.33
IIE	Riparian		175.70
IIF1	Streams		0.16
IIF2	Reservoirs		642.96
IIF3	Ponds & Lakes		4.12
VA1	Farmsteads		83.39
VA2	Open Spaces (rural)		2.82
VB1	Bldgs/Homes (hi den)		1.70
Total Water-Related Land Use			2,237.09
R	All Other Land		103,356.84
Total Land In Subarea			105,593.93

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

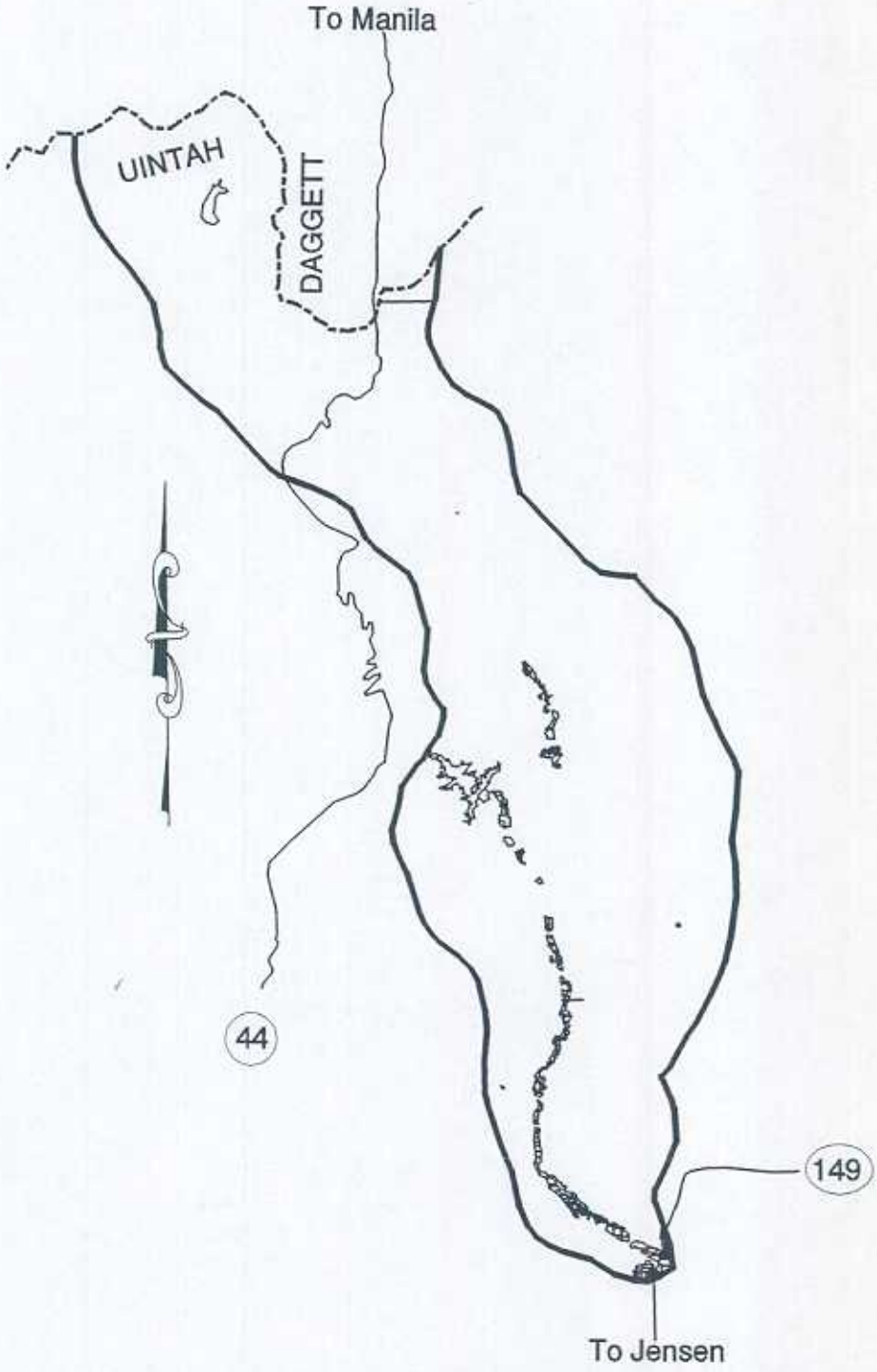

Figure 29. Water-related land use coverage of the Brush Creek 07-02-007 subarea.

Land Cover Area Summary for Figure 30.
Strawberry Res. 07-03-001 subarea.

State Code	Cover Type	Acres
IIF2	Reservoirs	12,188.96
IIF3	Ponds & Lakes	10.67
Total Water-Related Land Use		12,199.63
R	All Other Land	126,035.92
Total Land In Subarea		138,235.55

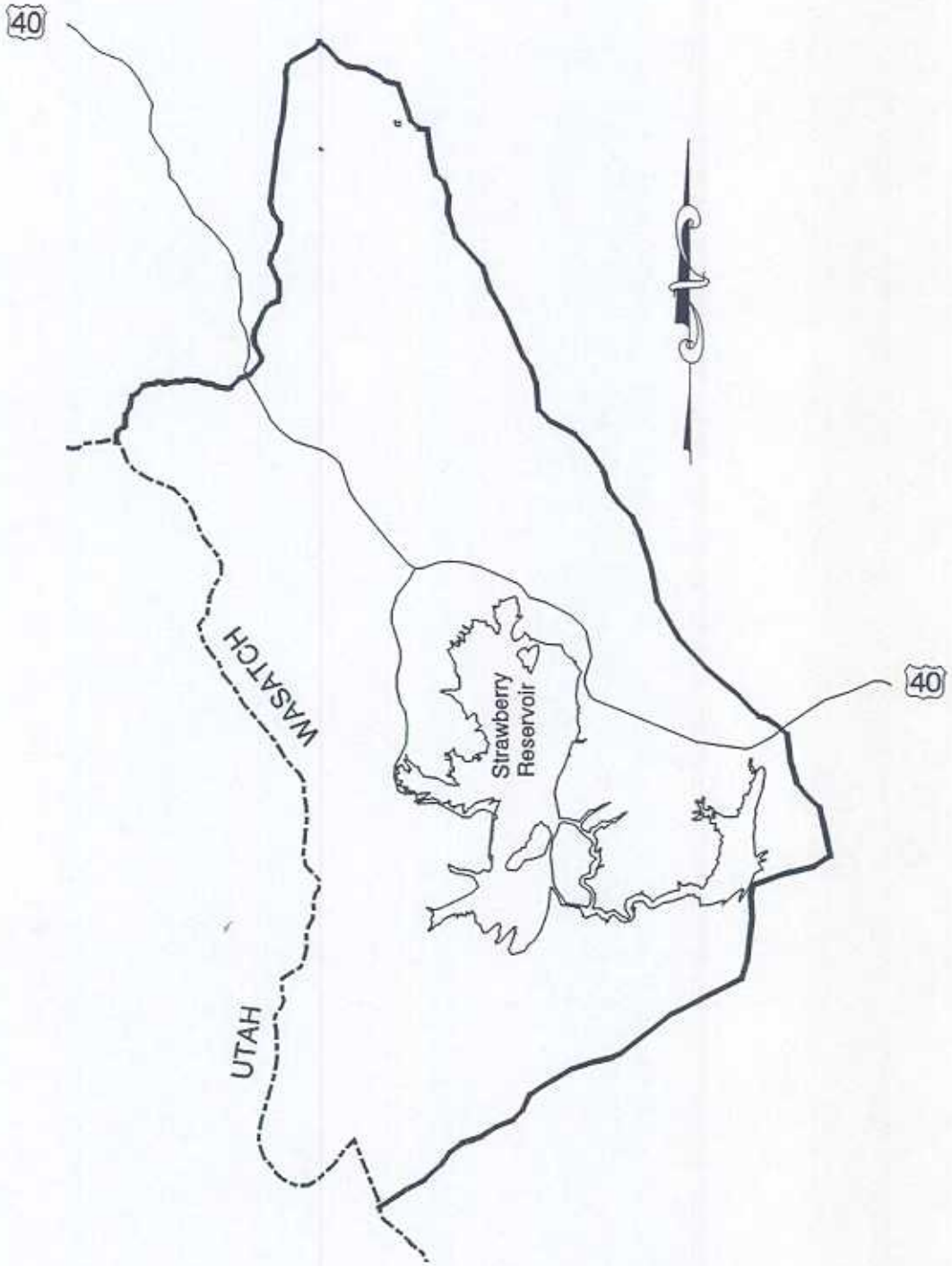

Figure 30. Water-related land use coverage of the Strawberry Res. 07-03-001 subarea.

Land Cover Area Summary for Figure 31.
Strawberry 07-03-002 subarea.

Code	Land Cover	Wasatch Co. Acres	Duchesne Co. Acres	Total Acres
IA4b	Idle	0.00	44.32	44.32
IIE	Riparian	21.10	106.72	127.82
IIF3	Ponds & Lakes	2.70	0.00	2.70
VA1	Farmsteads	0.00	0.97	0.97
Total Water-Related Land Use		23.80	152.01	175.81
R	All Other Land	68,557.92	24,752.35	93,310.27
Total Land In Subarea		68,581.72	24,884.58	93,486.08

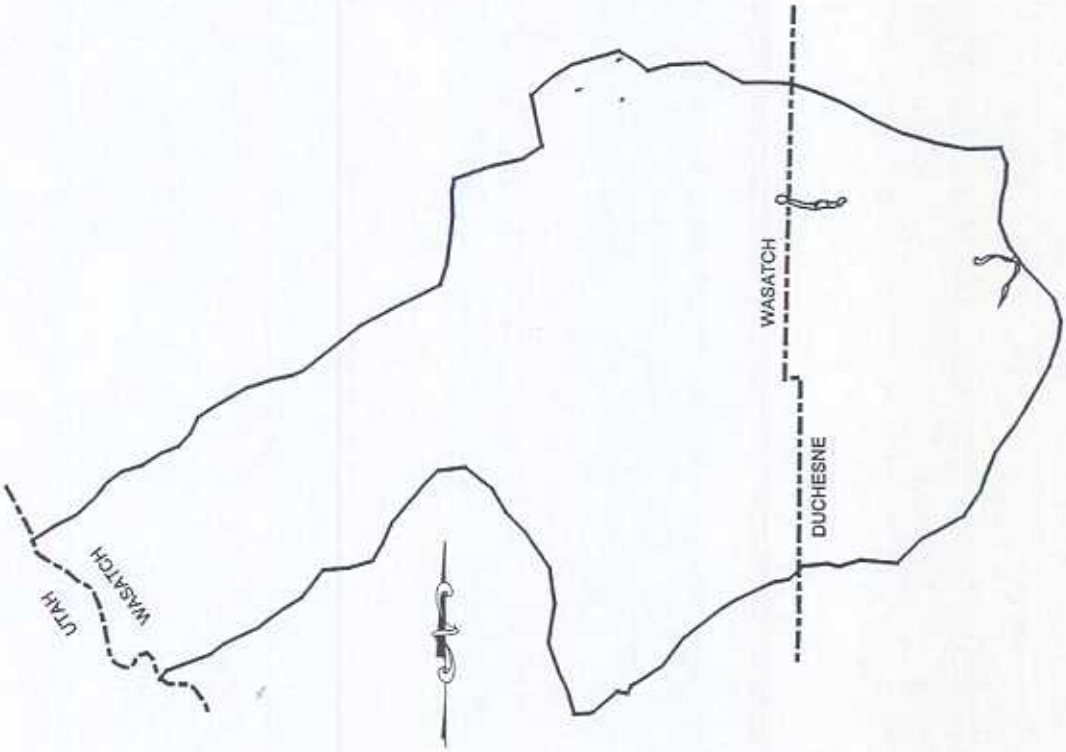

Figure 31. Water-related land use coverage of the Strawberry 07-03-002 subarea.

Land Cover Area Summary for Figure 32.
Currant Creek 07-03-003 subarea.

State Code	Cover Type	Acres
IA3b	Grass Hay	75.39
IA3d	Pasture	88.85
IIE	Riparian	215.96
IIF2	Reservoirs	628.63
IIF3	Ponds & Lakes	38.70
Total Water-Related Land Use		1,047.53
R	All Other Land	89,046.66
Total Land In Subarea		90,094.19

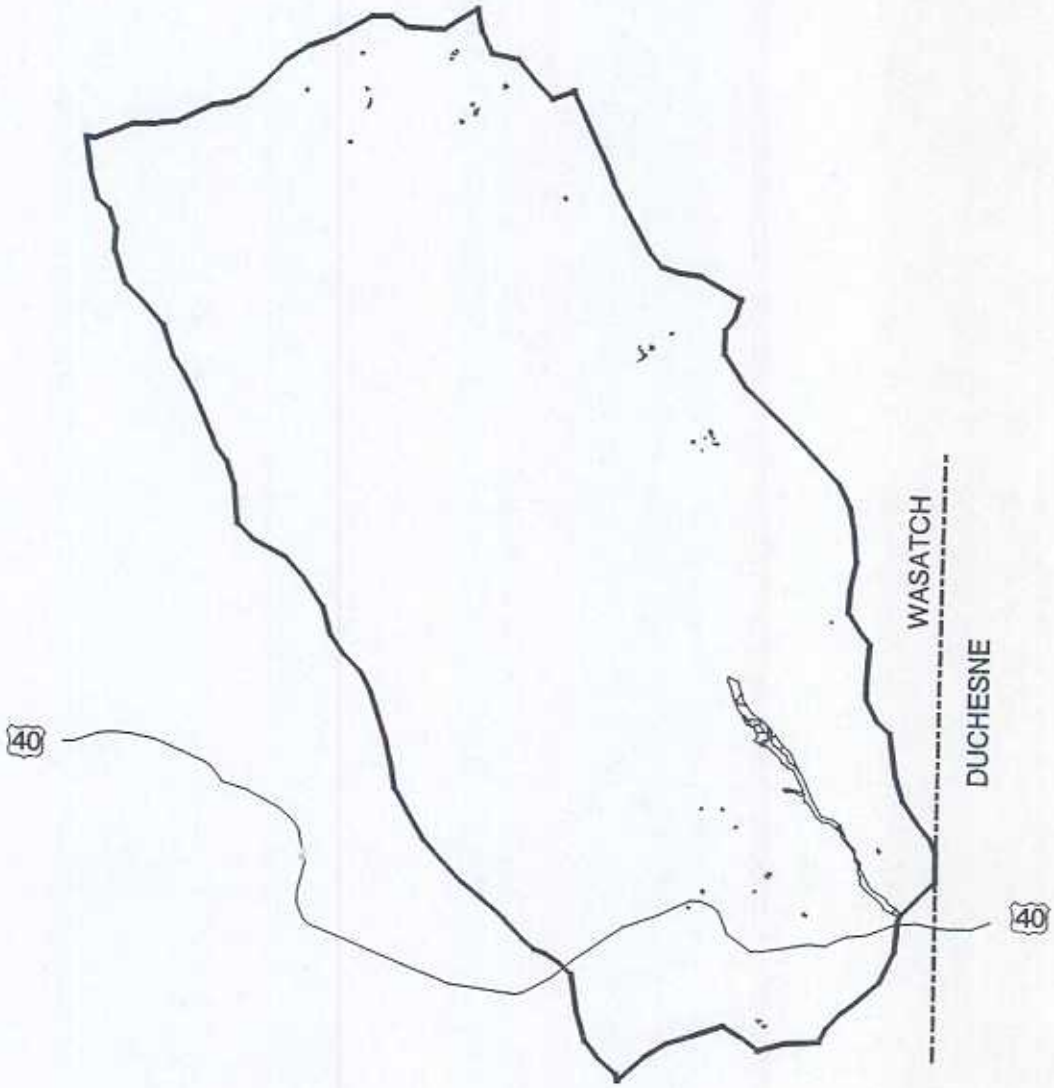

Figure 32. Water-related land use coverage of the Currant Creek 07-03-003 subarea.

Land Cover Area Summary for Figure 33.
Red Creek 07-03-004 subarea.

Code	Land Cover	Wasatch Co. Acres	Duchesne Co. Acres	Total Acres
IA2a	Grain	0.00	134.28	134.28
IA3a	Alfalfa	0.00	43.39	43.39
IA3b	Grass Hay	0.00	1,148.95	1,148.95
IA3d	Pasture	0.00	533.87	533.87
IA4b	Idle	0.00	271.84	271.84
IIA1a	Pasture (surf. & sub irr.)	0.00	5.17	5.17
IIE	Riparian	0.00	112.94	112.94
IIF2	Reservoirs	0.00	179.53	179.53
IIF3	Ponds & Lakes	4.65	5.10	9.75
VA1	Farmsteads	0.00	43.00	43.00
VB2	Bldgs/Homes (lo den)	0.00	48.24	48.24
VC1	Commercial	0.00	6.63	6.63
VC2	Industrial	0.00	1.27	1.27
Total Water-Related Land Use		4.65	2,534.21	2,538.86
R	All Other Land	22,674.86	34,050.71	56,725.63
Total Land In Subarea		22,679.51	36,584.98	59,264.49

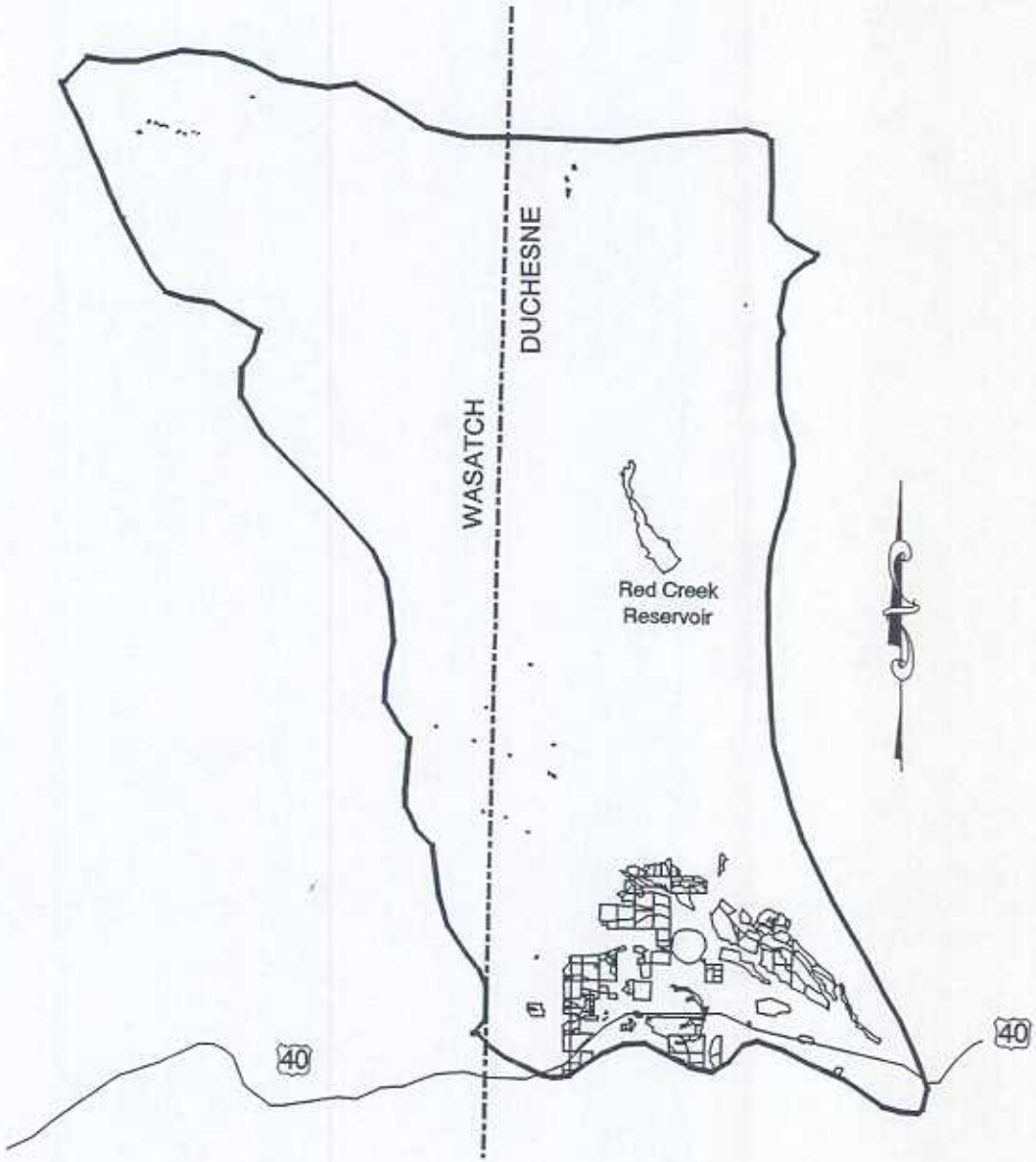

Figure 33. Water-related land use coverage of the Red Creek 07-03-004 subarea.

Land Cover Area Summary for Figure 34.
Fruitland 07-03-005 subarea.

Code	Land Cover	Wasatch Co. Acres	Duchesne Co. Acres	Total Acres
IA3a	Alfalfa	0.00	156.76	156.76
IA3b	Grass Hay	0.00	135.53	135.53
IA3d	Pasture	23.84	208.14	231.98
IIA1a	Pasture (surf. & sub irr.)	0.00	83.50	83.50
IIE	Riparian	12.90	114.14	127.04
IIF2	Reservoirs	0.00	8.81	8.81
IIF3	Ponds & Lakes	0.00	2.82	2.82
VA1	Farmsteads	1.88	8.13	10.01
VB2	Bldgs/Homes (lo den)	0.00	7.59	7.59
VC1	Commercial	5.17	0.00	5.17
Total Water-Related Land Use		43.79	725.42	769.21
R	All Other Land	1,872.34	42,715.11	44,587.45
Total Land In Subarea		1,916.13	43,440.53	45,356.66

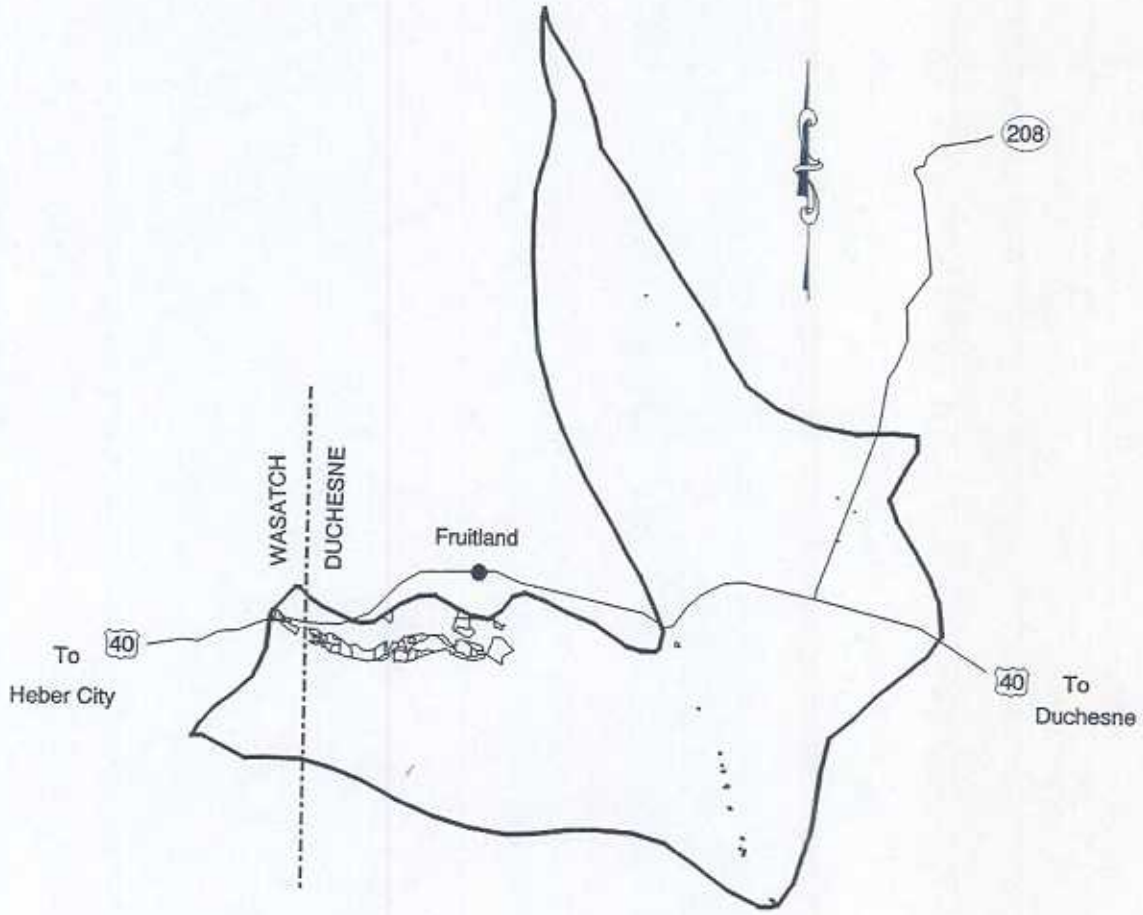

Figure 34. Water-related land use coverage of the Fruitland 07-03-005 subarea.

Land Cover Area Summary for Figure 35.
Lower Strawberry 07-03-006 subarea.

Code	Land Cover	Wasatch Co. Acres	Duchesne Co. Acres	Utah Co. Acres	Total Acres
IA2a	Grain	0.00	53.51	0.00	53.51
IA3a	Alfalfa	0.00	289.08	0.00	289.08
IA3b	Grass Hay	0.00	611.36	0.00	611.36
IA3d	Pasture	0.00	391.05	0.00	391.05
IA4a	Fallow	0.00	75.70	0.00	75.70
IA4b	Idle	0.00	24.91	0.00	24.91
IB2b	Pasture (dry)	0.00	2.71	0.00	2.71[1]
IIA1a	Pasture (surf. & sub irr.)	0.00	205.59	0.00	205.59
IIA2a	Pasture (sub-irr.)	0.00	2.26	0.00	2.26
IIE	Riparian	0.00	1,096.41	0.00	1,096.41
IIF2	Reservoirs	0.00	3,388.87	0.00	3,388.87
IIF3	Ponds & Lakes	0.00	37.12	0.00	37.12
VA1	Farmsteads	0.00	26.42	0.00	26.42
VB2	Bldgs/Homes (lo den)	0.00	35.37	0.00	35.37
VB3	Open Spaces	0.00	8.57	0.00	8.57
VC2	Industrial	0.00	1.94	0.00	1.94
VC3	M&I Open Spaces	0.00	4.72	0.00	4.72
Total Water-Related Land Use		0.00	6,255.59	0.00	6,255.59
R	All Other Land	3,120.84	234,810.38	19,151.37	257,082.59
Total Land In Subarea		3,120.84	241,065.97	19,151.37	263,338.18

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

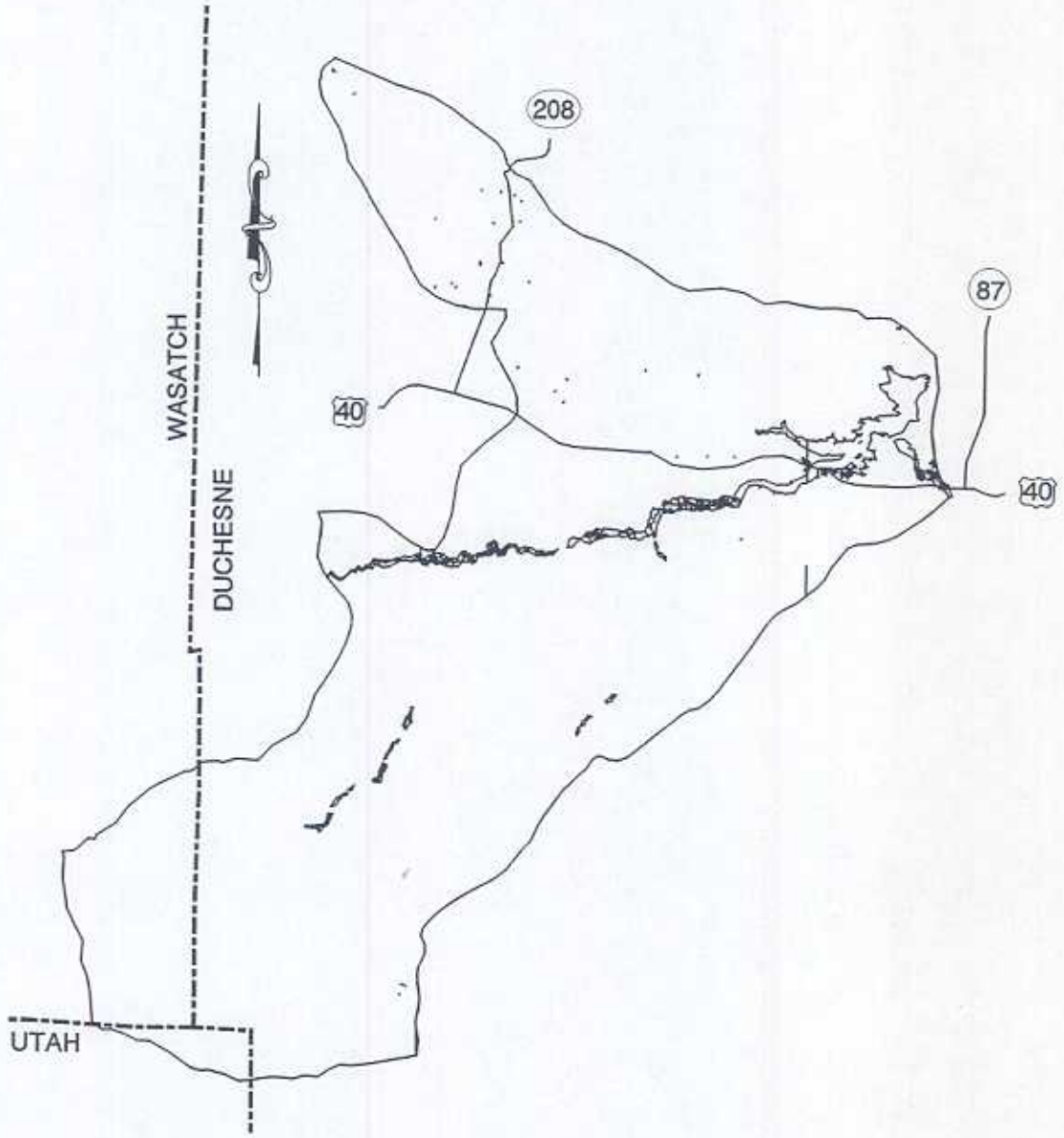

Figure 35. Water-related land use coverage of the Lower Strawberry 07-03-006 subarea.

Land Cover Area Summary for Figure 36.
Upper Duchesne 07-03-007 subarea.

Code	Land Cover	Wasatch Co. Acres	Duchesne Co. Acres	Total Acres
IA3b	Grass Hay	0.00	24.09	24.09
IA3d	Pasture	0.00	2.64	2.64
IIF	Open Water	0.00	2.44	2.44
IIF3	Ponds & Lakes	82.65	404.78	487.43
VA1	Farmsteads	0.00	4.13	4.13
VB2	Bldgs/Homes (lo den)	0.00	37.82	37.82
Total Water-Related Land Use		82.65	475.90	558.55
R	All Other Land	12,807.34	40,209.79	53,017.13
Total Land In Subarea		12,889.99	40,685.69	53,575.68

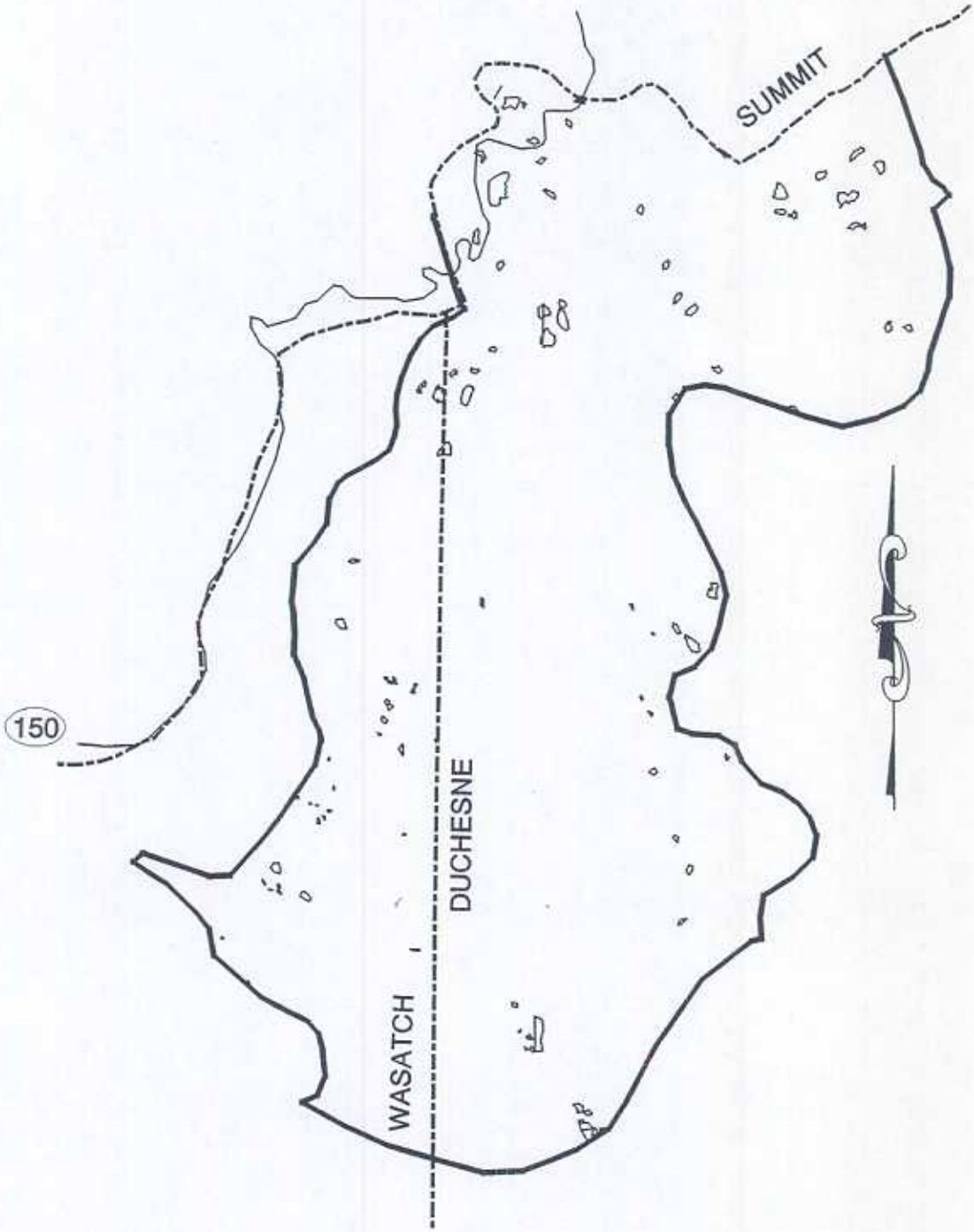

Figure 36. Water-related land use coverage of the Upper Duchesne 07-03-007 subarea.

Land Cover Area Summary for Figure 37.
West Fork of the Duchesne 07-03-008 subarea.

Code	Land Cover	Wasatch Co. Acres	Duchesne Co. Acres	Total Acres
IA2a	Grain	0.00	206.21	206.21
IA2a1	Corn	0.00	6.35	6.35
IA2b1	Potatoes	0.00	2.96	2.96
IA3a	Alfalfa	0.00	267.05	267.06
IA3b	Grass Hay	0.00	55.59	55.59
IA3d	Pasture	0.00	538.55	538.55
IA4a	Fallow	0.00	43.37	43.37
IA4b	Idle	0.00	172.01	172.01
IIE	Riparian	0.00	365.92	365.92
IIF3	Ponds & Lakes	24.10	13.98	38.08
VA1	Farmsteads	0.00	27.74	27.74
VA2	Open Spaces (rural)	0.00	3.94	3.94
VB2	Bldgs/Homes (lo den)	0.00	7.19	7.19
VB3	Open Spaces	0.00	19.38	19.38
Total Water-Related Land Use		24.10	1,730.24	1,754.34
R	All Other Land	53,356.22	42,073.92	95,430.14
Total Land In Subarea		53,380.32	43,804.16	97,184.48

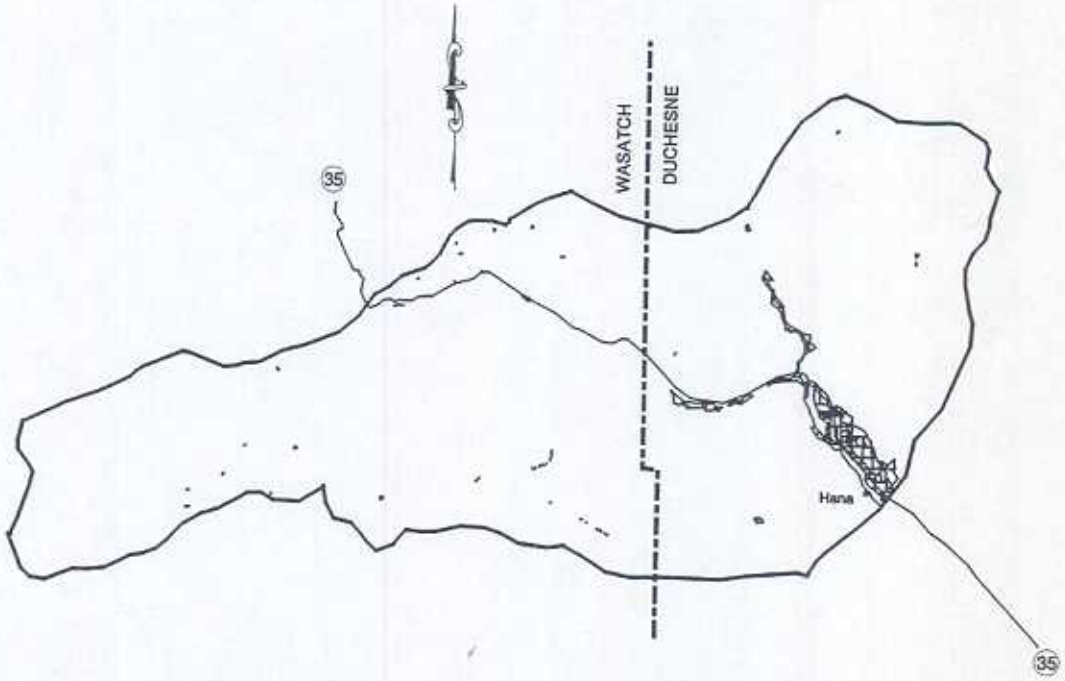

Figure 37. Water-related land use coverage of the West Fork of the Duchesne 07-03-008 subarea.

Land Cover Area Summary for Figure 38.
Tabiona 07-03-009 subarea.

State Code	Cover Type	Acres
IA2a	Grain	715.36
IA2b1	Potatoes	2.40
IA3a	Alfalfa	1,749.39
IA3b	Grass Hay	55.12
IA3d	Pasture	2,375.10
IA4a	Fallow	19.41
IA4b	Idle	327.97
IIB	Cattail/Bullrush Asp.	1.95
IIE	Riparian	1,102.81
IIF	Open Water	1.95
IIF3	Ponds & Lakes	8.62
IIF4b	Sewage Lagoon	3.64
IVC	Excavated Lands	17.46
VA1	Farmsteads	90.76
VA2	Open Spaces (rural)	28.10
VB2	Bldgs/Homes (lo den)	162.81
VC1	Commercial	3.00
VC2	Industrial	18.39
Total Water-Related Land Use		6,684.24
R	All Other Land	65,211.48
Total Land In Subarea		71,895.72

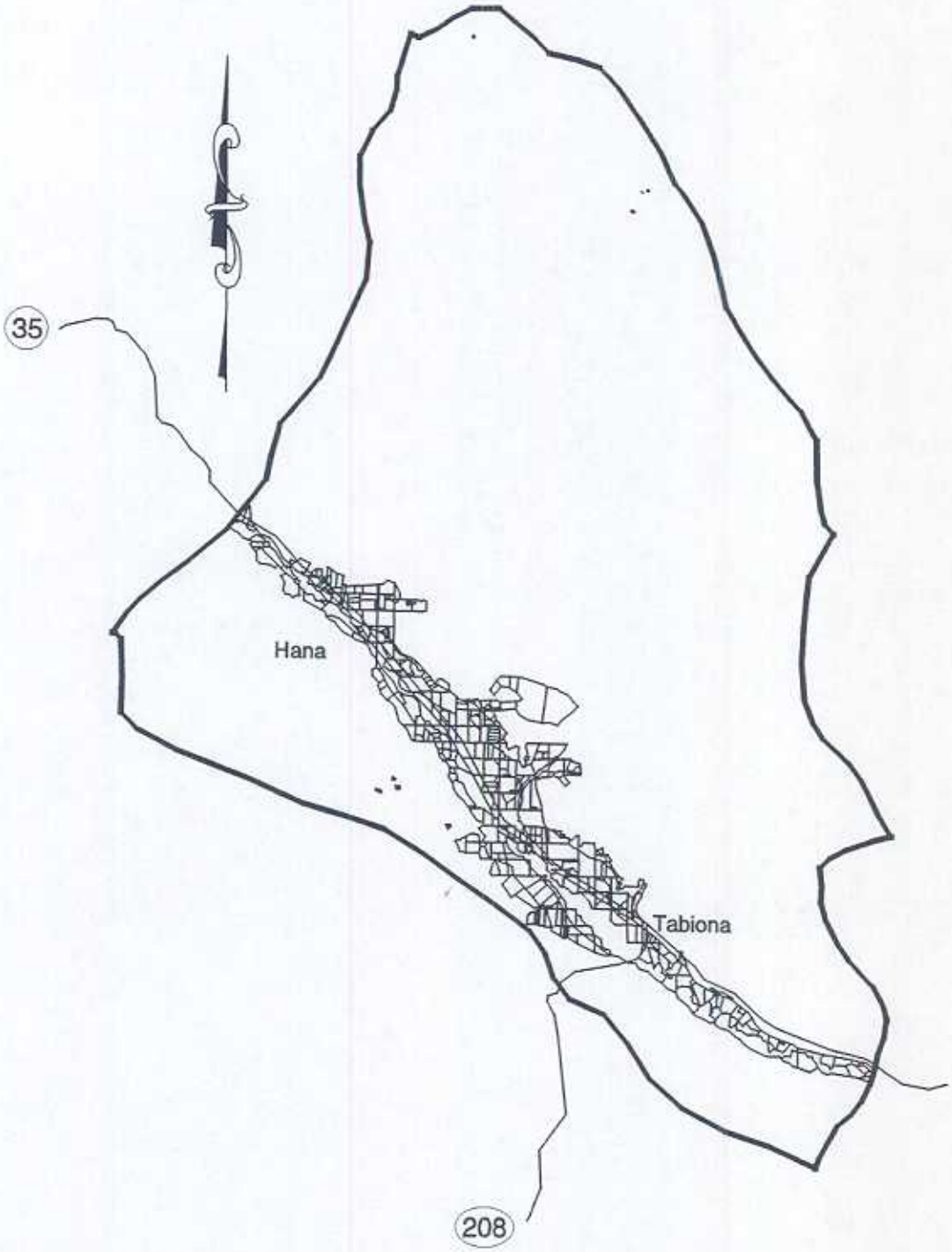

Figure 38. Water-related land use coverage of the Tabiona 07-03-009 subarea.

Land Cover Area Summary for Figure 39.
Upper Rock Creek 07-03-010 subarea.

State Code	Cover Type	Acres
IA3d	Pasture	47.92
IIE	Riparian	346.06
IIF	Open Water	14.10
IIF2	Reservoirs	2.75
IIF3	Ponds & Lakes	1,189.14
Total Water-Related Land Use		1,599.97
R	All Other Land	95,945.55
Total Land In Subarea		97,545.52

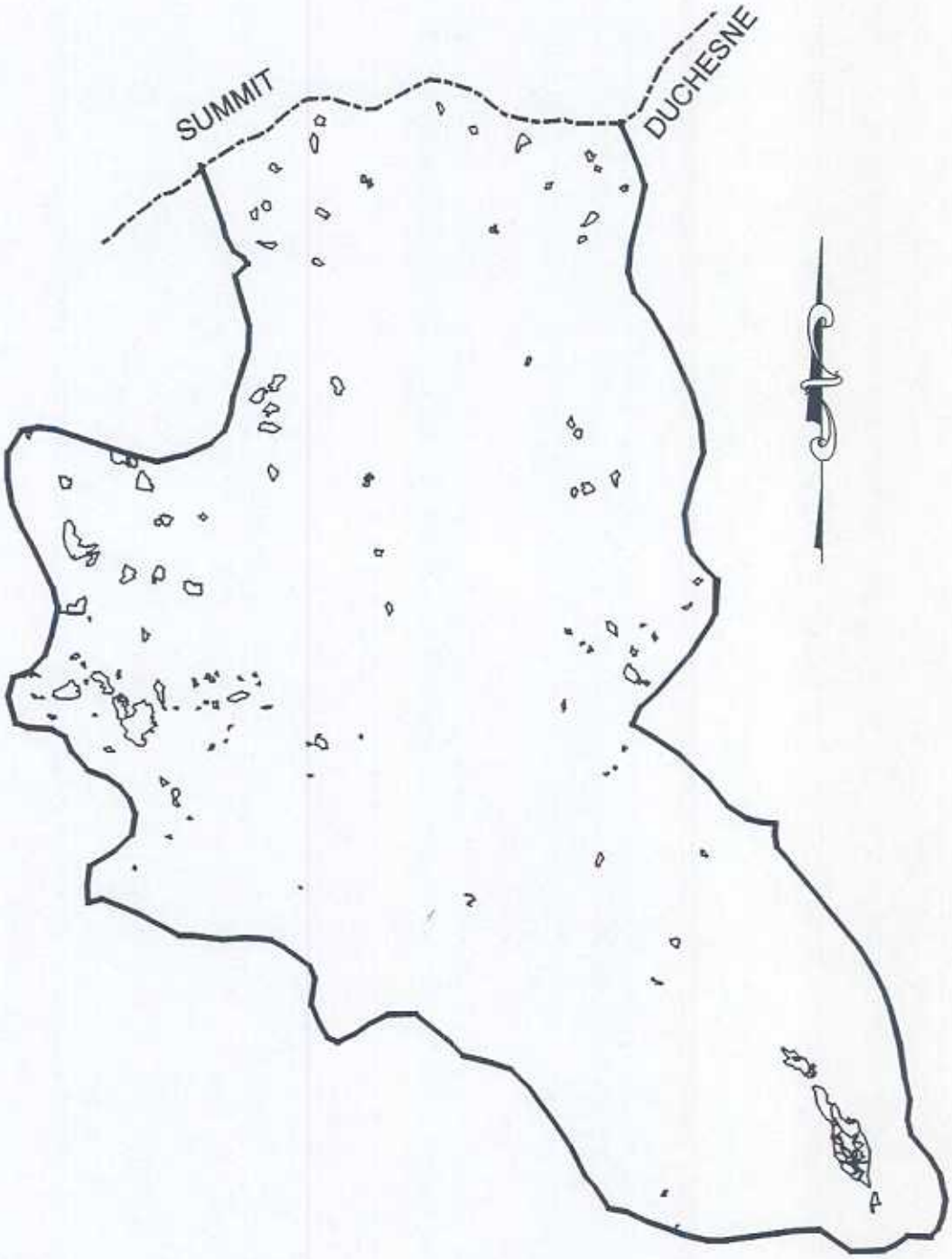

Figure 39. Water-related land use coverage of the Upper Rock Creek 07-03-010 subarea.

Land Cover Area Summary for Figure 40.
Lower Rock River 07-03-011 subarea.

State Code	Cover Type	Acres
IA3d	Pasture	102.39
IIE	Riparian	937.75
IIF3	Ponds & Lakes	5.64
VA1	Farmsteads	3.33
Total Water-Related Land Use		1,049.11
R	All Other Land	57,390.68
Total Land In Subarea		58,439.79

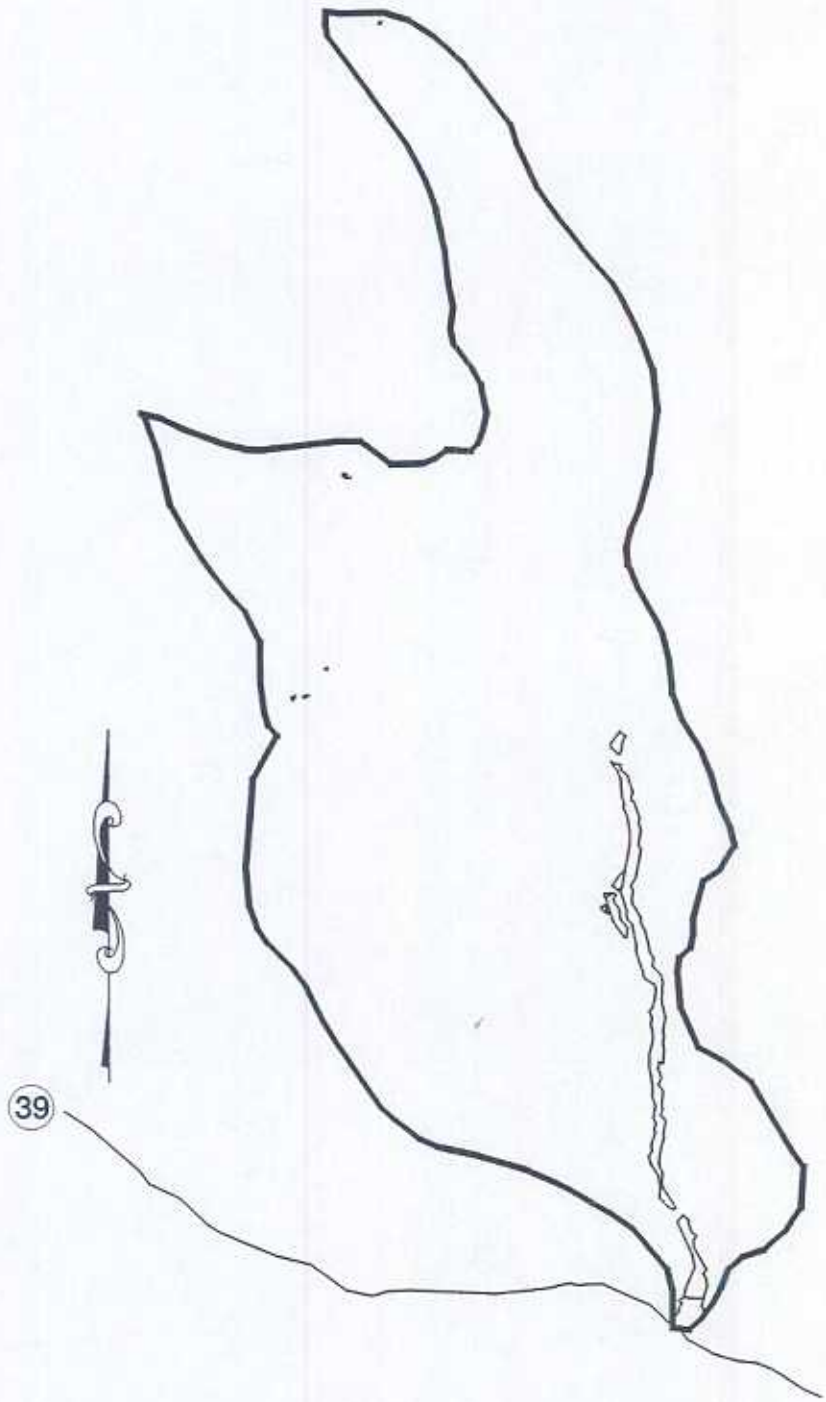

Figure 40. Water-related land use coverage of the Lower Rock River 07-03-011 subarea.

Land Cover Area Summary for Figure 41.
Utahn 07-03-012 subarea.

State Code	Cover Type	Acres
IA1a	Fruit	3.18
IA2a	Grain	182.19
IA2a1	Corn	455.55
IA2b1	Potatoes	2.03
IA3a	Alfalfa	1,828.79
IA3b	Grass Hay	583.08
IA3c	Grass/Turf	5.32
IA3d	Pasture	1,605.20
IA4a	Fallow	67.27
IA4b	Idle	87.56
IB2b	Pasture (dry)	32.43[1]
IIA1a	Pasture (surf. & sub irr.)	277.87
IIE	Riparian	1,462.13
IIF2	Reservoirs	21.08
IIF3	Ponds & Lakes	3.97
IIF4b	Sewage Lagoon	23.48
IIF4c	Evaporation Pond	3.57
IVC	Excavated Lands	12.48
VA1	Farmsteads	108.20
VA2	Open Spaces (rural)	28.64
VB2	Bldgs/Homes (lo den)	521.44
VC2	Industrial	127.47
VC3	M&I Open Spaces	9.00
VD	Transportation	46.49
Total Water-Related Land Use		7,088.42
R	All Other Land	49,687.94
Total Land In Subarea		56,776.36

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

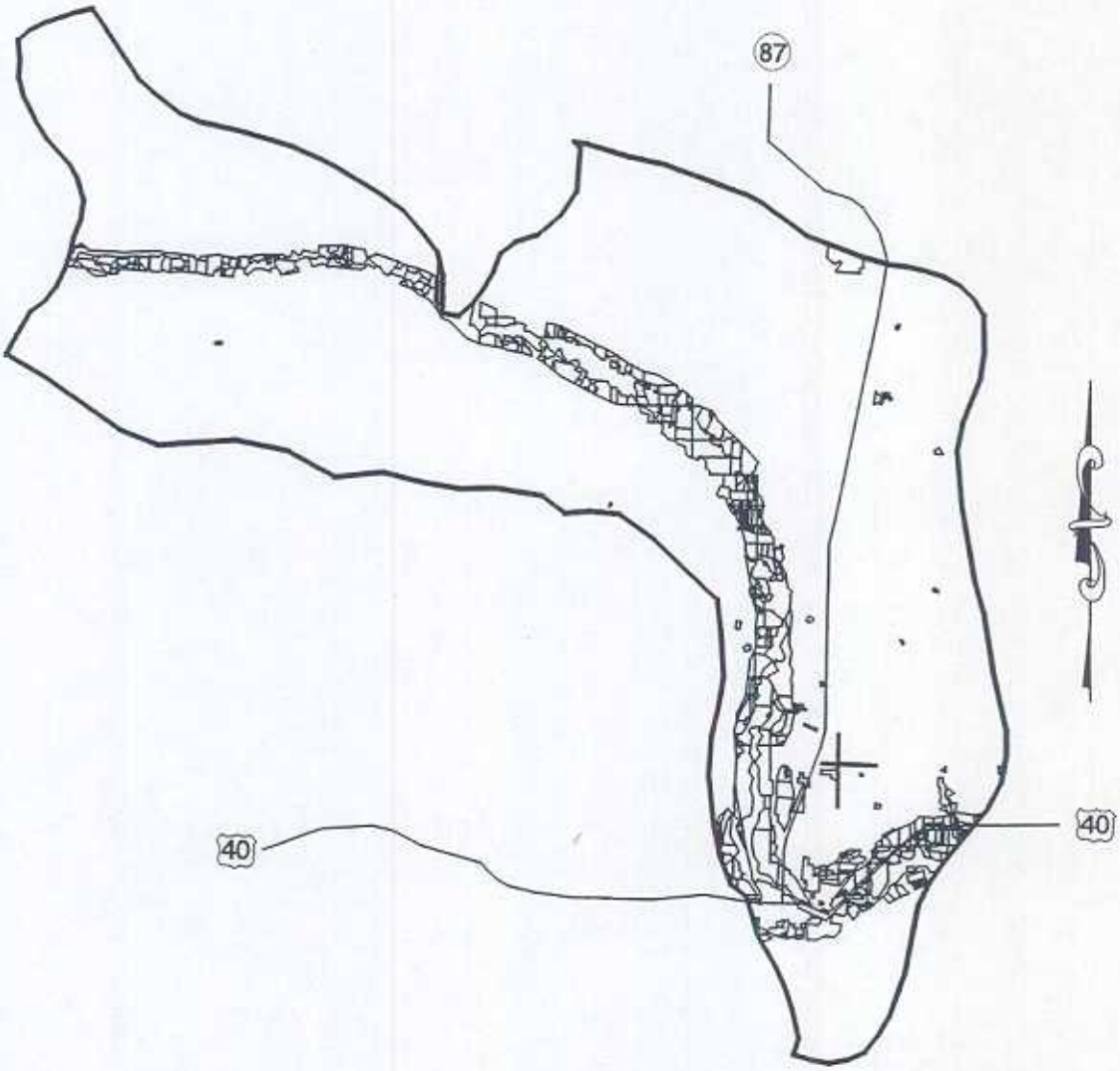

Figure 41. Water-related land use coverage of the Utahn 07-03-012 subarea.

Land Cover Area Summary for Figure 42.
Antelope Creek 07-03-013 subarea.

State Code	Cover Type		Acres
IA2a	Grain		44.73
IA3a	Alfalfa		382.43
IA3d	Pasture		92.96
IA4b	Idle		38.27
IB2b	Pasture	(dry)	26.92[1]
IIE	Riparian		133.58
IIF2	Reservoirs		9.41
IIF3	Ponds & Lakes		1.10
VA1	Farmsteads		42.42
VA2	Open Spaces (rural)		1.75
Total Water-Related Land Use			773.57
R	All Other Land		129,270.19
Total Land In Subarea			130,043.76

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

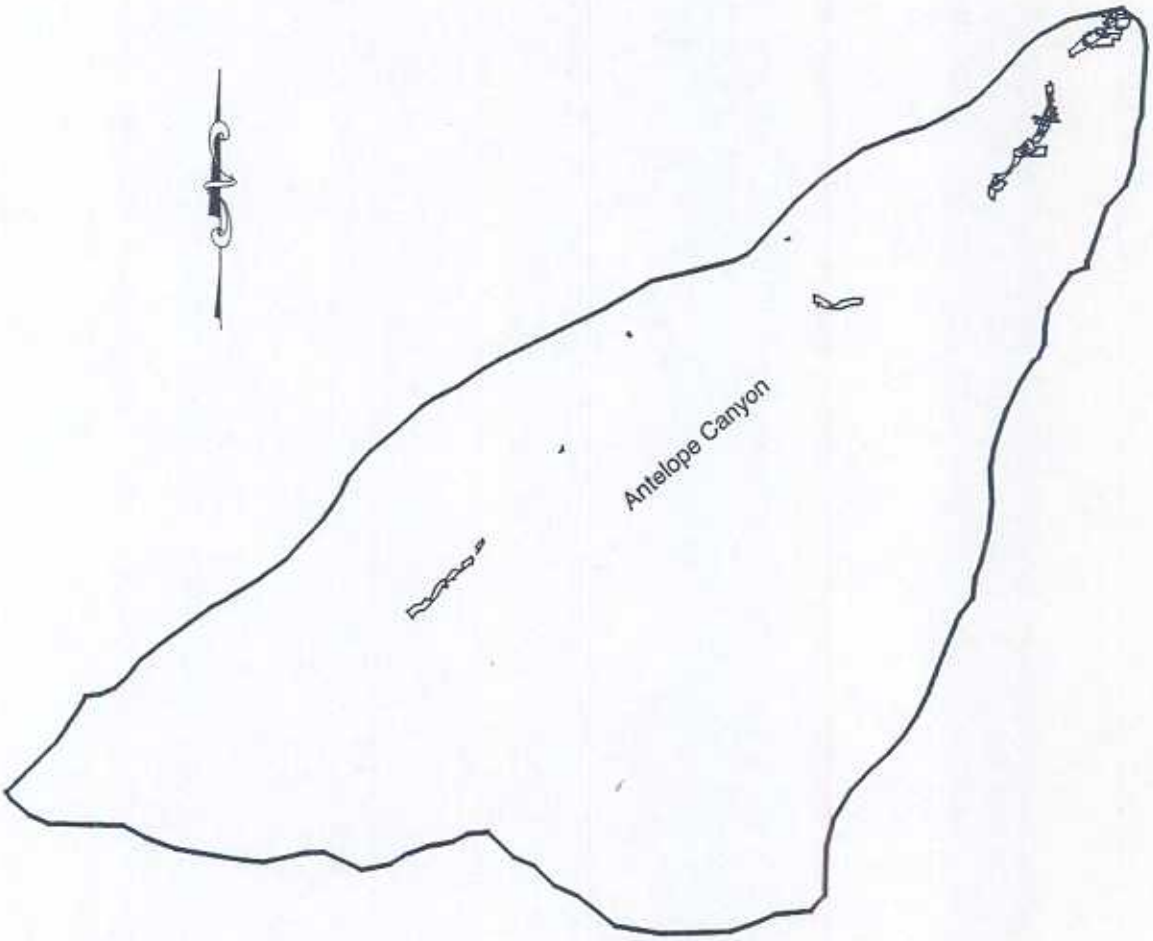

Figure 42. Water-related land use coverage of the Antelope Creek 07-03-013 subarea.

Land Cover Area Summary for Figure 43.
Moon Lake 07-03-014 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	1,299.14
Total Water-Related Land Use		1,299.14
R	All Other Land	71,267.11
Total Land In Subarea		72,566.25

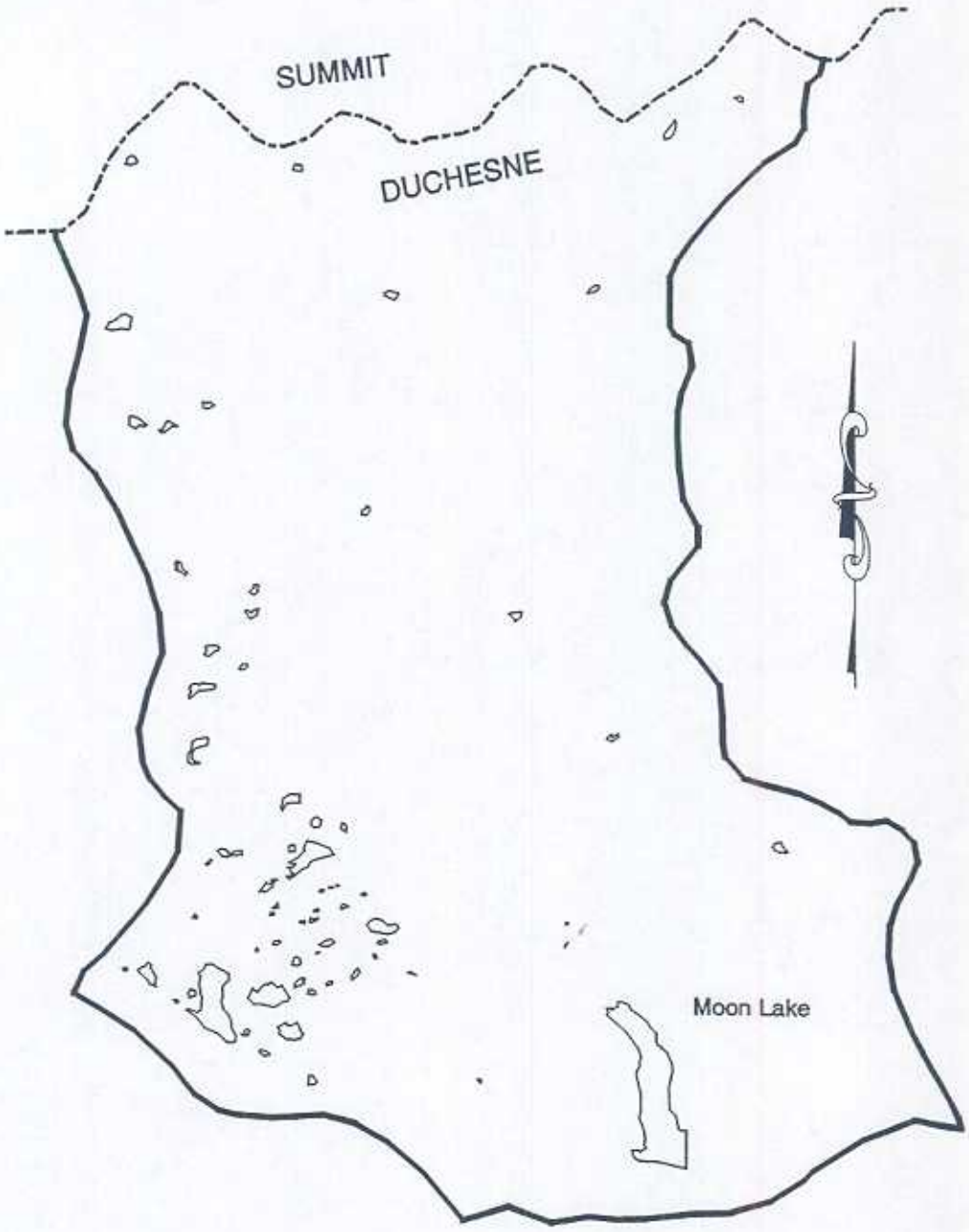

Figure 43. Water-related land use coverage of the Moon Lake 07-03-014 subarea.

Land Cover Area Summary for Figure 44.
Yellowstone River 07-03-015 subarea.

State Code	Cover Type	Acres
IA3d	Pasture	30.86
IIA1a	Pasture (surf. & sub irr.)	90.10
IIE	Riparian	571.08
IIF2	Reservoirs	8.65
IIF3	Ponds & Lakes	754.67
VA1	Farmsteads	22.06
VB3	Open Spaces	21.50
VC1	Commercial	3.57
Total Water-Related Land Use		1,502.49
R	All Other Land	79,833.98
Total Land In Subarea		81,336.47

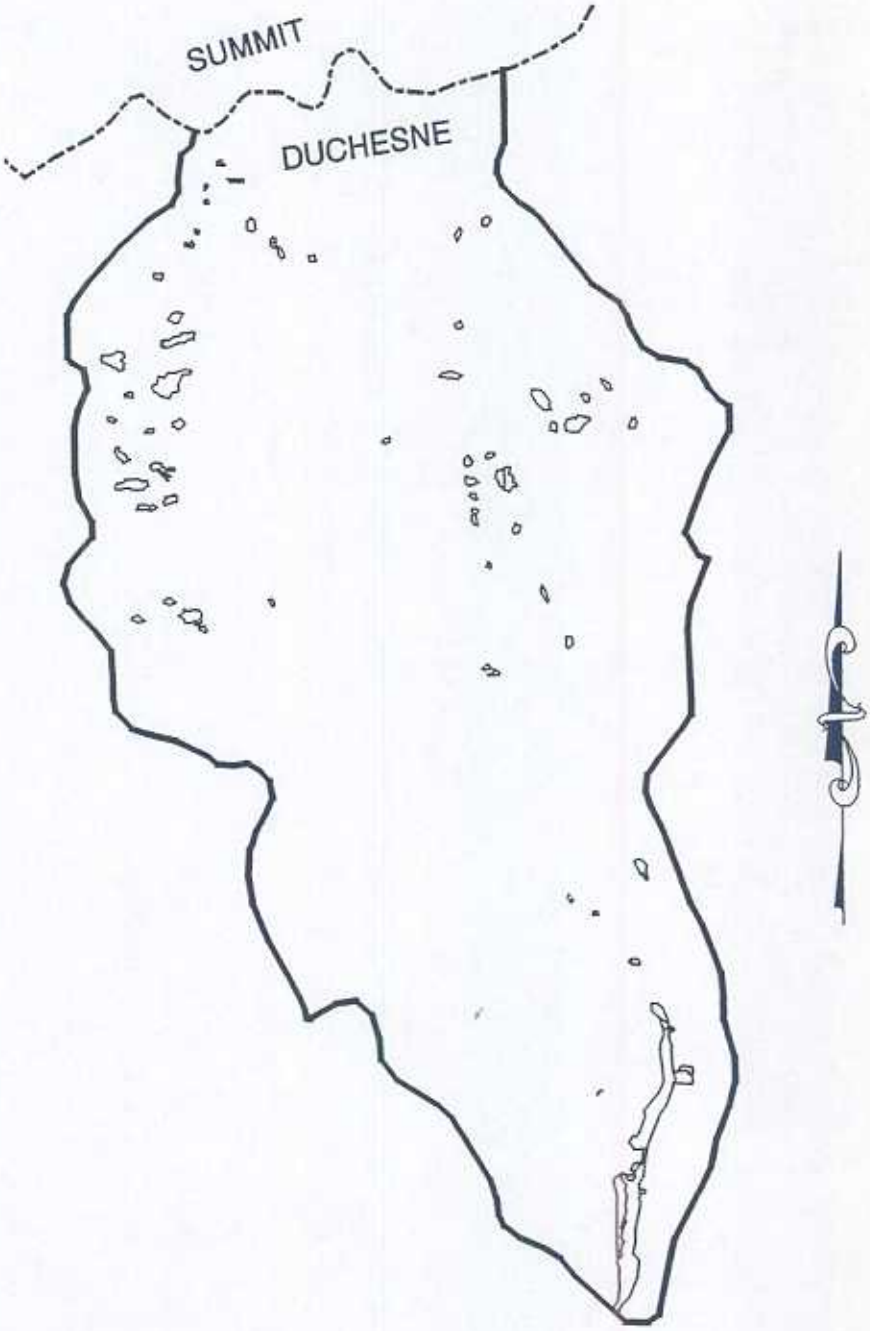

Figure 44. Water-related land use coverage of the Yellowstone River 07-03-015 subarea.

Land Cover Area Summary for Figure 45.
Uinta River 07-03-016 subarea.

State Code	Cover Type	Acres
IIF3	Ponds & Lakes	1,095.56
Total Water-Related Land Use		1,095.56
R	All Other Land	103,220.67
Total Land In Subarea		104,316.23

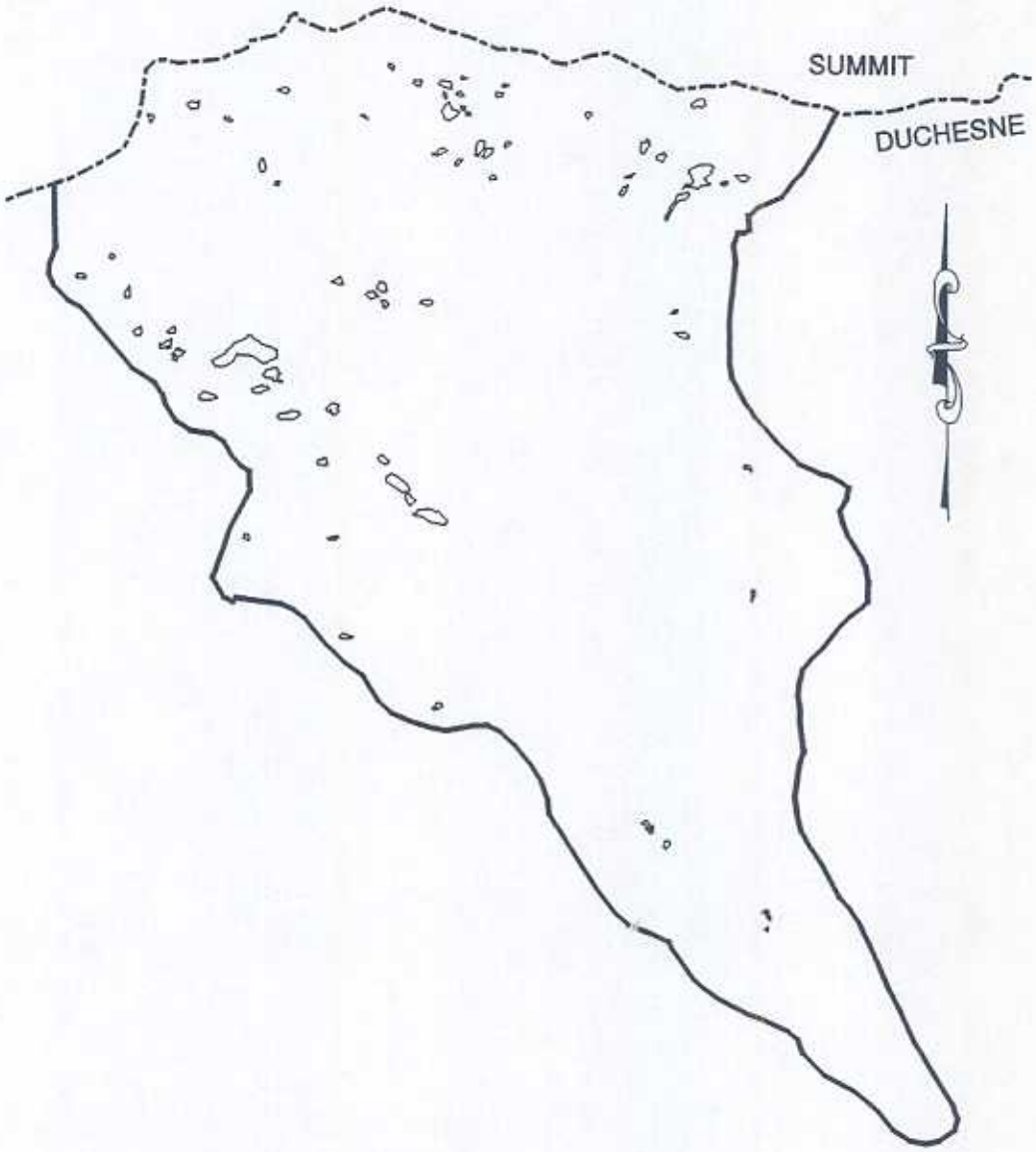

Figure 45. Water-related land use coverage of the Uinta River 07-03-016 subarea.

Land Cover Area Summary for Figure 46.
Farm Creek 07-03-017 subarea.

Code	Land Cover	Duchesne Co. Acres	Uintah Co. Acres	Total Acres
	Total Water-Related Land Use	0.00	0.00	0.00
R	All Other Land	0.00	0.00	0.00
	Total Land In Subarea	6,969.52	2,935.15	9,904.67
		6,969.52	2,935.15	9,904.67

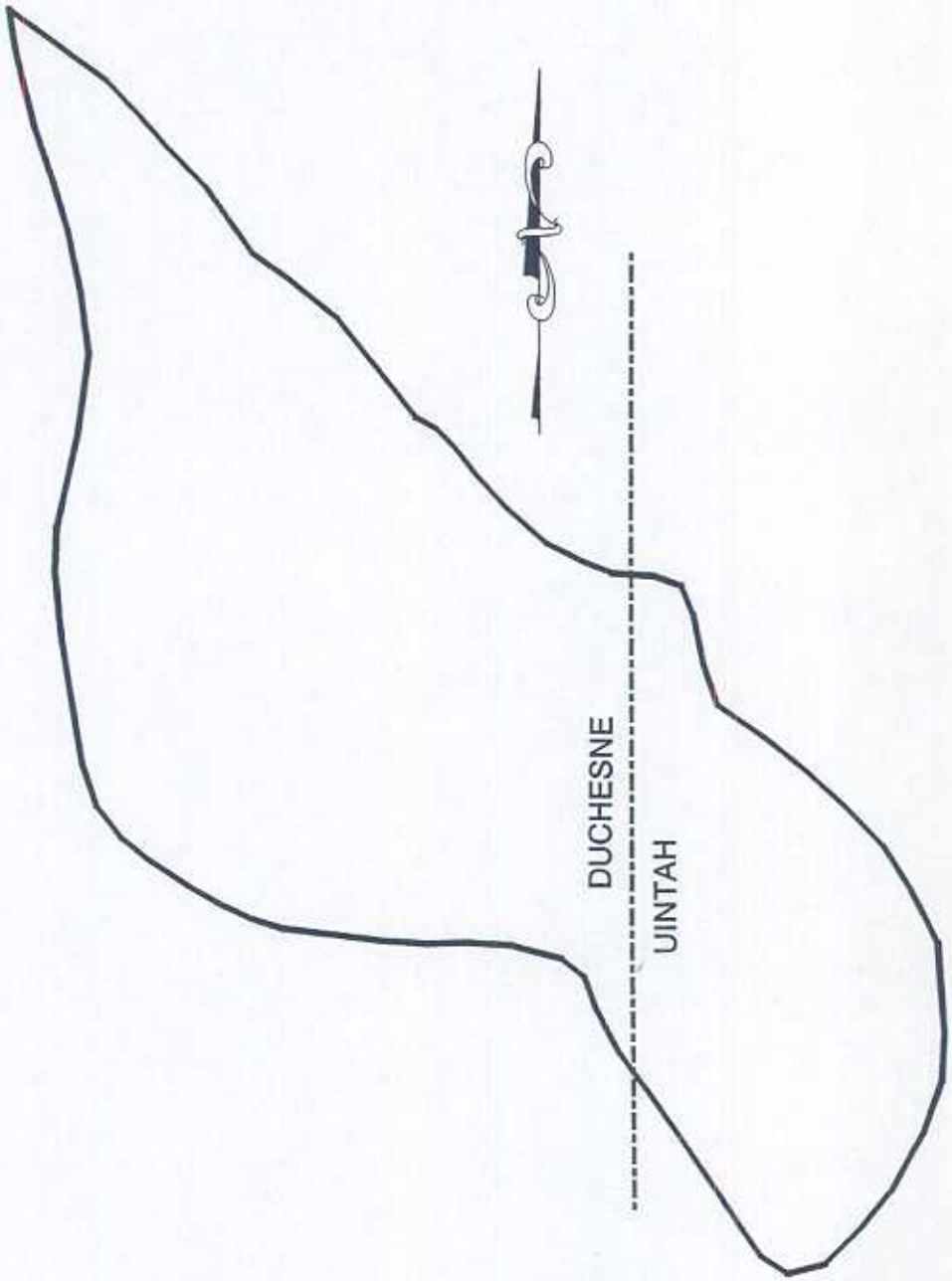

Figure 46. Water-related land use coverage of the Farm Creek 07-03-017 subarea.

Land Cover Area Summary for Figure 47.
Whiterocks River 07-03-018 subarea.

Code	Land Cover	Duchesne Co. Acres	Uintah Co. Acres	Total Acres
IIF2	Reservoirs	0.00	148.81	148.81
IIF3	Ponds & Lakes	588.97	129.86	718.83
Total Water-Related Land Use		588.97	278.67	867.64
R	All Other Land	44,837.13	23,805.30	68,642.43
Total Land In Subarea		45,426.10	24,083.97	69,510.07

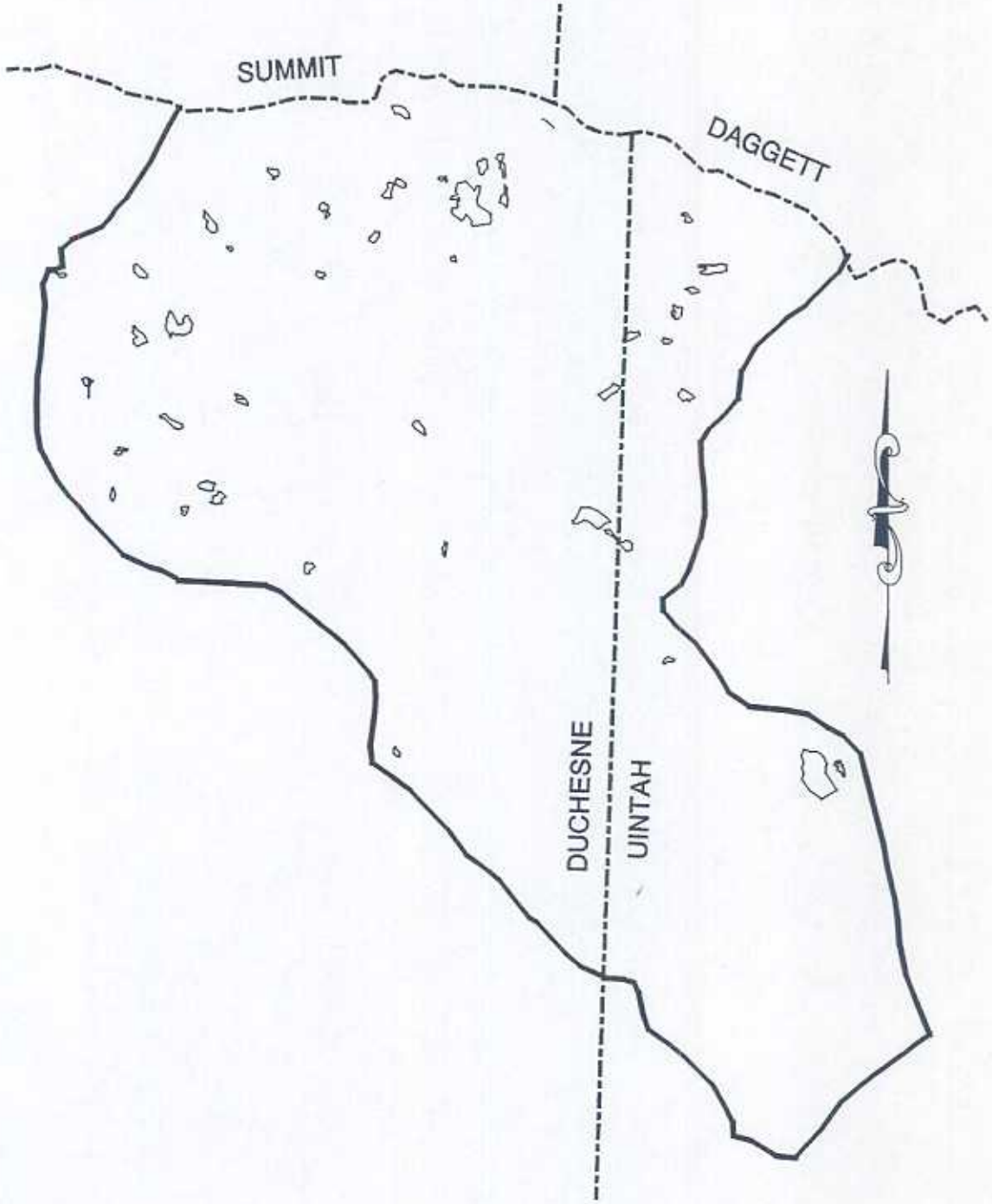

Figure 47. Water-related land use coverage of the Whiterocks River 07-03-018 subarea.

Land Cover Area Summary for Figure 48.
Roosevelt/Duchesne 07-03-019 subarea.

Code	Land Cover	Duchesne Co. Acres	Uintah Co. Acres	Total Acres
IA1a	Fruit	0.00	20.35	20.35
IA2a	Grain	4,331.08	1,962.30	6,293.38
IA2a1	Corn	1,912.58	1,596.77	3,509.35
IA2a2	Sorghum	64.48	0.00	64.48
IA2c	Other Row Crops	11.69	0.00	11.69
IA3a	Alfalfa	20,046.99	9,247.36	29,294.35
IA3b	Grass Hay	16,753.98	5,244.11	21,998.09
IA3d	Pasture	38,652.88	16,975.30	55,628.18
IA4a	Fallow	475.13	232.96	708.09
IA4b	Idle	2,654.32	2,028.44	4,682.76
IB1a3	Beans (dry)	0.00	39.13	39.13[1]
IB2b	Pasture (dry)	10.19	233.91	244.10[1]
IIA1a	Pasture (surf. & sub irr.)	3,181.15	2,113.20	5,294.35
IIA2a	Pasture (sub-irr.)	0.00	638.81	638.81
IIB	Cattail/Bullrush Asp.	19.93	86.59	106.52
IIE	Riparian	6,818.98	3,041.06	9,860.04
IIF2	Reservoirs	1,735.20	1,095.10	2,830.30
IIF3	Ponds & Lakes	693.93	32.99	726.92
IIF4b	Sewage Lagoon	58.59	159.98	218.57
IVC	Excavated Lands	126.90	25.88	152.78
VA1	Farmsteads	1,363.69	613.82	1,977.51
VA2	Open Spaces (rural)	351.35	187.97	539.32
VB2	Bldgs/Homes (lo den)	2,346.38	1,293.73	3,640.11
VB3	Open Spaces	206.61	53.50	260.11
VB4	Idle Spaces	176.26	82.09	258.35
VC1	Commercial	294.43	157.18	451.61
VC2	Industrial	918.24	182.87	1,101.11
VC3	M&I Open Spaces	96.67	119.03	215.70
Total Water-Related Land Use		103,301.63	47,464.43	150,766.06
R	All Other Land	495,108.07	179,750.47	674,858.54
Total Land In Subarea		598,409.70	227,214.90	825,624.60

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

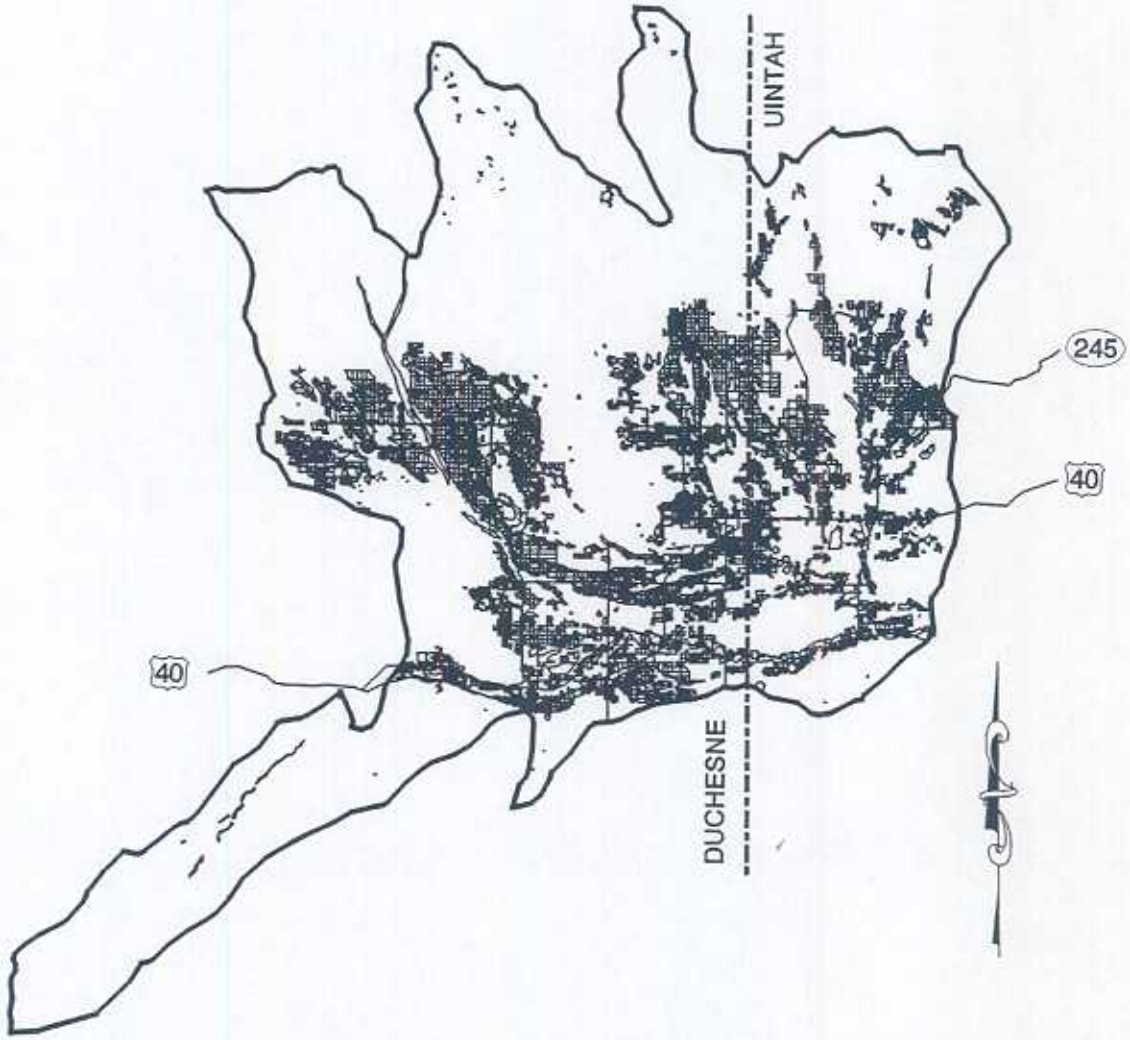

Figure 48. Water-related land use coverage of the Roosevelt/Duchesne 07-03-019 subarea.

Land Cover Area Summary for Figure 49.
Ouray 07-03-020 subarea.

State Code	Cover Type		Acres
IA2a	Grain		71.51
IA3a	Alfalfa		2,131.55
IA3b	Grass Hay		13.37
IA3d	Pasture		1,152.32
IA4a	Fallow		200.78
IA4b	Idle		273.58
IB2b	Pasture	(dry)	83.44[1]
IB3b	Idle	(dry)	193.93[1]
IIA1a	Pasture (surf. & sub irr.)		124.84
IIA1b	Hayland (surf. & sub irr.)		4.08
IIA2a	Pasture (sub-irr.)		332.24
IIE	Riparian		3,813.85
IIF2	Reservoirs		120.05
IIF3	Ponds & Lakes		2.96
VA1	Farmsteads		66.97
VA2	Open Spaces (rural)		28.86
VB2	Bldgs/Homes (lo den)		57.69
VC2	Industrial		1.70
Total Water-Related Land Use			8,673.72
R	All Other Land		41,233.14
Total Land In Subarea			49,906.86

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

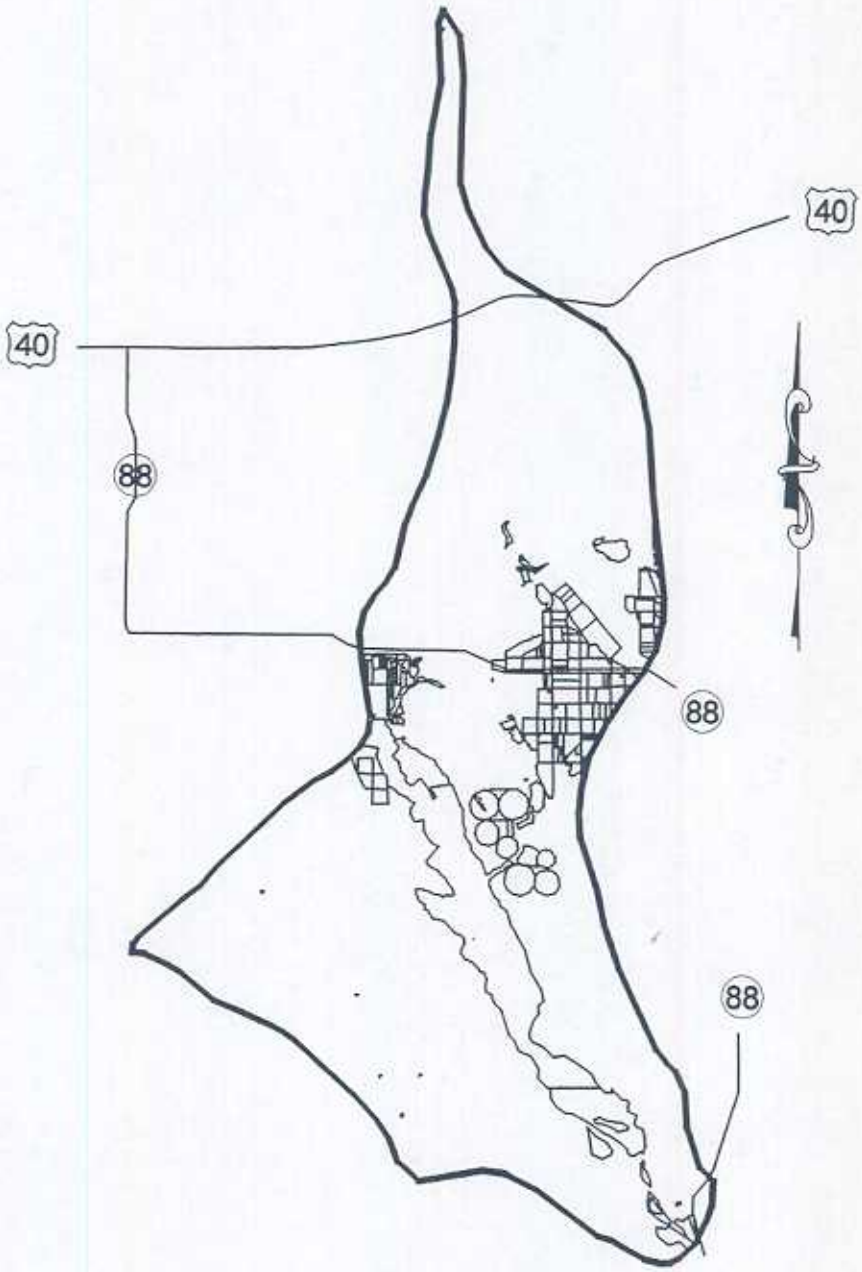

Figure 49. Water-related land use coverage of the Ouray 07-03-020 subarea.

Land Cover Area Summary for Figure 50.
Jensen 07-04-001 subarea.

State Code	Cover Type		Acres
IA2a	Grain		336.28
IA2a1	Corn		351.81
IA2a2	Sorgum		39.15
IA3a	Alfalfa		5,824.33
IA3b	Grass Hay		348.79
IA3d	Pasture		1,640.33
IA4a	Fallow		762.76
IA4b	Idle		770.52
IB2b	Pasture	(dry)	73.38[1]
IB3b	Idle	(dry)	348.62[1]
IIA1a	Pasture (surf. & sub irr.)		285.84
IIA1b	Hayland (surf. & sub irr.)		40.47
IIA2a	Pasture (sub-irr.)		99.19
IIB	Cattail/Bullrush Asp.		1,459.42
IIC	Wet Flats		694.98
IIE	Riparian		4,210.57
IIF1	Streams		4,906.86
IIF2	Reservoirs		28.28
IIF3	Ponds & Lakes		1,595.72
IVC	Excavated Lands		36.27
VA1	Farmsteads		102.87
VA2	Open Spaces (rural)		118.89
VB2	Bldgs/Homes (lo den)		16.73
VB3	Open Spaces		11.10
VC1	Commercial		28.85
VC2	Industrial		3.26
Total Water-Related Land Use			24,135.27
R	All Other Land		361,203.84
Total Land In Subarea			385,339.11

[1]In conducting water-related land use inventories, the division attempts to inventory all lands or areas that consume or evaporate water other than natural precipitation. Non-irrigated agriculture lands are generally mapped if they fall within or border irrigated lands. Non-irrigated lands away from irrigated lands are normally not mapped. Acres shown in the table reflect only the numbers of acres mapped, not the total numbers of acres in the subarea.

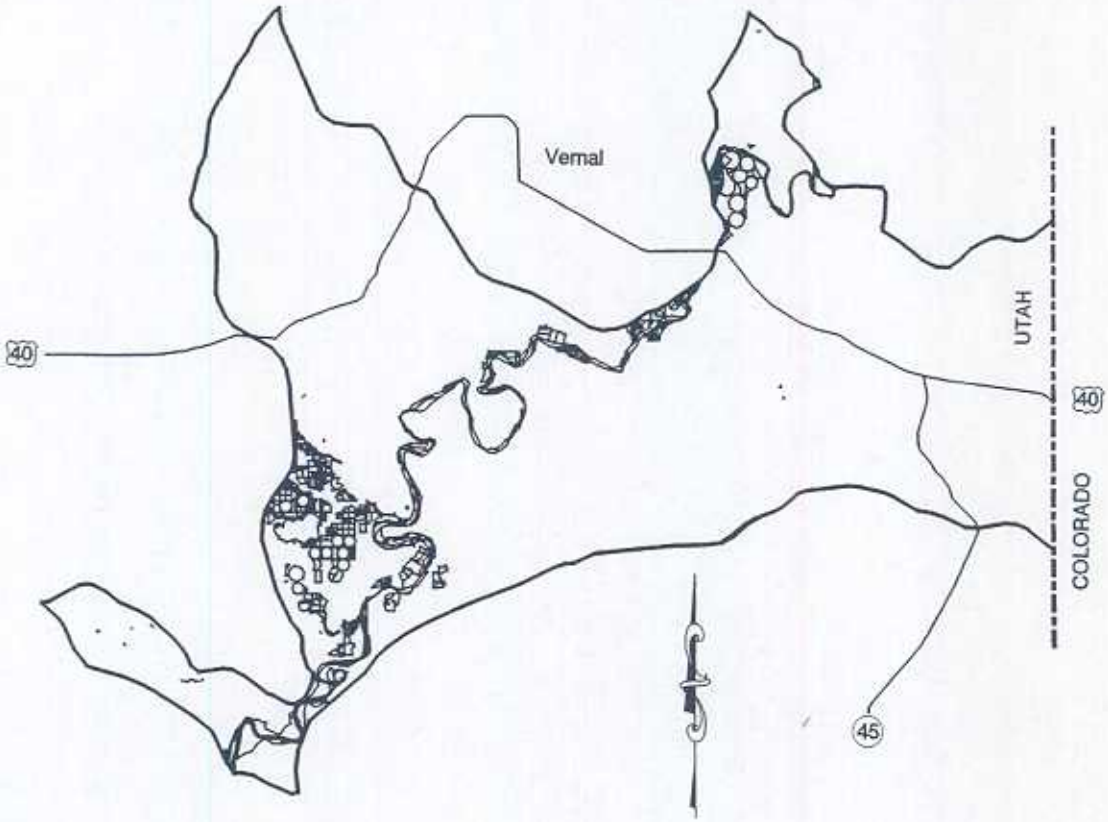

Figure 50. Water-related land use coverage of the Jensen 07-04-001 subarea.

Land Cover Area Summary for Figure 51.
Upper Minnie Maude 07-04-002 subarea.

Code	Land Cover	Duchesne Co. Acres	Carbon Co. Acres	Total Acres
IA3d	Pasture	0.00	74.62	74.62
IIA1a	Pasture (surf. & sub irr.)	0.00	132.73	132.73
IIF2	Reservoirs	0.00	0.59	0.59
IIF3	Ponds & Lakes	0.00	0.79	0.79
Total Water-Related Land Use		0.00	208.73	208.73
R	All Other Land	17,391.95	12,096.38	29,461.33
Total Land In Subarea		17,391.95	12,278.11	29,670.06

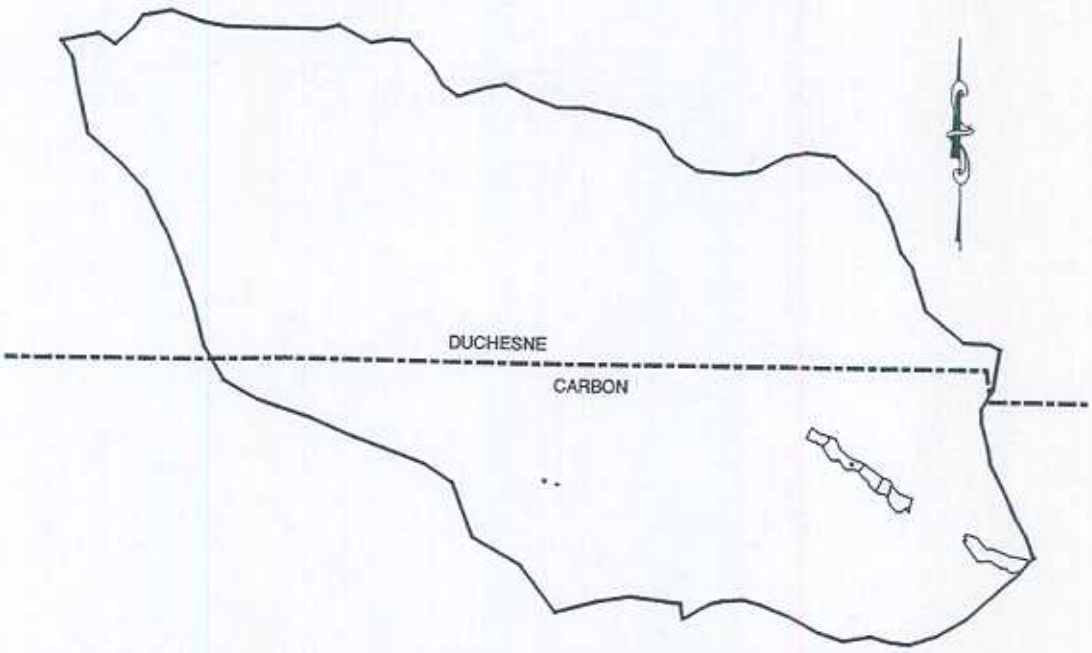

Figure 51. Water-related land use coverage of the Upper Minnie Maud 07-04-002 subarea.

Land Cover Area Summary for Figure 52.
Argyle Creek 07-04-003 subarea.

Code	Land Cover	Duchesne Co. Acres	Carbon Co. Acres	Total Acres
IA3a	Alfalfa	30.62	177.04	207.66
IA3b	Grass Hay	0.00	3.61	3.61
IA3d	Pasture	30.31	161.59	191.90
IA4a	Fallow	0.00	19.52	19.52
IA4b	Idle	43.73	6.82	50.55
IIA1a	Pasture (surf. & sub irr.)	281.10	0.00	281.10
IIA2a	Pasture (sub-irr.)	38.87	0.00	38.87
IIA2b	Hayland (sub-irr.)	35.90	0.00	35.90
IIE	Riparian	103.88	238.58	342.46
VA1	Farmsteads	5.42	8.01	13.43
Total Water-Related Land Use		569.83	615.17	1,185.00
R	All Other Land	56,052.34	50,194.15	106,246.49
Total Land In Subarea		56,622.17	50,809.32	107,431.49

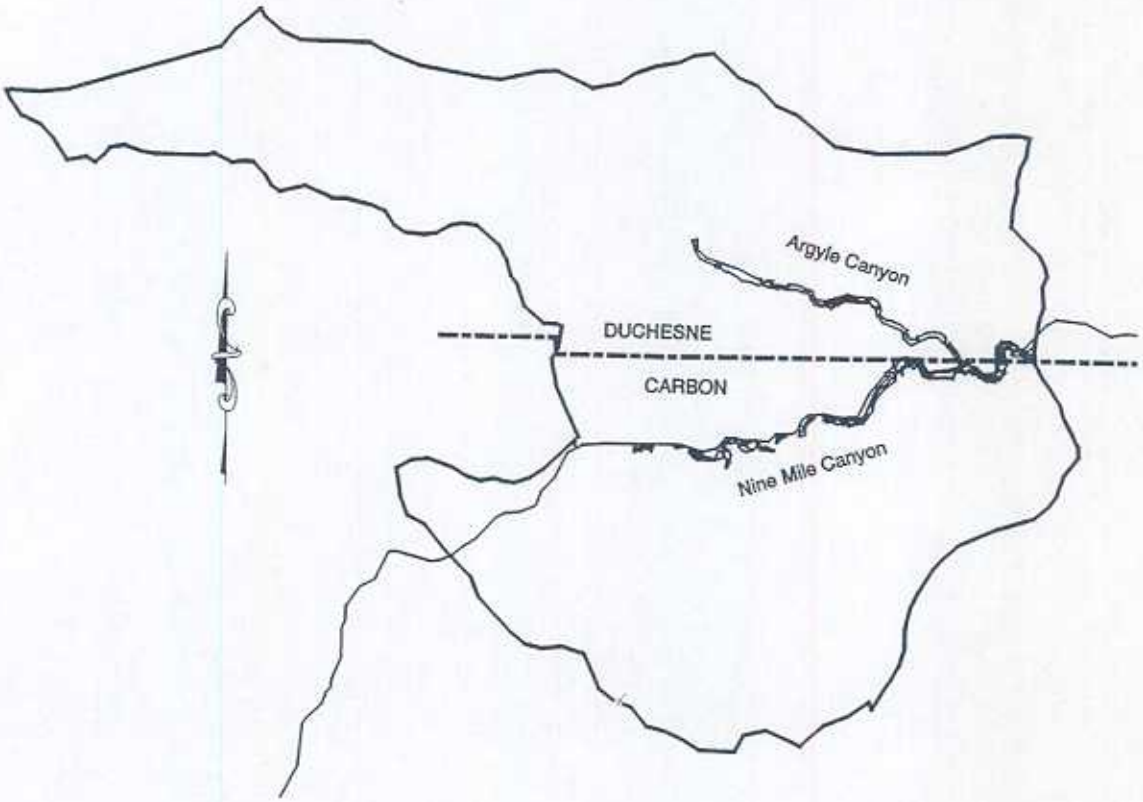

Figure 52. Water-related land use coverage of the Argyle Creek 07-04-003 subarea.

Land Cover Area Summary for Figure 53.
Nine Mile 07-04-004 subarea.

Code	Land Cover	Uintah Co. Acres	Duchesne Co. Acres	Carbon Co. Acres	Total Acres
IA2a1	Corn	0.00	0.00	5.17	5.17
IA3a	Alfalfa	0.00	216.21	70.62	286.83
IA3d	Pasture	0.00	100.93	25.89	126.82
IA4a	Fallow	0.00	16.17	0.00	16.17
IA4b	Idle	0.00	58.43	2.26	60.69
IIE	Riparian	0.00	158.73	137.88	296.61
VA1	Farmsteads	0.00	4.45	0.00	4.45
VA2	Open Spaces (rural)	0.00	7.80	0.00	7.80
Total Water-Related Land Use		0.00	562.72	241.82	804.54
R	All Other Land	5,984.96	52,785.13	89,274.16	148,044.25
Total Land In Subarea		5,984.96	53347.85	89,515.98	148,848.79

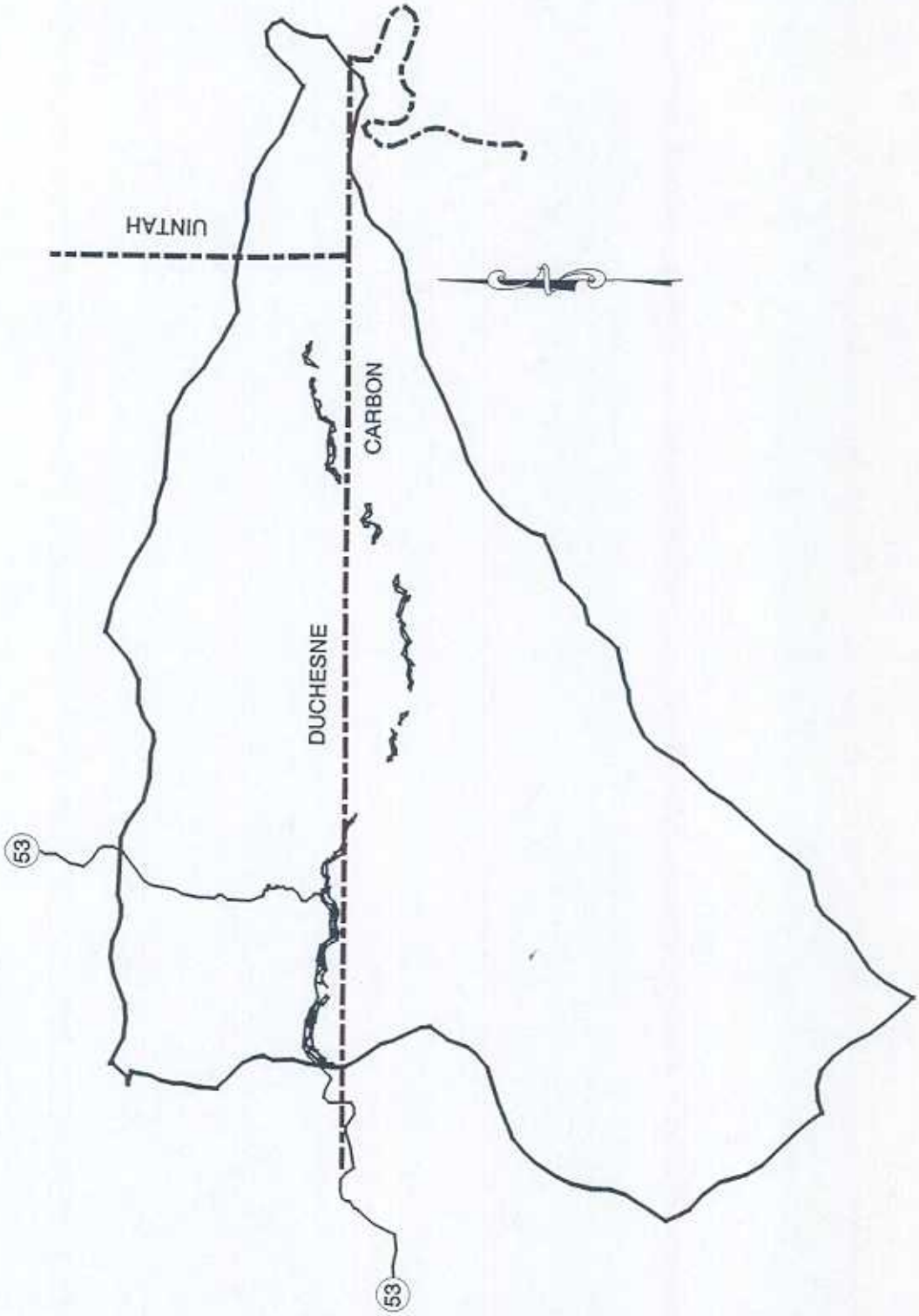

Figure 53. Water-related land use coverage of the Nine Mile 07-04-004 subarea.

Land Cover Area Summary for Figure 54
Upper Willow 07-04-005 subarea.

Code	Land Cover	Uintah Co. Acres	Grand Co. Acres	Total Acres
IIF3	Ponds & Lakes	1.02	0.00	1.02
Total Water-Related Land Use		1.02	0.00	1.02
R	All Other Land	32,958.34	157,736.21	190,694.55
Total Land In Subarea		32,959.36	157,736.21	190,695.57

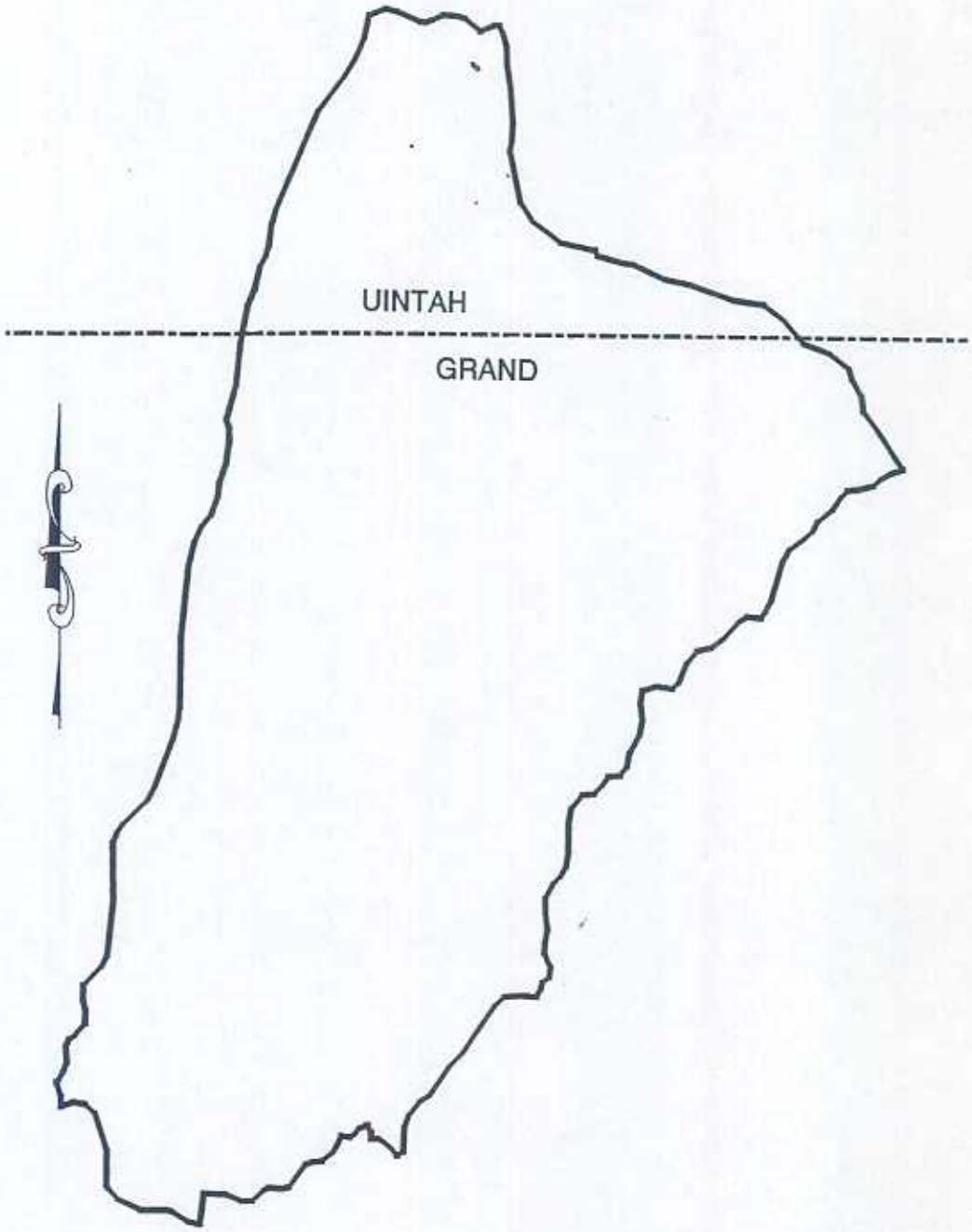

Figure 54. Water-related land use coverage of the Upper Willow 07-04-006 subarea.

Land Cover Area Summary for Figure 55.
Willow 07-04-006 subarea.

Code	Land Cover	Uintah Co. Acres	Grand Co. Acres	Total Acres
IA3a	Alfalfa	579.91	0.00	579.91
IA3b	Grass Hay	125.21	0.00	125.21
IA3d	Pasture	294.78	0.00	294.78
IA4b	Idle	29.00	0.00	29.00
IIA1a	Pasture (surf. & sub irr.)	61.41	0.00	61.41
IIB	Cattail/Bullrush Asp.	43.78	0.00	43.78
IIE	Riparian	110.80	0.00	110.80
IIF2	Reservoirs	66.23	23.72	89.95
IIF3	Ponds & Lakes	78.48	0.00	78.48
VA1	Farmsteads	6.94	0.00	6.94
VC2	Industrial	1.02	0.00	1.02
Total Water-Related Land Use		1,397.56	23.72	1,421.28
R	All Other Land	335,279.41	71,379.28	406,658.69
Total Land In Subarea		336,676.97	71,403.00	408,079.97

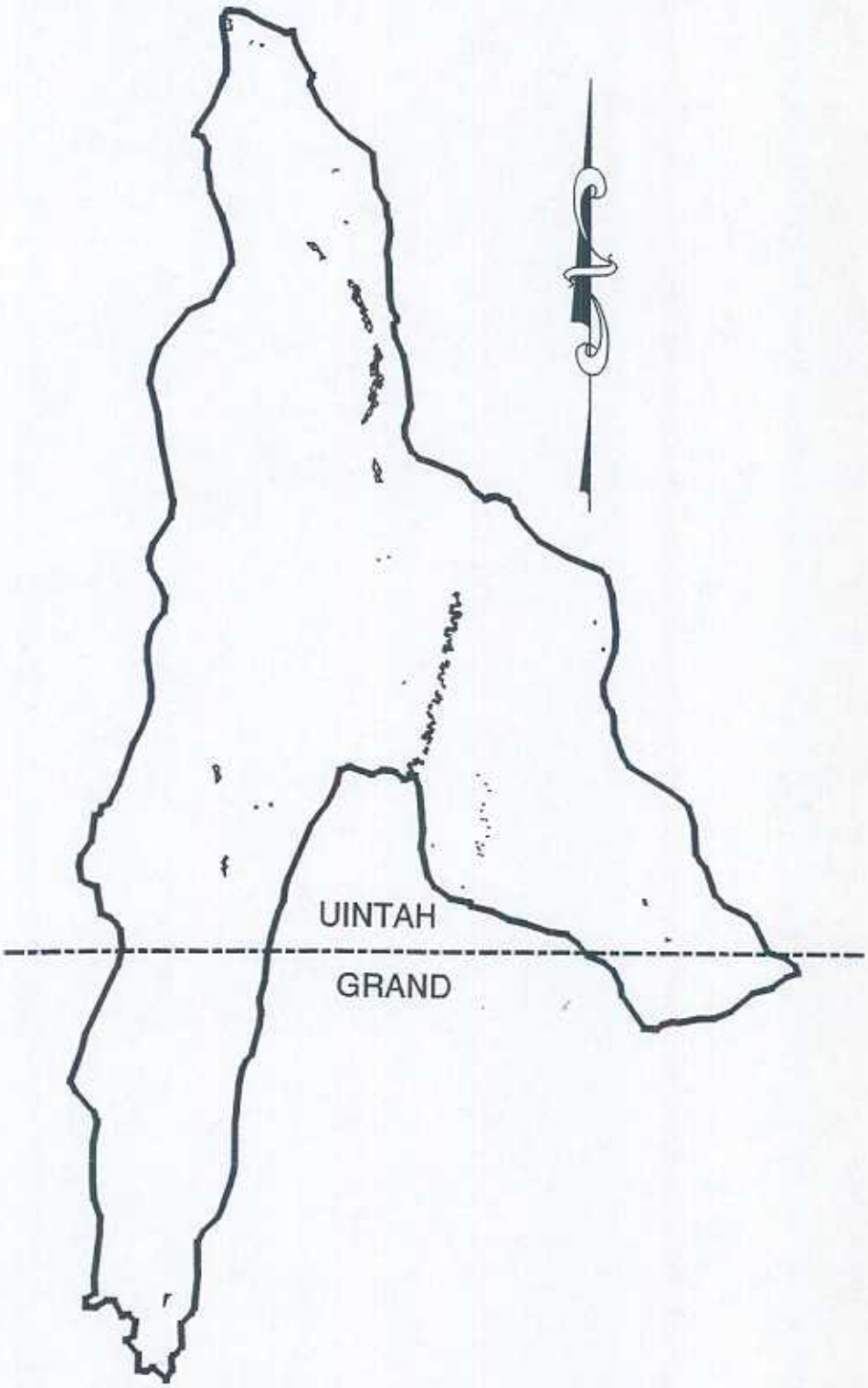

Figure 55. Water-related land use coverage of the Willow 07-04-006 subarea.

Land Cover Area Summary for Figure 56.
Range Creek 07-04-007 subarea.

Code	Land Cover	Carbon Co. Acres	Emery Co. Acres	Total Acres
IA3a	Alfalfa	0.00	30.56	30.56
IA3d	Pasture	0.00	77.23	77.23
IA4a	Fallow	0.00	32.37	32.37
IA4b	Idle	0.00	63.71	63.71
IIE	Riparian	0.00	82.68	82.68
IIF2	Reservoirs	0.00	6.67	6.67
VA2	Open Spaces (rural)	0.00	4.98	4.98
Total Water-Related Land Use		0.00	298.20	298.20
R	All Other Land	29,306.90	64,231.67	93,538.57
Total Land In Subarea		29,306.90	64,529.87	93,836.77

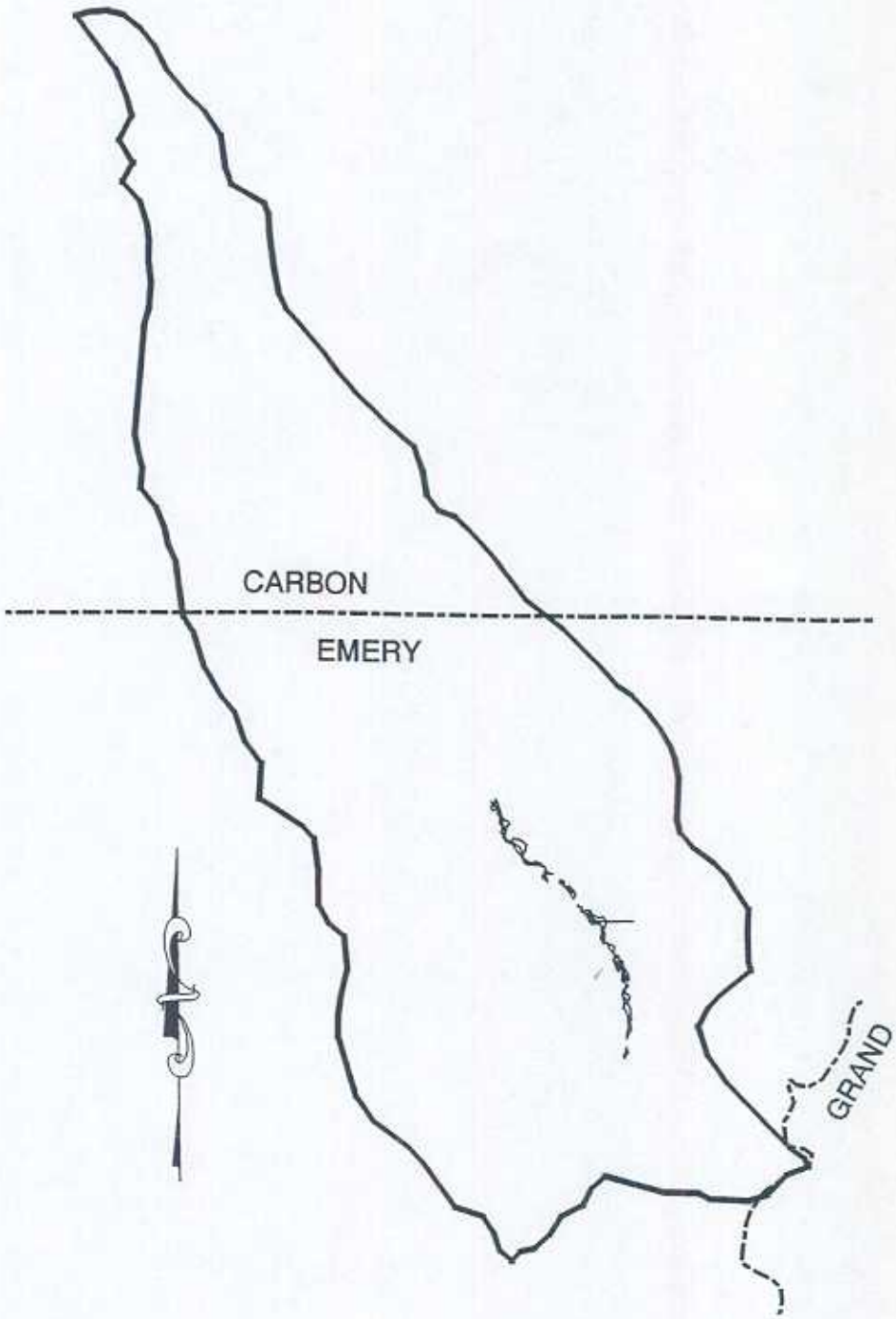

Figure 56. Water-related land use coverage of the Range Creek 07-04-007 subarea.

Land Cover Area Summary for Figure 57.
Desolation 07-04-008 subarea.

Code	Land Cover	Uintah Co. Acres	Duchesne Co. Acres	Carbon Co. Acres	Emery Co. Acres	Grand Co. Acres	Total Acres
IA2a	Grain	63.31	969.58	0.00	0.00	0.00	1,032.89
IA2a1	Corn	1.85	521.39	0.00	0.00	0.00	523.24
IA3a	Alfalfa	741.54	3,384.80	0.00	0.00	0.00	4,126.34
IA3b	Grass Hay	78.12	96.71	0.00	0.00	0.00	174.83
IA3d	Pasture	69.11	430.35	0.00	0.00	0.00	499.46
IA4a	Fallow	41.35	0.00	0.00	0.00	0.00	41.35
IA4b	Idle	47.44	508.01	0.00	0.00	0.00	555.45
IIA1a	Pasture (surf. & sub irr.)	112.64	40.18	0.00	0.00	0.00	152.82
IIA2a	Pasture (sub-irr.)	18.67	0.00	0.00	0.00	0.00	18.67
IIB	Cattail/Bullrush Asp.	148.63	0.00	0.00	0.00	0.00	148.63
IIC	Wet Flats	0.00	14.54	0.00	0.00	0.00	14.54
IIE	Riparian	1,099.84	73.38	0.00	0.00	0.00	1,173.22
IIF1	Streams	2,696.44	0.00	665.78	328.90	636.27	4,327.39
IIF2	Reservoirs	319.71	153.92	0.00	0.00	0.00	473.63
IIF3	Ponds & Lakes	41.70	1.09	0.00	0.00	0.00	42.79
IVC	Excavated Lands	0.00	7.94	0.00	0.00	0.00	7.94
VA1	Farmsteads	0.00	72.49	0.00	0.00	0.00	72.49
VA2	Open Spaces (rural)	13.64	40.00	0.00	0.00	0.00	53.64
VC2	Industrial	0.00	0.94	0.00	0.00	0.00	0.94
Total Water-Related Land Use		5,493.99	6,315.32	665.78	328.90	636.27	13,440.26
R	All Other Land	311,237.55	171,778.40	151,461.88	43,764.58	151,630.09	829,872.50
Total Land In Subarea		316,731.54	178,093.72	152,127.66	44,093.48	152,266.36	843,312.76

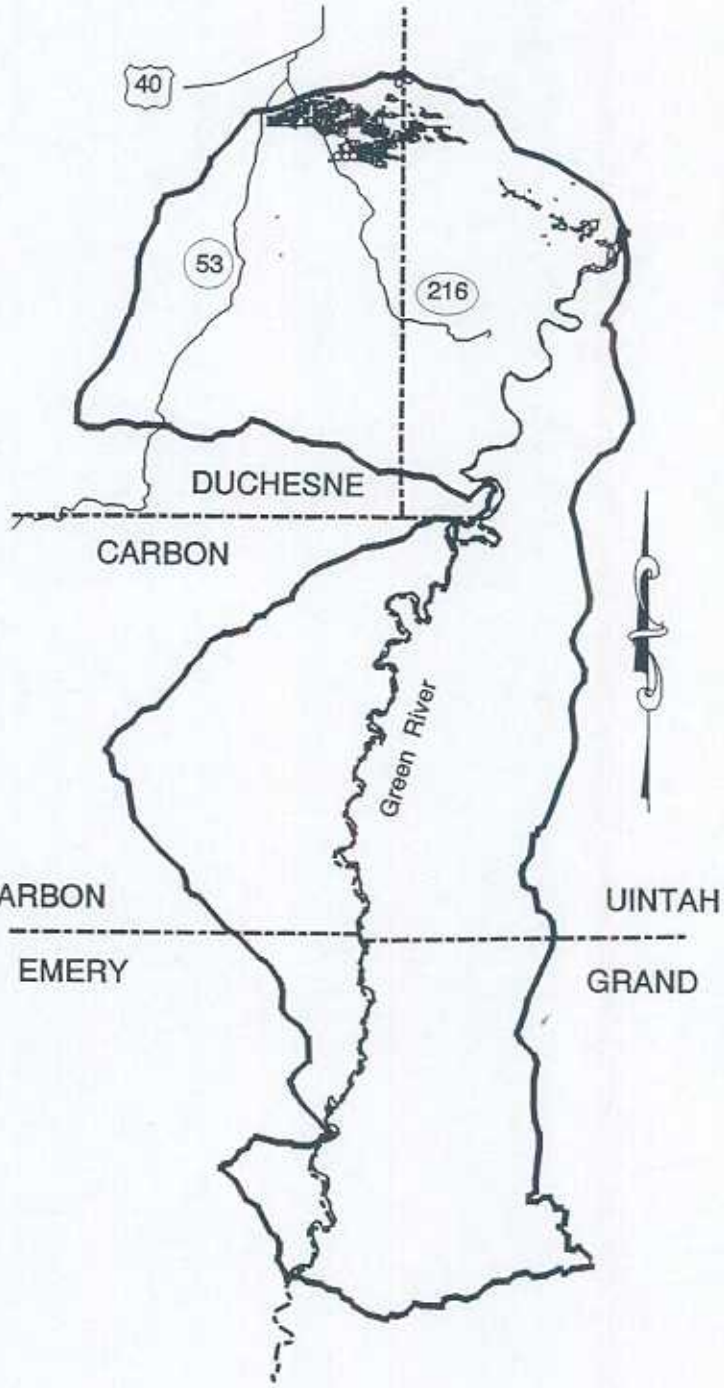

Figure 57. Water-related land use coverage of the Desolation 07-04-008 subarea.

Land Cover Area Summary for Figure 58.
Evacuation Creek 07-05-001 subarea.

State Code	Cover Type	Acres
IIF1	Streams	216.18
Total Water-Related Land Use		216.18
R	All Other Land	101,783.96
Total Land In Subarea		102,000.14

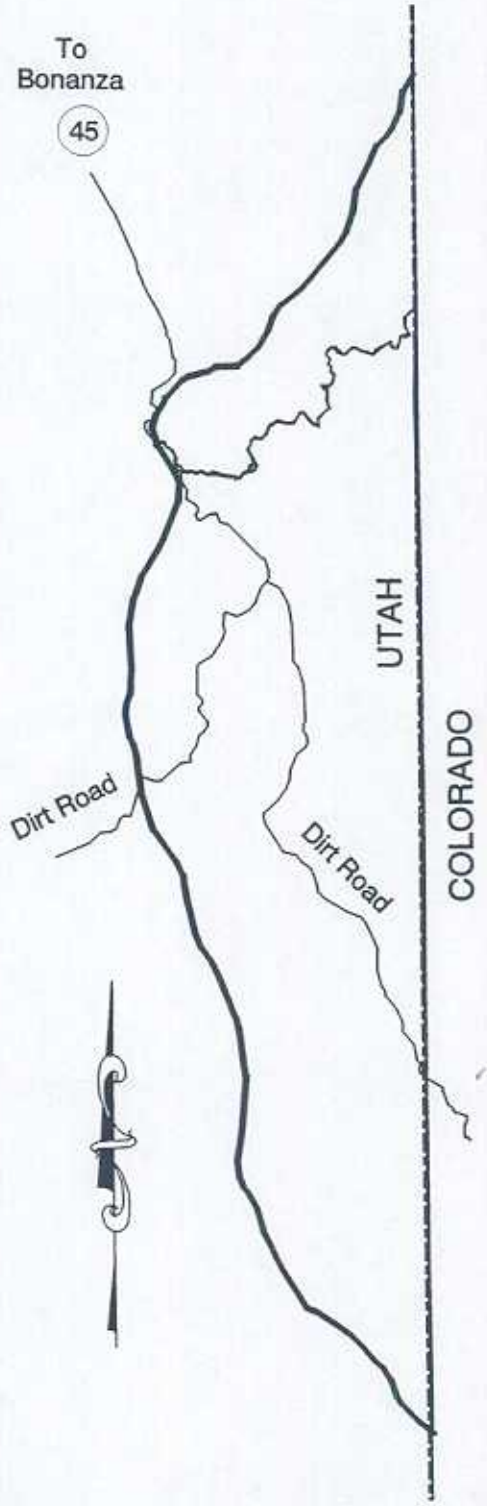

Figure 58. Water-related land use coverage of the Evacuation Creek 07-05-001 subarea.

Land Cover Area Summary for Figure 59.
Lower White River 07-05-002 subarea.

Code	Land Cover	Uintah Co. Acres	Grand Co. Acres	Total Acres
IA3a	Alfalfa	722.32	0.00	722.32
IA3b	Grass Hay	127.24	0.00	127.24
IA3d	Pasture	178.40	0.00	178.40
IIE	Riparian	2,441.62	0.00	2,441.62
IIF1	Streams	1,029.07	0.00	1,029.07
IIF2	Reservoirs	16.47	0.00	16.47
IIF3	Ponds & Lakes	78.97	0.00	78.97
VA2	Open Spaces (rural)	2.70	0.00	2.70
VB2	Bldgs/Homes (lo den)	1.23	0.00	1.23
Total Water-Related Land Use		4,598.02	0.00	4,598.02
R	All Other Land	710,203.51	4,265.65	714,469.16
Total Land In Subarea		714,801.53	4,265.65	719,067.18

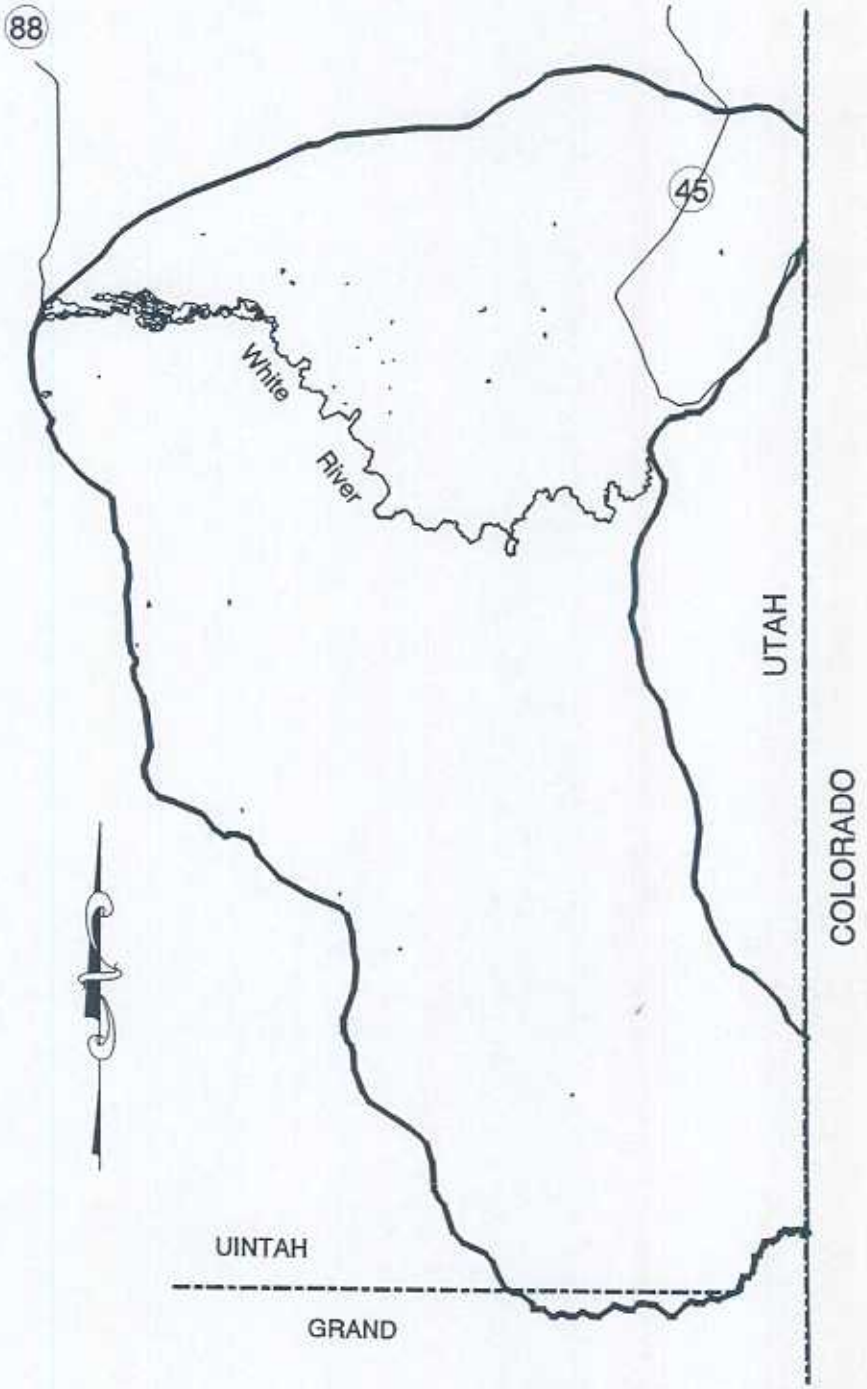

Figure 59. Water-related land use coverage of the Lower White River 07-05-002 subarea.

The water-related land cover for all the subareas in the study area is summarized in Table 2, and water-related land cover for the counties is summarized in Table 3.

The division inventoried over 330,475 acres of land in Summit, Wasatch, Daggett, Uintah, Grand, Emery, Utah, and Carbon counties. This amounts to 4.7 percent of the entire land area in the Uinta Study Unit. Areas not inventoried are mainly national forests and rangeland. Of the inventoried acres, 212,211 are irrigated land (including land that is fallow, idle or sub-irrigated), 94,445 are wet/open water areas (including reservoirs and mountain lakes) and 18,169 are residential/industrial areas (including farmsteads and rural housing).

Table 2. Summary of land cover by subarea for the Uinta Basin (acres).

Code	Cover	Upr Blacks Fk. 07-01-001	Blacks Fork 07-01-002	W. Smiths Fk. 07-01-003	E. Smiths Fk. 07-01-004	Marsh & Bridger 08-01-005	Henry's Fk. 07-01-006	W. Fk. Beaver 07-01-007	M. Fk. Beaver 07-01-008
IA1a	Fruit	0	0	0	0	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	0	0	0	0
IA2a1	Corn	0	0	0	0	0	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	0	0	0	0	0	0	0	0
IA3b	Grass Hay	0	0	0	0	0	0	0	0
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	0	0	0	0	0	0	0	0
IA4a	Fallow	0	0	0	0	0	0	0	0
IA4b	Idle Overgrown	0	0	0	0	0	0	0	0
IIA1a	Pasture (surf. & sub.)	0	0	0	0	0	0	0	0
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		0	0	0	0	0	0	0	0
IIA2a	Sub. Irr. Pasture	0	0	0	0	0	0	0	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		0	0	0	0	0	0	0	0
Irrigated Croplands Subtotal		0	0	0	0	0	0	0	0
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	0	0	0
IIE	Riparian	0	0	0	0	0	0	0	0
IIF	Open Water	0	0	0	0	0	0	0	0
IIF2	Reservoirs	0	0	0	0	0	0	0	0
IIF3	Ponds & Lakes	159	51	9	378	88	227	32	119
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		159	51	9	378	88	227	32	119
VA	Farmsteads	0	0	0	0	0	0	0	0
VB	Residential	0	0	0	0	0	0	0	0
VB3	Open Spaces	0	0	0	0	0	0	0	0
VC	Commercial/Industrial	0	0	0	0	0	0	0	0
Residential/Industrial Subtotal		0	0	0	0	0	0	0	0
Land Use/Land Cover Totals		159	51	9	378	88	227	32	119

Table 2. Continued.

Code	Cover	Hoop Lake 07-01-009	Lone Tree 07-01-010	Fish Lake 07-01-011	Burnt Fk. 07-01-012	Henry's Fk. 07-01-013	Sheep Creek 07-01-014	Carter Creek 07-01-015	Flaming Gorge 07-01-016
IA1a	Fruit	0	0	0	0	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	0	0	0	7
IA2a1	Corn	0	0	0	0	0	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	0	0	0	0	125	0	0	1,943
IA3b	Grass Hay	0	0	0	34	1,471	343	0	2,965
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	0	739	0	0	75	152	0	2,368
IA4a	Fallow	0	0	0	0	0	0	0	0
IA4b	Idle Overgrown	0	0	0	0	0	0	0	14
IIA1a	Pasture (surf. & sub.)	0	1,339	0	0	0	12	0	447
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	172
Surface Irr. Cropland Subtotal		0	2,078	0	34	1,671	507	0	7,916
IIA2a	Sub. Irr. Pasture	0	62	0	0	0	0	0	364
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		0	62	0	0	0	0	0	364
Irrigated Croplands Subtotal		0	2,140	0	34	1,671	507	0	8,280
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	0	0	0
IIE	Riparian	0	483	0	0	45	242	0	0
IIF	Open Water	0	0	0	0	0	0	1	40
IIF2	Reservoirs	0	0	106	0	0	70	0	13,732
IIF3	Ponds & Lakes	179	66	260	0	0	414	212	17
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	55
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		179	549	366	0	45	726	213	13,844
VA	Farmsteads	0	12	0	0	37	1	0	212
VB	Residential	0	0	0	0	0	0	0	443
VB3	Open Spaces	0	0	0	0	0	6	0	196
VC	Commercial/Industrial	0	0	0	0	0	0	0	52
Residential/Industrial Subtotal		0	12	0	0	37	7	0	903
Land Use/Land Cover Totals		179	2,701	366	34	1,753	1,240	213	23,027

Table 2. Continued.

Code	Cover	Pot Creek 07-01-017	Vermillion 07-01-018	Up. Dry Fk. 07-02-001	N. Dry Fk. 07-02-002	E. Dry Fk. 07-02-003	Ashley Dry Fk. 07-02-004	Vernal 07-02-005	Big Brush Crk 07-02-006
IA1a	Fruit	0	0	0	0	0	0	10	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	0	5	860	0
IA2a1	Corn	0	86	0	0	0	1	921	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	2	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	0	377	0	0	0	410	10,352	59
IA3b	Grass Hay	0	47	0	0	0	44	793	0
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	92	23	0	0	0	576	7,821	10
IA4a	Fallow	0	0	0	0	0	0	353	0
IA4b	Idle Overgrown	0	0	0	0	0	32	1,108	0
IIA1a	Pasture (surf. & sub.)	42	341	0	0	0	0	2,045	0
IIA1b	Grass Hay (surf. & sub.)	0	10	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		134	884	0	0	0	1,068	24,265	69
IIA2a	Sub. Irr. Pasture	29	407	0	0	0	0	829	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		29	407	0	0	0	0	829	0
Irrigated Croplands Subtotal		163	1,291	0	0	0	1,068	25,094	69
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	71	0
IIC	Wet Flats	0	0	0	0	0	0	112	0
IIE	Riparian	23	164	0	0	0	355	364	19
IIF	Open Water	0	1,860	0	0	0	0	250	0
IIF2	Reservoirs	563	42	0	0	0	45	877	338
IIF3	Ponds & Lakes	2	5	167	0	0	183	286	45
IIF4a	Temporary Flooded	33	23	0	0	0	5	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	236	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		621	2,094	167	0	0	588	2,196	402
VA	Farmsteads	4	40	0	0	0	79	835	1
VB	Residential	0	34	0	0	0	26	4,646	0
VB3	Open Spaces	0	0	0	0	0	3	356	0
VC	Commercial/Industrial	0	3	0	0	0	2	551	0
Residential/Industrial Subtotal		4	77	0	0	0	110	6,388	1
Land Use/Land Cover Totals		788	3,462	167	0	0	1,766	33,678	472

Table 2. Continued.

Code	Cover	Brush Crk 07-02-007	Strawberry Res. 07-03-001	Strawberry 07-03-002	Currant Crk 07-03-003	Red Creek 07-03-004	Fruitland 07-03-005	Lwr Strawberry 07-03-006	Upr Duchesne 07-03-007
IA1a	Fruit	0	0	0	0	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	58	0	0	0	134	0	54	0
IA2a1	Corn	21	0	0	0	0	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	818	0	0	0	43	157	289	0
IA3b	Grass Hay	90	0	0	75	1,149	136	611	24
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	186	0	0	89	534	232	391	3
IA4a	Fallow	36	0	0	0	0	0	76	0
IA4b	Idle Overgrown	56	0	44	0	272	0	25	0
IIA1a	Pasture (surf. & sub.)	0	0	0	0	5	84	206	0
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		1,265	0	44	164	2,137	609	1,652	27
IIA2a	Sub. Irr. Pasture	10	0	0	0	0	0	2	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		10	0	0	0	0	0	2	0
Irrigated Croplands Subtotal		1,275	0	44	164	2,137	609	1,654	27
IIB	Cattail/Bullrush Aspect	0	0	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	39	0	0	0	0	0	0	0
IIE	Riparian	176	0	128	216	113	127	1,096	0
IIF	Open Water	0	0	0	0	0	0	3,389	2
IIF2	Reservoirs	643	12,189	0	629	180	9	37	0
IIF3	Ponds & Lakes	4	11	3	39	10	3	0	487
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		862	12,200	131	884	303	139	4,522	489
VA	Farmsteads	86	0	1	0	43	10	26	4
VB	Residential	2	0	0	0	48	8	35	38
VB3	Open Spaces	0	0	0	0	0	0	9	0
VC	Commercial/Industrial	0	0	0	0	8	5	7	0
Residential/Industrial Subtotal		88	0	1	0	99	23	77	42
Land Use/Land Cover Totals		2,225	12,200	176	1,048	2,539	771	6,253	558

Table 2. Continued.

Code	Cover	W. Fk. Duchesne 07-03-008	Tabiona 07-03-009	Upr Rock Crk 07-03-010	Lwr Rock River 07-03-011	Utahn 07-03-012	Antelope Crk 07-03-013	Moon Lake 07-03-014	Yellowstone Riv 07-03-015
IA1a	Fruit	0	0	0	0	3	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	206	715	0	0	182	45	0	0
IA2a1	Corn	6	0	0	0	46	0	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	3	2	0	0	2	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	0
IA3a	Alfalfa	267	1,749	0	0	1,829	382	0	0
IA3b	Grass Hay	56	55	0	0	583	0	0	0
IA3c	Grass/Turf	0	0	0	0	5	0	0	0
IA3d	Pasture	539	2,375	48	102	1,605	93	0	31
IA4a	Fallow	43	19	0	0	67	0	0	0
IA4b	Idle Overgrown	172	328	0	0	88	38	0	0
IIA1a	Pasture (surf. & sub.)	0	0	0	0	278	0	0	90
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	0
Surface Irr. Cropland Subtotal		1,292	5,243	48	102	4,688	558	0	121
IIA2a	Sub. Irr. Pasture	0	0	0	0	0	0	0	0
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	0
Sub. Irr. Cropland Subtotal		0	0	0	0	0	0	0	0
Irrigated Croplands Subtotal		1,292	5,243	48	102	4,688	558	0	121
IIB	Cattail/Bullrush Aspect	0	2	0	0	0	0	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	0	0	0
IIE	Riparian	366	1,103	346	938	1,462	134	0	571
IIF	Open Water	0	0	14	0	0	0	0	0
IIF2	Reservoirs	0	2	3	0	21	9	0	9
IIF3	Ponds & Lakes	38	9	1,189	6	4	1	1,299	755
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	4	0	0	23	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	4	0	0	0
Wet/Open Water Subtotal		404	1,120	1,552	944	1,514	144	1,299	1,335
VA	Farmsteads	32	119	0	3	137	44	0	22
VB	Residential	7	163	0	0	521	0	0	0
VB3	Open Spaces	19	0	0	0	0	0	0	22
VC	Commercial/Industrial	0	21	0	0	136	0	0	4
Residential/Industrial Subtotal		58	303	0	3	794	44	0	48
Land Use/Land Cover Totals		1,754	6,666	1,600	1,049	6,996	746	1,299	1,504

Table 2. Continued.

Code	Cover	Uinta Riv 07-03-016	Farm Creek 07-03-017	Whiterocks Riv 07-03-018	Roosevelt/Du 07-03-019	Ouray 07-03-020	Jensen 07-04-001	Up Minnie Maude 07-04-002	Argyle Creek 07-04-003
IA1a	Fruit	0	0	0	20	0	0	0	0
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	6,293	72	336	0	0
IA2a1	Corn	0	0	0	3,574	0	391	0	0
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	0
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	12	0	0	0	0
IA3a	Alfalfa	0	0	0	29,294	2,132	5,824	0	208
IA3b	Grass Hay	0	0	0	21,998	13	349	0	4
IA3c	Grass/Turf	0	0	0	0	0	0	0	0
IA3d	Pasture	0	0	0	55,628	1,152	1,640	75	192
IA4a	Fallow	0	0	0	708	201	763	0	20
IA4b	Idle Overgrown	0	0	0	4,683	274	771	0	51
IIA1a	Pasture (surf. & sub.)	0	0	0	5,294	125	286	133	281
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	4	40	0	0
Surface Irr. Cropland Subtotal		0	0	0	127,504	3,973	10,400	208	756
IIA2a	Sub. Irr. Pasture	0	0	0	639	332	99	0	39
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	36
Sub. Irr. Cropland Subtotal		0	0	0	639	332	99	0	75
Irrigated Croplands Subtotal		0	0	0	128,143	4,305	10,499	208	831
IIB	Cattail/Bullrush Aspect	0	0	0	107	0	1,459	0	0
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	0
IIC	Wet Flats	0	0	0	0	0	695	0	0
IIE	Riparian	0	0	0	9,860	3,814	4,211	0	342
IIF	Open Water	0	0	0	0	0	4,907	0	0
IIF2	Reservoirs	0	0	149	2,830	120	28	1	0
IIF3	Ponds & Lakes	1,096	0	719	727	3	1,596	1	0
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	0
IIF4b	Sewage Lagoon	0	0	0	219	0	0	0	0
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	0
Wet/Open Water Subtotal		1,096	0	868	13,743	3,937	12,896	2	342
VA	Farmsteads	0	0	0	2,517	96	222	0	13
VB	Residential	0	0	0	3,898	58	17	0	0
VB3	Open Spaces	0	0	0	260	0	11	0	0
VC	Commercial/Industrial	0	0	0	1,768	2	32	0	0
Residential/Industrial Subtotal		0	0	0	8,443	156	282	0	13
Land Use/Land Cover Totals		1,096	0	868	150,329	8,398	23,677	210	1,186

Table 2. Continued.

Code	Cover	Nine Mile 07-04-004	Upper Willow 07-04-005	Willow 07-04-006	Range Creek 07-04-007	Desolation 07-04-008	Evacuation Crk 07-05-001	Lwr White Riv 07-05-002	Subareas Total
IA1a	Fruit	0	0	0	0	0	0	0	34
IA1e	Other Horticulture	0	0	0	0	0	0	0	0
IA2a	Grain	0	0	0	0	1,033	0	0	10,000
IA2a1	Corn	5	0	0	0	523	0	0	5,575
IA2b	Vegetables	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	0	0	0	0	9
IA2b2	Onions	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	0	0	0	0	12
IA3a	Alfalfa	287	0	580	31	4,126	0	722	62,006
IA3b	Grass Hay	0	0	125	0	175	0	127	31,267
IA3c	Grass/Turf	0	0	0	0	0	0	0	5
IA3d	Pasture	127	0	295	77	499	0	178	77,948
IA4a	Fallow	16	0	0	32	41	0	0	2,376
IA4b	Idle Overgrown	61	0	29	64	555	0	0	8,663
IIA1a	Pasture (surf. & sub.)	0	0	61	0	153	0	0	11,222
IIA1b	Grass Hay (surf. & sub.)	0	0	0	0	0	0	0	227
Surface Irr. Cropland Subtotal		496	0	1,090	204	7,105	0	1,027	209,344
IIA2a	Sub. Irr. Pasture	0	0	0	0	19	0	0	2,831
IIA2b	Sub. Irr. Grass Hay	0	0	0	0	0	0	0	36
Sub. Irr. Cropland Subtotal		0	0	0	0	19	0	0	2,867
Irrigated Croplands Subtotal		496	0	1,090	204	7,124	0	1,027	212,211
IIB	Cattail/Bullrush Aspect	0	0	44	0	149	0	0	1,760
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	0	71
IIC	Wet Flats	0	0	0	0	15	0	0	860
IIE	Riparian	297	0	111	83	1,173	0	2,442	30,803
IIF	Open Water	0	0	0	0	4,327	216	1,029	16,036
IIF2	Reservoirs	0	0	90	7	474	0	16	33,217
IIF3	Ponds & Lakes	0	1	78	0	43	0	79	11,097
IIF4a	Temporary Flooded	0	0	0	0	0	0	0	61
IIF4b	Sewage Lagoon	0	0	0	0	0	0	0	536
IIF4c	Evaporation Pond	0	0	0	0	0	0	0	4
Wet/Open Water Subtotal		297	1	323	90	6,181	216	3,566	94,445
VA	Farmsteads	12	0	7	5	126	0	3	4,749
VB	Residential	0	0	0	0	0	0	1	9,945
VB3	Open Spaces	0	0	0	0	0	0	0	882
VC	Commercial/Industrial	0	0	1	0	1	0	0	2,593
Residential/Industrial Subtotal		12	0	8	5	127	0	4	18,169
Land Use/Land Cover Totals		805	1	1,421	299	13,432	216	4,597	324,825

Table 3. Summary of land cover by county for the Uinta Basin (acres).

Code	Cover	Carbon	Daggett	Emery	Duchesne	Grand	Summit	Uintah	Utah	Wasatch	Counties Total
IA1a	Fruit	0	0	0	3	0	0	31	0	0	34
IA1e	Other Horticulture	0	0	0	0	0	0	0	0	0	0
IA2a	Grain	0	7	0	6,583	0	0	3,356	0	54	10,000
IA2a1	Corn	5	0	0	2,550	0	0	3,019	0	0	5,575
IA2b	Vegetables	0	0	0	0	0	0	0	0	0	0
IA2b1	Potatoes	0	0	0	7	0	0	2	0	0	9
IA2b2	Onions	0	0	0	0	0	0	0	0	0	0
IA2b3	Beans	0	0	0	0	0	0	0	0	0	0
IA2c	Other Row Crops	0	0	0	12	0	0	0	0	0	12
IA3a	Alfalfa	248	2,318	31	28,106	0	1	31,013	0	289	62,006
IA3b	Grass Hay	4	4,526	0	18,853	0	334	6,864	0	687	31,267
IA3c	Grass/Turf	0	0	0	5	0	0	0	0	0	5
IA3d	Pasture	187	2,705	77	44,827	0	739	28,908	0	504	77,948
IA4a	Fallow	20	0	32	621	0	0	1,627	0	76	2,376
IA4b	Idle Overgrown	9	14	64	4,206	0	0	4,346	0	25	8,663
IIA1a	Pasture (surf. & sub.)	0	843	0	4,092	0	1,339	4,743	0	206	11,222
IIA1b	Grass Hay (surf. & sub.)	0	182	0	0	0	0	45	0	0	227
Surface Irr. Cropland Subtotal		473	10,595	204	109,865	0	2,413	83,954	0	1,841	209,344
IIA2a	Sub. Irr. Pasture	0	758	0	39	0	62	1,970	0	2	2,831
IIA2b	Sub. Irr. Grass Hay	0	0	0	36	0	0	0	0	0	36
Sub. Irr. Cropland Subtotal		0	758	0	75	0	62	1,970	0	2	2,867
Irrigated Croplands Subtotal		473	11,353	204	109,940	0	2,475	85,924	0	1,843	212,211
IIB	Cattail/Bullrush Aspect	0	0	0	22	0	0	1,738	0	0	1,760
IIB-E	Wet/Vegetation Asp.	0	0	0	0	0	0	71	0	0	71
IIC	Wet Flats	0	0	0	15	0	0	846	0	0	860
IIE	Riparian	376	358	83	12,408	0	483	15,748	0	1,346	30,803
IIF	Open Water	666	1,099	329	17	636	0	9,901	0	3,389	16,036
IIF2	Reservoirs	0	14,374	7	2,122	24	106	3,730	0	12,855	33,217
IIF3	Ponds & Lakes	0	646	0	6,069	0	1,569	2,651	0	163	11,097
IIF4a	Temporary Flooded	0	55	0	0	0	0	6	0	0	61
IIF4b	Sewage Lagoon	0	55	0	86	0	0	396	0	0	536
IIF4c	Evaporation Pond	0	0	0	4	0	0	0	0	0	4
Wet/Open Water Subtotal		1,042	16,586	419	20,743	660	2,158	35,087	0	17,753	94,445
VA	Farmsteads	8	276	5	2,258	0	16	2,157	0	28	4,749
VB	Residential	0	477	0	3,308	0	0	6,125	0	35	9,945
VB3	Open Spaces	0	202	0	247	0	0	424	0	9	882
VC	Commercial/Industrial	0	55	0	1,480	0	0	1,047	0	12	2,593
Residential/Industrial Subtotal		8	1,010	5	7,293	0	16	9,753	0	84	18,169
Land Use/Land Cover Totals		1,523	28,949	628	137,976	660	4,649	130,764	0	19,680	324,825

METHODOLOGY FOR GATHERING LAND USE DATA

Background

The methodology used by the division over the past 25 years in conducting water-related land use studies has varied with regard to the procedures used, detail, etc. Earlier inventories were prepared with large format vertical-aerial photographs supplemented with field surveys to label boundaries, vegetation types, and other water use information.

After identifying crops and labeling photographs, the photographs were projected onto a base map and then planimetered or "dot-counted" to determine the acreage. Tables for individual townships and ranges were prepared showing total land within every section and the amount of land in each land use category. Data were then available for use in preparing water budgets.

The water-related land use inventories completed by the division and the U.S. Soil Conservation Service (SCS) over the last 25 years have essentially covered the entire state. The two agencies have inventoried about 4 million acres (including 1.4 million acres of irrigated land) in order to acquire the data needed to prepare hydrologic inventories and to conduct other water-related studies in Utah.

In the early 1980s, the division began updating its methodology for collecting water-related land use data to take advantage of the rapidly growing fields of remotely sensed data and computerized Geographic Information Systems (GIS). Updating land use data for each hydrologic area of the state is an on-going process, and the division has now developed procedures for consistent data gathering and for updating it at 7- to 10-year intervals.

For several years, the division contracted with the University of Utah Research Institute, Center for Remote Sensing and Cartography (CRSC), to prepare water-related land use inventories. During this period, water-related land use data was obtained by using high altitude color infrared photography and laboratory interpretation, with field checking. More recently, the division has entered into cooperative agreements with several federal and other state agencies to complete and update all land use data for the state of Utah.

Present Method

In March 1984, several division staff members visited the California Department of Water Resources to observe its methodology for collecting water-related land use data for state water planning purposes. The division, based on its review of the California methodology and its own experience, developed a water-related land use inventory program. This program includes the use of 35mm slides, USGS 7-1/2 minute quadrangle maps, field-mapping using base maps produced from the 35mm photography and a computerized geographic information system to process, store and retrieve land use data.

The first step in a water-related land use inventory is to identify areas to be covered with aerial photography for any individual year. These areas are identified on maps of suitable scale (usually 1:100,000) using previous land use studies and other available information such as maps generated from high altitude color infrared photography or Landsat. Flight lines are plotted on the maps show land areas to be covered with aerial photography. Flight lines are generally plotted running north and south through the center of the sections to be photographed. An exception to the

practice is a long narrow canyon with irrigated land only in the bottom. When this situation is encountered, the flight line will follow the canyon without regard to section lines or compass directions.

During the second step, identified areas are photographed using 35mm slide film. Ideally, the 35mm photography should be conducted at a time of year that shows the highest contrast between the water-related land use areas mainly irrigated land) and surrounding areas. When field mapping/checking is to be conducted in the same season, the photographs are taken as early in the growing season as possible. The division has generally found that the period from June 15 to July 15 is the best time for this photography. The division specifies that aerial photographs be obtained using an aircraft (Figure 60) carrying a high quality 35mm single lens reflex camera mounted to focus along a vertical axis to the earth. A 24mm lens is required and photos must be taken between 6,000 and 6,500 feet above the ground. This procedure allows each slide to cover a little more than one square mile with approximately 30 percent overlap on the wide side of the slide and 5 percent on the slide's narrow side. High quality commercial color positive film is used with appropriate commercial processing after each day's flight. The slides are then cataloged according to the flight-line number and shown on a location map. All 35mm slides are stored in files at the division offices and cataloged according to individual quadrangle map location.

After cataloging the slides, the division transfers boundaries of water-related areas from the slide to USGS 7-1/2 minute quadrangle maps using a standard slide projector with a 100-200mm zoom lens. The image is directed from the projector, located below a glass table top, to a 45 degree first surface mirror to the back of a quadrangle map. The image showing through

Figure 60. Typical aircraft used for aerial photography.

the map is adjusted to the map scale with the zoom lens. Field boundaries and other water-use boundaries are then traced on the 7-1/2 minute quadrangle map. At the same time, a technician attempts to identify the category of land use or land cover and uses a code for the appropriate category in each water use area on the field map. The date that transfer of slide data was completed is also noted on the map. Figure 61 illustrates this basic procedure.

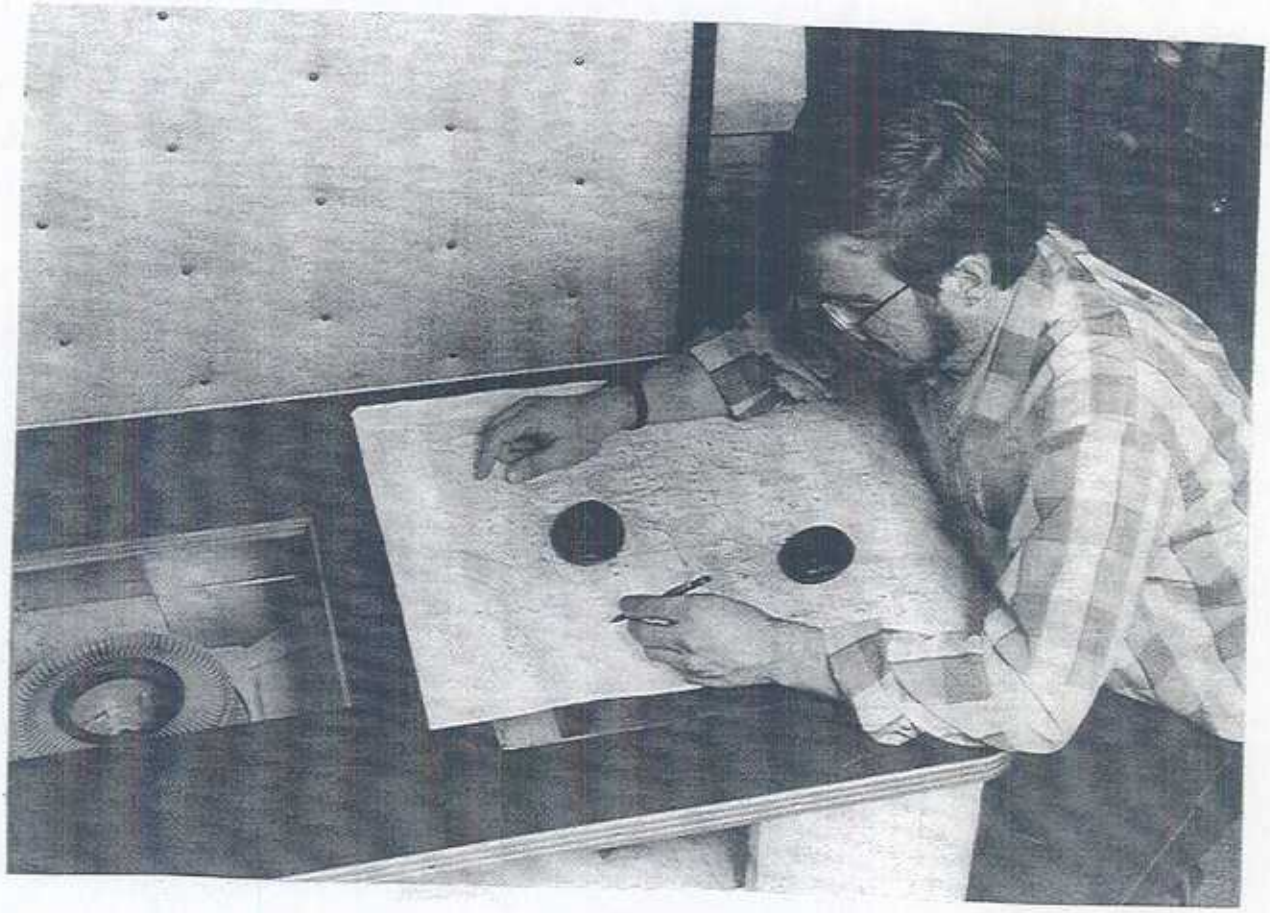

Figure 61. Mapper transferring slide data to field map.

After the slide data are transferred to the quadrangle map, a two-person team uses the map in the field to check the boundaries and land use data on the quadrangle and marks in red the actual land use or land cover category if it is different than the category originally identified. After the land classification on the quadrangle map has been field-checked, the field team marks the completion date on the edge of the map. Figure 62 shows a Division of Water Resources field map after field-checking has been completed.

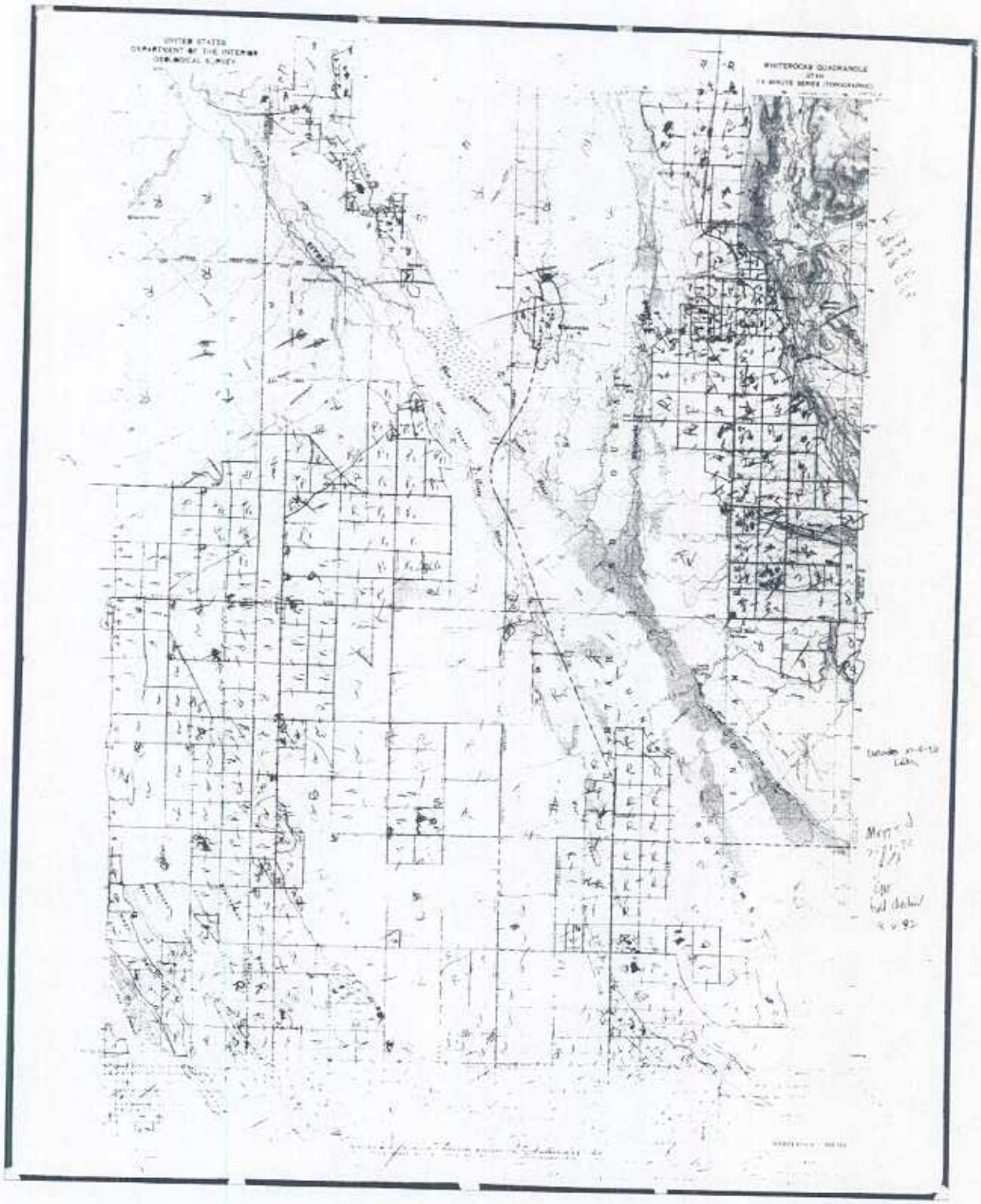

Figure 62. Field map after field checking has been completed. (Whiterocks 7-1/2 minute quadrangle)

The next step is to digitize and process the field data. Digitizing is the process of converting data from map or image form to digital form for computer analysis. Typically, digitizing and entering the categories of land use into the computer is performed during the fall and winter following the aerial photography. This is accomplished by using ESRI ARC/INFO Software and a digitizer board large enough to hold a quadrangle map. The division's digitizing work station is shown in Figure 63. All processed data is filed in the State AGRC database. The division uses the special data management and geographic information management capabilities of the AGRC ARC/INFO system to produce tabulated water-related land use maps.

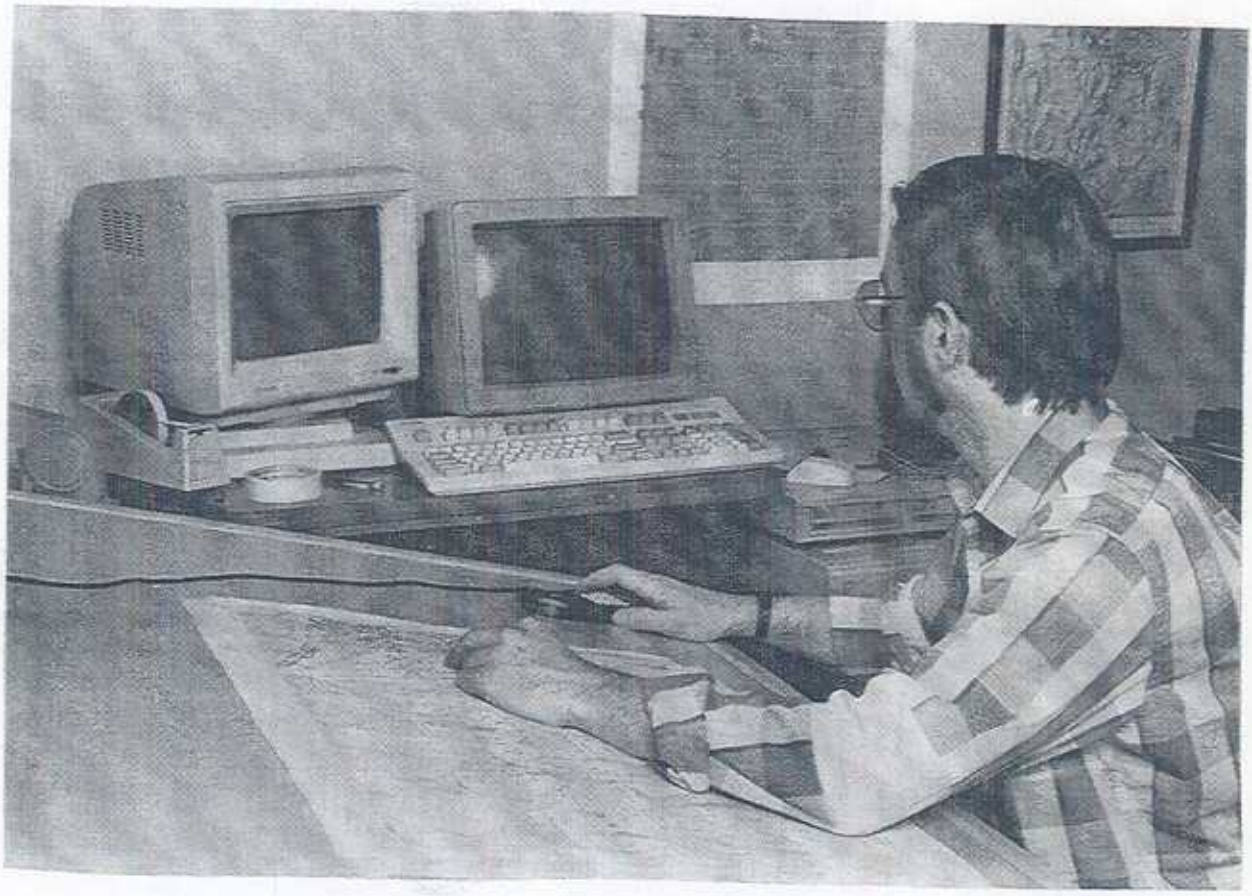

Figure 63. Digitizing work station.

Once the land use data have been digitized and processed through the AGRC ARC/INFO system, the division plots out a 7-1/2 minute quadrangle line map of the data. These plots are overlaid on the field maps to check for errors in recording or digitizing. An example of a line map of the Whiterocks 7-1/2 minute quadrangle is shown in Figure 64.

Computer-Generated Line Maps Legend for Figure 64
Uinta Study Unit.

Label	Code	Cover Type
O	IA1a	Orchards
BR	IA1e	Berries
G	IA2a	Grain
C	IA2a1	Corn
V	IA2b	Vegetables
PO	IA2b1	Potatoes
ON	IA2b2	Onions
B	IA2b3	Beans
T	IA2b4	Tomatoes
S	IA2c	Other Row Crops
A	IA3a	Alfalfa
P1	IA3b	Grass Hay
P	IA3d	Pasture
TF	IA3e	Turf/Grass Yards
F	IA4a	Idle-Plowed
I	IA4b	Idle-Overgrown
DG	IB1a	Non Irr. Crops
DA	IB2a	Non Irr. Alfalfa
DP	IB2b	Non Irr. Pasture
DF	IB3a	Non Irr. Idle-Plowed
DI	IB3b	Non Irr. Idle-Overgrown
IWP	IIA2a1	Irrigated Wet Pasture
IWP1	IIA2a2	Irrigated Wet Grass Hay
WP	IIA2b1	Wet Pasture/Non Irr.
WP1	IIA2b2	Non Irr. F.W. Hay Land
WF	IIC	Wet Flats
WR	IIB	Cattail/Bulrush
W	IIF	Open Water
WM	IIF4a	Temp. Flooded/Marsh
SL	IIF4b	Sewage Lagoons
EP	IIF4c	Evaporation Pond
R	VB1	Buildings/Homes
R2	VB2	Buildings/Homes
RP	VB3	Open Spaces
R	VB6a	Residential
CM	VC1	Commercial
CI	VC2	Industrial
CS	VC3	Open Spaces

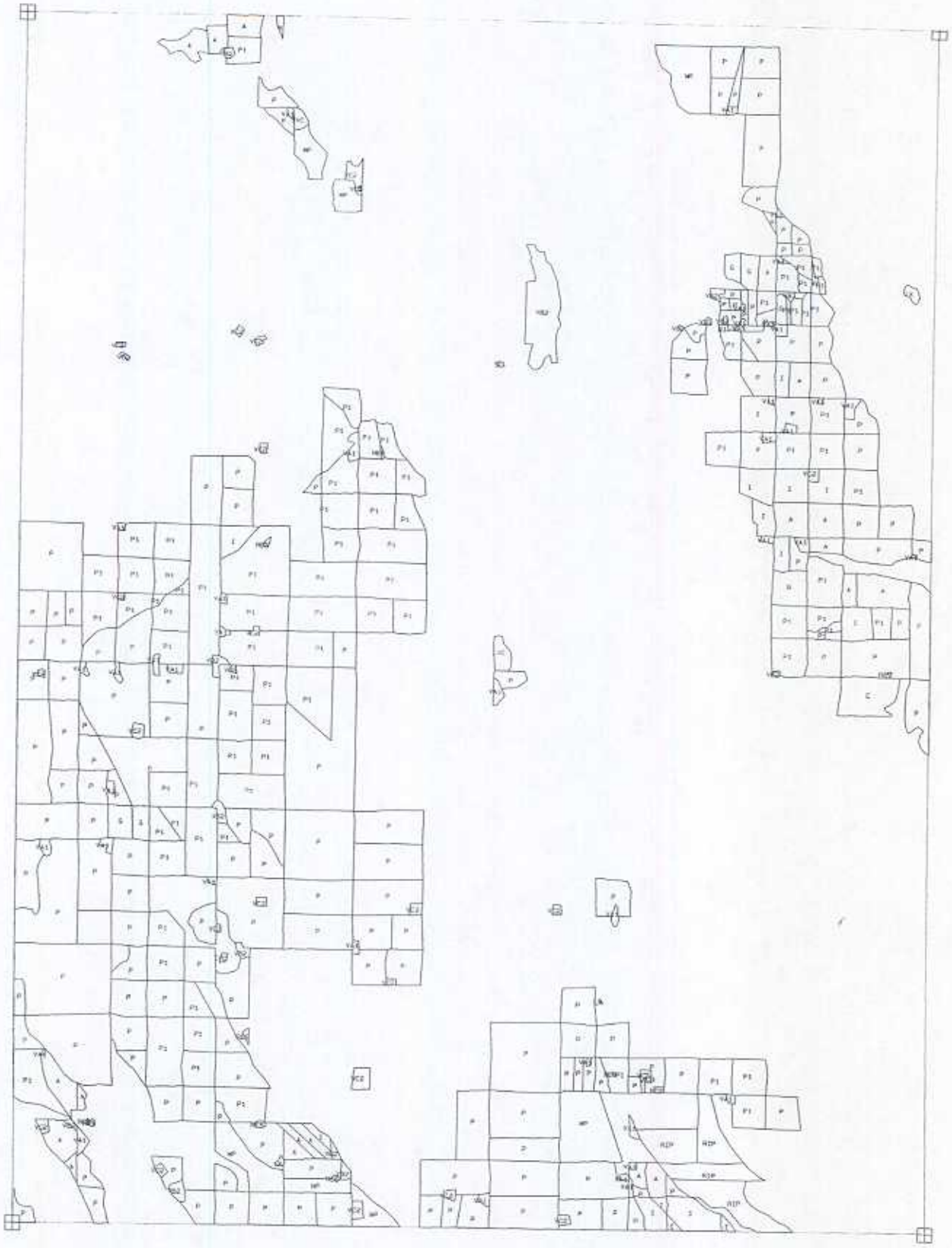

Figure 64. Computer-generated line map of the Whiterocks 7-1/2 minute quadrangle.

Once checked, the data in the AGRC ARC/INFO system become available for use in water resource planning studies. A map of the Whiterocks quadrangle, similar to what might be obtained from the AGRC, is shown in Figure 65.

Legend for computer generated color map Figure 65.

	IA1a	FRUIT	IRRIG CROPLAND
	IA1e	BERRIES	
	IA2a	GRAIN	
	IA2a1	CORN	
	IA2a2	SORGHUM	
	IA2b	VEGETABLES	
	IA2b1	POTATOES	
	IA2b2	ONIONS	
	IA2b3	BEANS	
	IA2c	OTHER ROW CROPS	
	IA3a	ALFALFA	
	IA3b	GRASS HAY	
	IA3c	GRASS/TURF	
	IA3d	PASTURE	
	IA4a	FALLOW	
	IA4b	IDLE	
	IIA1a	PASTURE	GRASSY/PHREATO
	IIA1b	HAYLAND	
	IIA2a	PASTURE	
	IIA2b	HAYLAND	
	IB	NON IRR CROPLAND	NON-IRRIG CROPLAND
	IB1a	GRAIN	
	IB2a	ALFALFA	
	IB2b	PASTURE	
	IB3a	FALLOW	
	IB3b	IDLE	
	IIC	WET FLATS	GRASSY/PHREATO /WATER
	IIE	RIPARIAN	
	IIF	OPEN WATER	
	IIF4a	TEMP FLOODED	
	IIF4b	SEWAGE LAGOON	
	VB	RESIDENTIAL	BUILT-UP LAND
	VB4	OPEN SPACES	
	VC	COMMERCIAL/INDUSTR	

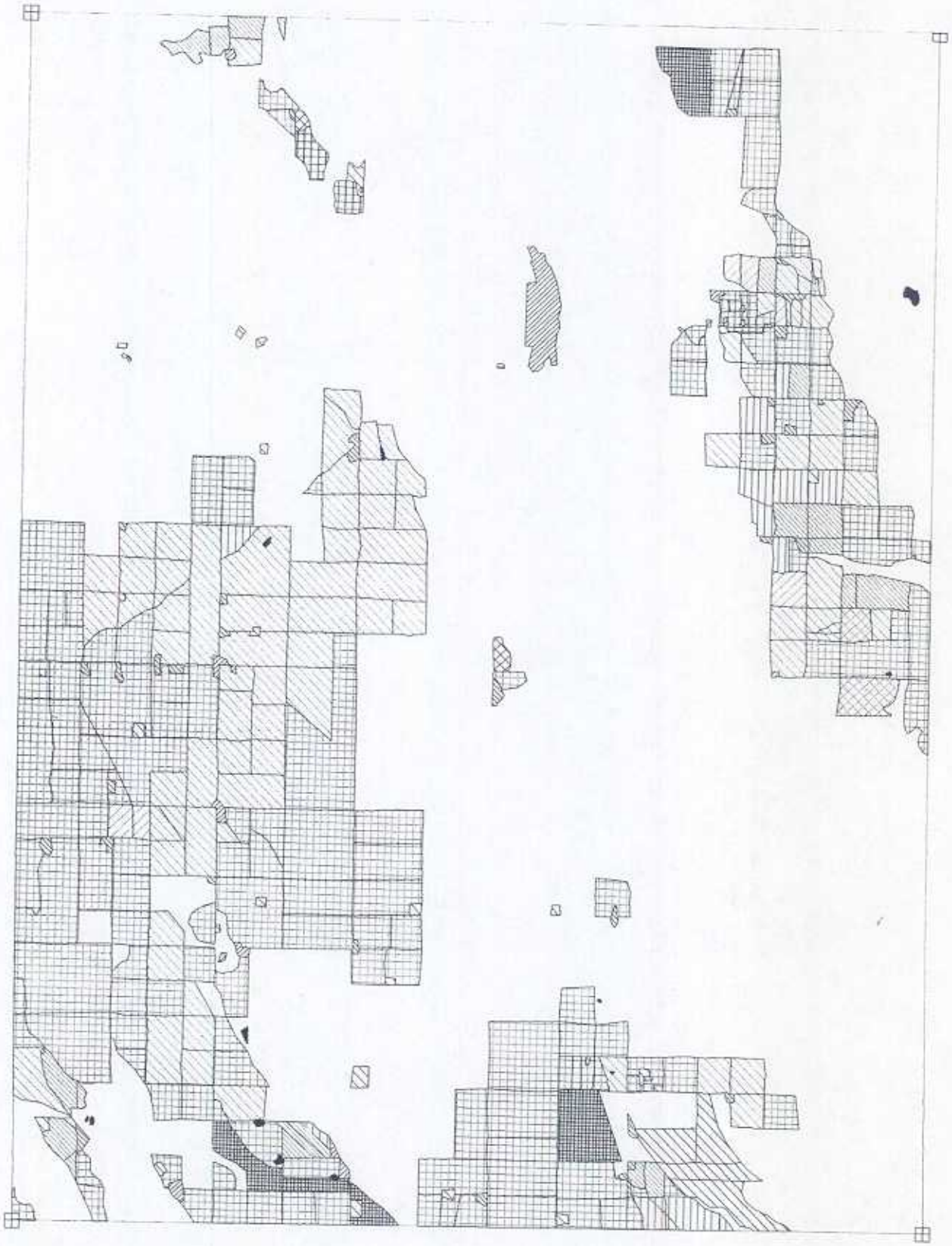

Figure 65. Final computer-generated map of the Whiterocks 7-1/2 minute quadrangle.

LAND USE CATEGORIES

During the division's years of collecting water-related land use data, land use categories and map codes have varied from inventory to inventory.

In late 1984, at the beginning of the division's new phase of mapping water-related land use, an Active Mappers Committee was formed. The committee reviewed all ongoing mapping efforts in the state and then focused on the issue of coordinating and standardizing map data. A summary of the committee's work is given in Appendix B. The division is committed to using the *1988 Standard Cover Types and Codes List* developed from this committee. Codes from this standard cover type list, with descriptive information, are shown in Table 1.

As each water-related land use inventory for the state is completed and, also, when some areas are re-inventoried, it is useful in some instances to tabulate and compare inventories and respective changes. Because of the different names of cover type and codes that were used earlier to the *1988 Standard Cover Types and Codes List*, it becomes necessary that earlier names of cover types and codes should be provided in this report. Table 4 shows the codes from earlier studies that relate to the standard cover types. Appendix C lists the previous land use studies conducted by the division.

Table 4. List of cover types and land use codes (standardized in 1988) for the State of Utah with the state code and comparisons of the 1988 standard code and cover type to previous land use inventories.

STATE CODE	COVER TYPES (Standardized in 1988)	UTAH LK. (66)[a] BEAR R. (69) WEBER R. (70)	UINTAH (67) W. COLO. (67) VIRGIN R.(78) UINTA B. (80)	SALT LAKE COUNTY (82)	U. SEVIER (81) M. SEVIER (83) L. SEVIER (85) BEAR R. (86) WEBER R. (87)
I	Cropland	-[b]	-	-	*[c]
IA	Irrigated	A[d]	A	-	*
IA1	Hort. & Specialty Crops	-	-	-	*
IA1a	Fruit	A8	A16	-	*
IA1a1	Cherry	-	-	-	*
IA1a2	Apple	-	-	-	*
IA1a3	Peach	-	-	-	*
IA1a4	Pear	-	-	-	*
IA1a5	Apricot	-	-	-	*
IA1a6	Other	-	-	-	*
IA1b	Nuts	-	-	-	*
IA1b1	Walnut	-	-	-	*
IA1b2	Pecan	-	-	-	*
IA1b3	Other	-	-	-	*
IA1c	Vineyard	-	-	-	*
IA1d	Bush Fruit	-	-	-	*
IA1e	Berries	-	-	-	*
IA1f	Nurseries	-	-	-	*
IA1g	Other	-	-	-	*
IA2	Row & Close-Grown Crops	-	-	-	*
IA2a	Grain	A4	-	Ag	*
IA2a1	Corn	A5	A1	-	*
IA2a2	Sorghum	-	-	-	*
IA2a3	Wheat	-	A9	-	*
IA2a4	Barley	-	A7	-	*
IA2a5	Oats	-	A8	-	*
IA2a6	Other	-	-	-	*
IA2b	Vegetables	-	-	-	*
IA2b1	Potatoes	A7	A3	-	*
IA2b2	Onions	-	-	-	*
IA2b3	Beans	A13	-	-	*
IA2b4	Tomatoes	A10	A5	-	*
IA2b5	Sweet Corn	-	-	-	*
IA2b6	Other	A6,A9,A11	A2,A4,A6	-	IA2b5[e]

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[d] The use of a code, such as the (A) footnoted, indicates that the code used for the above inventory corresponds to the 1988 standard cover types.
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Table 4. Continued.

STATE CODE	COVER TYPES (Standardized in 1988)	UTAH LAKE (66)[1] BEAR R. (69) WEBER R. (70)	UINTAH (67) W. COLO. (67) VIRGIN R.(78) UINTA B. (80)	SALT LAKE COUNTY (82)	U. SEVIER (81) M. SEVIER (83) L. SEVIER (85) BEAR R. (86) WEBER R. (87)
IA3	Forage Crops	-	-	A	*
IA3a	Alfalfa	A1	A10	-	*
IA3b	Grass Hay	A3	A12	-	*
IA3c	Grass/Turf	-	-	-	IA3e
IA3d	Pasture	A2	A13	-	*
IA3e	Other	-	A11	-	IA3c
IA4	Other	-	A18	Ai	*
IA4a	Fallow Plowed	-	-	-	*
IA4b	Idle (Overgrown)	A12	A17	-	*
IB	Non-Irrigated	E	B	D	*
IB1	Row & Close-Grown Crops	-	-	-	*
IB1a	Grain (Beans, Seeds)	E1	-	-	*
IB1a1	Wheat	-	B2	-	*
IB1a2	Other Grains	-	B3	-	*
IB1a3	Dry Beans	-	B4	-	*
IB1a4	Safflower	-	-	-	*
IB2	Hayland Crops	-	-	-	*
IB2a	Alfalfa	E2	B1	-	*
IB2b	Pasture	E3	B5	-	*
IB2c	Other	E5	-	-	*
IB3	Other (Plowed)	-	B7	-	*
IB3a	Fallow	E4	B6	Df	*

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II	Meadow/Wetlands/Open Water	C	O,F	-	*
IIA	Grassy Aspect	-	-	-	*
IIA1	Irrigated	-	-	-	*
IIA1a	Pasture	-	A14	-	IIA1a1,2a1
IIA1b	Hayland	-	A15	-	IIA1a2,2a2
IIA2	Non-Irrigated	-	-	-	*
IIA2a	Pasture	C4	8,F8	Ws	IIA1b1,2b1
IIA2b	Hayland	-	-	-	IIA1b2,1b2
IIA2c	Non-Agricultural Use	-	-	-	IIA1b3,2b3
IIB	Cattail/Bullrush	C1	F4	Wc	*
IIC	Wet Flats (barren)	-	-	M	*
IID	Shrub Aspect	C5	F2	-	*
IIE	Riparian	C2	-	Wr	*
IIE1	Forested Aspect	-	F1	-	*
IIE2	Shrub Aspect	C3	3,5,6,7,9	-	*
IIF	Open Water	B	E	-	*
IIF1	Streams	-	-	-	*
IIF2	Reservoirs	-	E1,E2	-	*
IIF3	Ponds/Lakes	-	E4	-	*
IIF4	Other	-	E3	-	*
IIF4a	Temporarily Flooded	-	-	-	*
IIF4b	Sewage Lagoon	-	-	-	*
IIF4c	Evaporation Pond	-	-	S	IIFAC,VC2
IIF5	Salt Water	-	-	-	*

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III	Range & Forest Land	-	-	-	*
IIIA	Alpine Plants	-	-	-	*
IIIB	Conifer	-	-	Uc	*
IIIB1	Douglas/White Fur	-	-	-	*
IIIB2	Ponderosa	-	-	-	*
IIIB3	Fir/Spruce	-	-	-	*
IIIB4	Lodgepole Pine	-	-	-	*
IIIB5	Pinyon-Juniper	-	-	-	*
IIIB6	Etc.	-	-	-	*
IIIC	Deciduous	-	-	Ud	*
IIIC1	Aspen	-	-	-	*
IIIC2	Mountain Brush	-	-	-	*
IIIC3	Etc.	-	-	-	*
IIID	Grass Aspect	-	-	-	*
IIID1	Dry Pasture	-	-	-	*
IIID2	Native Grasses	-	-	Ug	*
IIID3	Etc.	-	-	-	*
IIIE	Shrub Aspect	-	-	-	*
IIIE1	Northern Desert Shrub	-	-	Um	*
IIIE1a	Sagebrush	-	-	-	*
IIIE1b	Etc.	-	-	-	*
IIIE2	Southern Desert Shrub	-	-	-	*
IIIE2a	Creosote Bush	-	-	-	*
IIIE2b	Etc.	-	-	-	*
IIIE3	Salt Desert Shrub	-	-	-	*
IIIE3a	Shadescale	-	-	-	*
IIIE3b	Greasewood	-	-	-	*
IIIE3c	Saltbrush	-	-	-	*
IIIE3d	Desert Molley	-	-	-	*
IIIE3e	Etc.	-	-	-	*

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IV	Barren Lands	-	-	-	*
IVA	Bare Soil/Sand	-	-	-	*
IVA1	Dry Salt Flats	-	-	-	*
IVA2	Beaches	-	-	-	*
IVA3	Other Sandy Areas	-	-	-	*
IVA4	Other	-	-	-	*
IVB	Rock Outcrop	-	-	Ur	*
IVC	Excavated Land	-	-	E	*
IVD	Other	-	-	-	*
V	Built-Up Land	D	C	-	*
VA	Farmstead	-	-	-	*
VA1	Builds/Homes	-	C1,C5	-	*
VA2	Open Spaces	-	C4	-	*
VB	Residential	-	-	-	*
VB1	High Density	-	C3	Rt,R	VB1,VB2,VB6a
VB2	Low Density	-	-	R1	VB3
VB3	Open Spaces	-	C2	L	VB4
VB4	Idle	-	-	-	*
VC	Commercial/Industrial	F	D	C	*
VC1	Commercial	-	-	-	*
VC2	Industrial	-	-	-	VC4
VC3	Open Spaces	-	-	X	*
VD	Transportation & Utilities	-	-	D	VD,VE
VE	Other	-	-	-	*

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APPENDIXES

APPENDIX A

Hydrologic Inventories

Utah Lake Drainage Area. In cooperation with Utah State University. November 1969. 136 pages - includes substantial climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, geology, economy, history, and physiography.

Uintah Study Unit. In cooperation with Utah State University. March 1970. 181 pages - includes substantial climatic, streamflow, and groundwater data, detailed water budgets, and more general information on topography, geology, arable lands, history, economy, water quality and water development and management. (out of print, file copy only)

Weber River Study Unit. In cooperation with Utah State University. August 1970 - includes substantial climatic, streamflow and groundwater data, detailed water budgets, and more general information on topography, geology, economy, and water quality.

Great Salt Lake Desert Area. In cooperation with Utah State University. November 1971. 70 pages - includes substantial climatic and water resources data, water budget for Tooele Valley, and more general information on physiography, economy, geology, and water management aspects.

Bear River Study Unit. In cooperation with Utah State University. February 1973. 126 pages - includes substantial climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

Price River Study Unit. June 1975. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

Escalante River Study Unit. December 1976. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

Dirty Devil River Study Unit. January 1977. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

San Rafael River Study Unit. January 1977. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

Update of the Price River Study Unit. June 1978. Includes updated climatic, streamflow, and water use data and detailed water budgets.

Update of the San Rafael River Study Unit. December 1979. Includes updated climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

Virgin and Kanab Study Units (Utah's Lower Colorado River Area). February 1983. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology, and economy.

Hydrologic Inventory of Colorado, Dolores, and San Juan Study Units. September 1987. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology and economy.

Hydrologic Inventory of the Sevier River Basin. January 1991. Includes climatic, streamflow, and groundwater data, detailed water budgets, and more general information on water quality, topography, geology and economy.

APPENDIX B

In late 1984 at the beginning of Division of Water Resource's new phase of mapping water-related land use, an Active Mappers Committee was formed. The Division of Water Resources, Department of Natural Resource and The Division of Agriculture Development and Conservation, Department of Agriculture co-chaired this committee. Lloyd Austin, Division of Water Resources and Jim Christensen, Department of Agriculture filled these roles. Member agencies were:

Automated Geographic Reference

Bureau of Land Management

Bureau of Reclamation

Center of Remote Sensing, University of Utah

Dept of Transportation

Dept of Agriculture

Dept of Natural Resource

Dept of Health - Water Pollution

Div of Water Resources

Div of Water Rights

Div of Wildlife Resource

Soil Conservation Service

State Lands and Forestry

Utah Geological and Mineral Survey

U.S. Fish and Wildlife

U.S. Forest Service/Ogden

U.S. Forest Service

U.S. Geological Service

Utah State University-Extension Service

The committee surveyed all ongoing mapping efforts and then focused on the issue of coordinating and standardizing map data. The relationships between several state agencies and the AGRC program of the Office of Planning and Budget were also clarified. Three specific products came from this committee's work. The first was a standardized definition of a base resource data map file as follows:

Layers of Data	Level of Detail
Infrastructure & Base	Map Quad Sheet (USGS Topo) 1:24,000 scale
Ownership	Federal/State/Private, input 1:250,000 scale
Soils	Level 3 definition with preferred input of 1:24,000 scale
Land Cover	Use standard legend and set preferred input 1:24,000 scale
Climate	Precipitation/Temperature 1:250,000 input scale

Secondly, a standard legend for a cover map was developed and agreed upon which allows a hierarchy of data entry. This is shown as Table 1. The headings which are marked with an asterisk were minimum required for the base data set. Individual agencies could use finer breakdowns as needed for their specific programs.

The Division of Water Resources used only certain categories in the Uinta Study Unit mapping which were considered necessary for water use budgets being prepared. All range land and forest land categories were left off while some categories were subdivided further than required by the base data set standards.

The third agreement reached by the committee was the use of a standard set of watershed units for the state. It was agreed that the maps developed by the United States Geological Survey working with National Water Resources Council would serve as the base standard. Individual agencies could then further subdivide these larger units for specific study purposes. This proposal was also presented to the Resource Development Coordinating Committee during the year 1986 and ratified.

APPENDIX C

Water-Related Land Use Studies

Utah Lake Drainage Area. In cooperation with Utah State University. February 1968 - detailed water-related land use tables and maps.

Bear River Drainage Area. In cooperation with Utah State University. April 1969 - detailed water-related land use tables and maps.

Weber River Drainage Area. In cooperation with Utah State University. February 1970 - detailed water-related land use tables and maps.

Uinta Hydrologic Area. Staff Report No. 7. September 1971 - detailed water-related land use tables and maps.

West Colorado Hydrologic Area. Staff Report No. 8. January 1972 - detailed water-related land use tables and maps.

Uintah Basin. In cooperation with U.S. Soil Conservation Services and National Aeronautics and Space Administration. 1980. Contains detailed water-related land use maps and tables. Investigates the use of landsat data concurrently with the high altitude color infrared photography to update the changing patterns of land use. Performed under contract with the Center for Remote Sensing and Cartography of the University of Utah Research Institute. 109 pages plus maps.

Sevier River Basin (Upper Portion), 1981. Contains detailed water-related land use maps and tables. Performed under contract with the Center for Remote Sensing and Cartography of the University of Utah Research Institute. 27 pages plus maps.

Sevier River Basin (Lower Portion), 1985. Contains detailed water-related land use maps and tables.

Salt Lake County, 1982. Contains detailed water related land use maps and tables. Performed under contract with the Center for Remote Sensing and Cartography of the University of Utah Research Institute. 24 pages plus maps.

Sevier River Basin (Middle Portion), 1984. Contains detailed water-related land use maps and tables. Performed under contract with the Center for Remote Sensing and Cartography of the University of Utah Research Institute. 34 pages plus maps.

Virgin River Area, 1989. Contains detailed water-related land use maps and tables. Performed in cooperation with USDA Soil Conservation Service, St. George, Utah office and Utah Division of Water Rights, Cedar City Area Office. 56 pages plus maps.

Bear River Basin, 1991. Contains detailed water-related land use maps and tables. Performed in cooperation with Utah Division of Water Rights. 50 pages plus maps.

Columbia River Basin (Utah portion), 1991. Contains detailed water-related land use maps and tables. 46 pages plus maps.

Southeast Colorado Basin (Utah Portion), 1991. Contains detailed water-related land use maps and tables. 57 pages plus maps.

Sevier River Basin, 1992. Contains detailed water-related land use maps and tables. 136 pages plus maps.

Weber River Area, 1992. Contains detailed water-related land use maps and tables. 56 pages plus maps.

Kanab Creek/Virgin River Study Units, 1992. Contains detailed water-related land use maps and tables. 58 pages plus maps.

Cedar/Beaver Study Unit, 1993. Contains detailed water-related land use maps and tables. 46 pages plus maps.

Utah Lake Study Area, 1993. Contains detailed water-related land use maps and tables. 60 pages plus maps.

West Colorado Study Unit, 1993. Contains detailed water-related land use maps and tables. 68 pages plus maps.

Great Salt Lake Desert Study Unit, 1993. Contains detailed water-related land use maps and tables. 57 pages plus maps.

Lower Jordan River Study Area, 1994. Contains detailed water-related land use maps and tables. 78 pages plus maps.