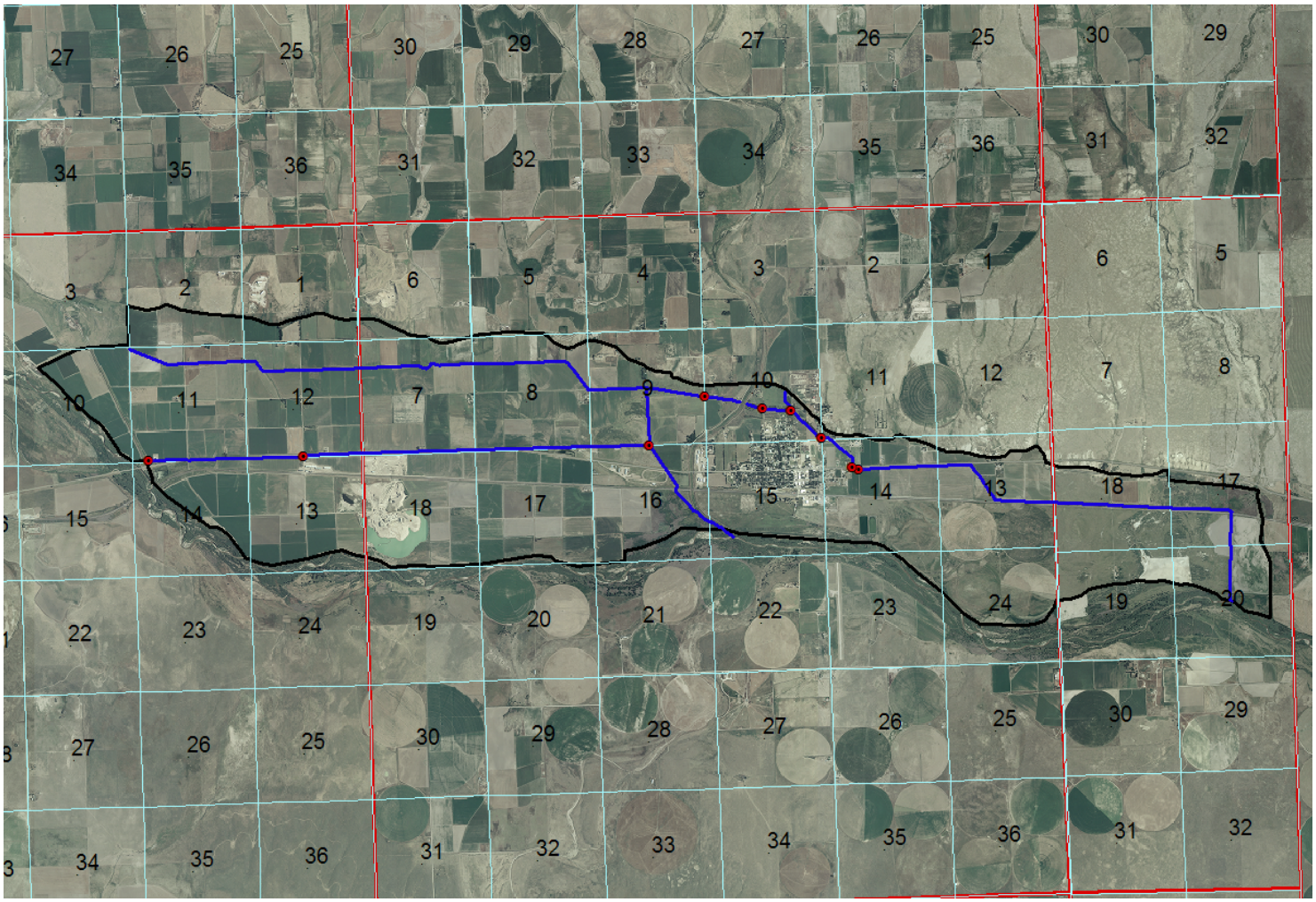
Holly Drainage District
System Inventory



May 18 2007, Oct. 22, 2008

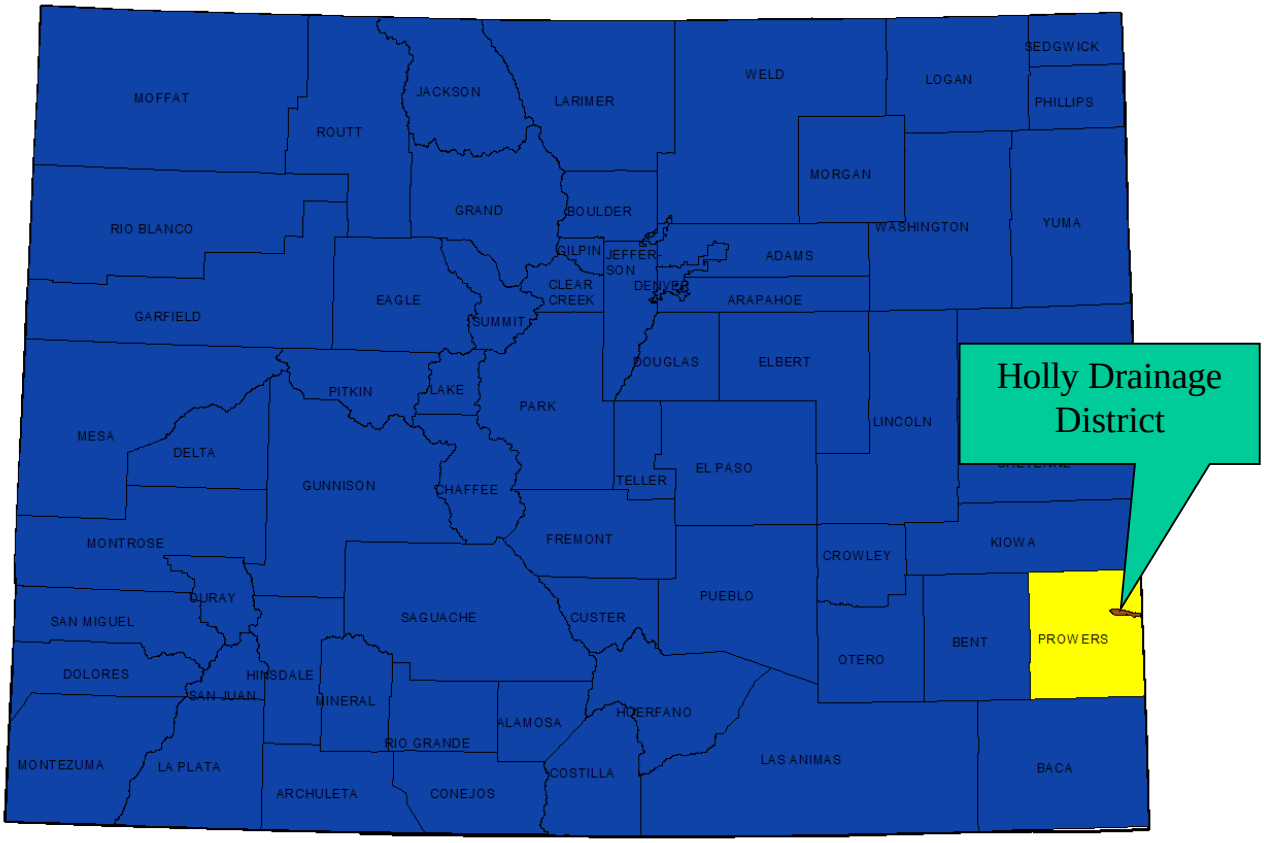
Prepared with the assistance of John Golden, Calvin Melcher, Sherry Wagner and Walter Epley

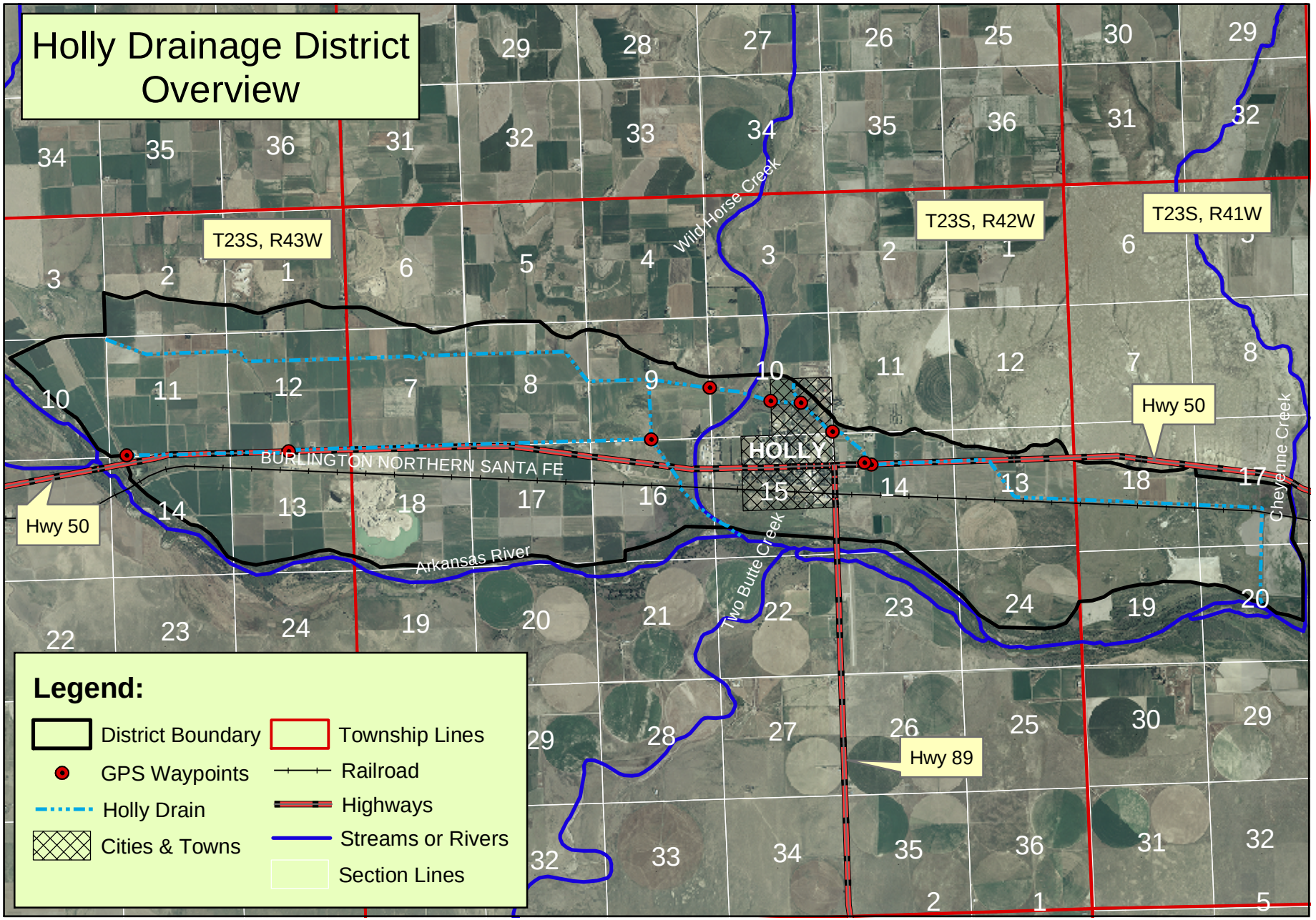
The Lower Arkansas Valley Drainage System Rehabilitation Study

Colorado State Univ., Dr. John Wilkins-Wells, Sociology Water Lab

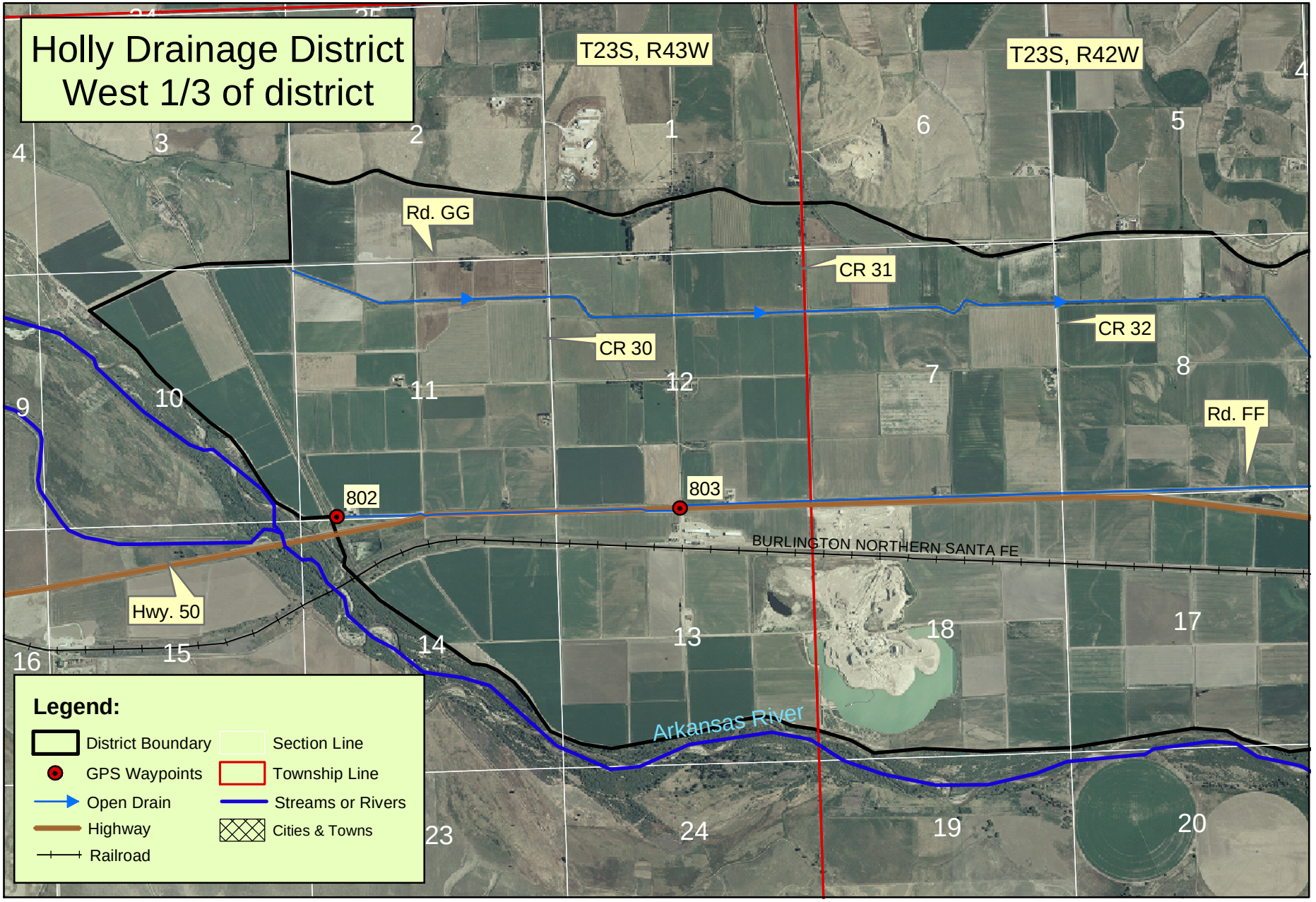
Clark Building B258, Fort Collins, CO 80523 Ph: 970-491-5635

Location of Holly Drainage District
In Colorado
And Prowers County

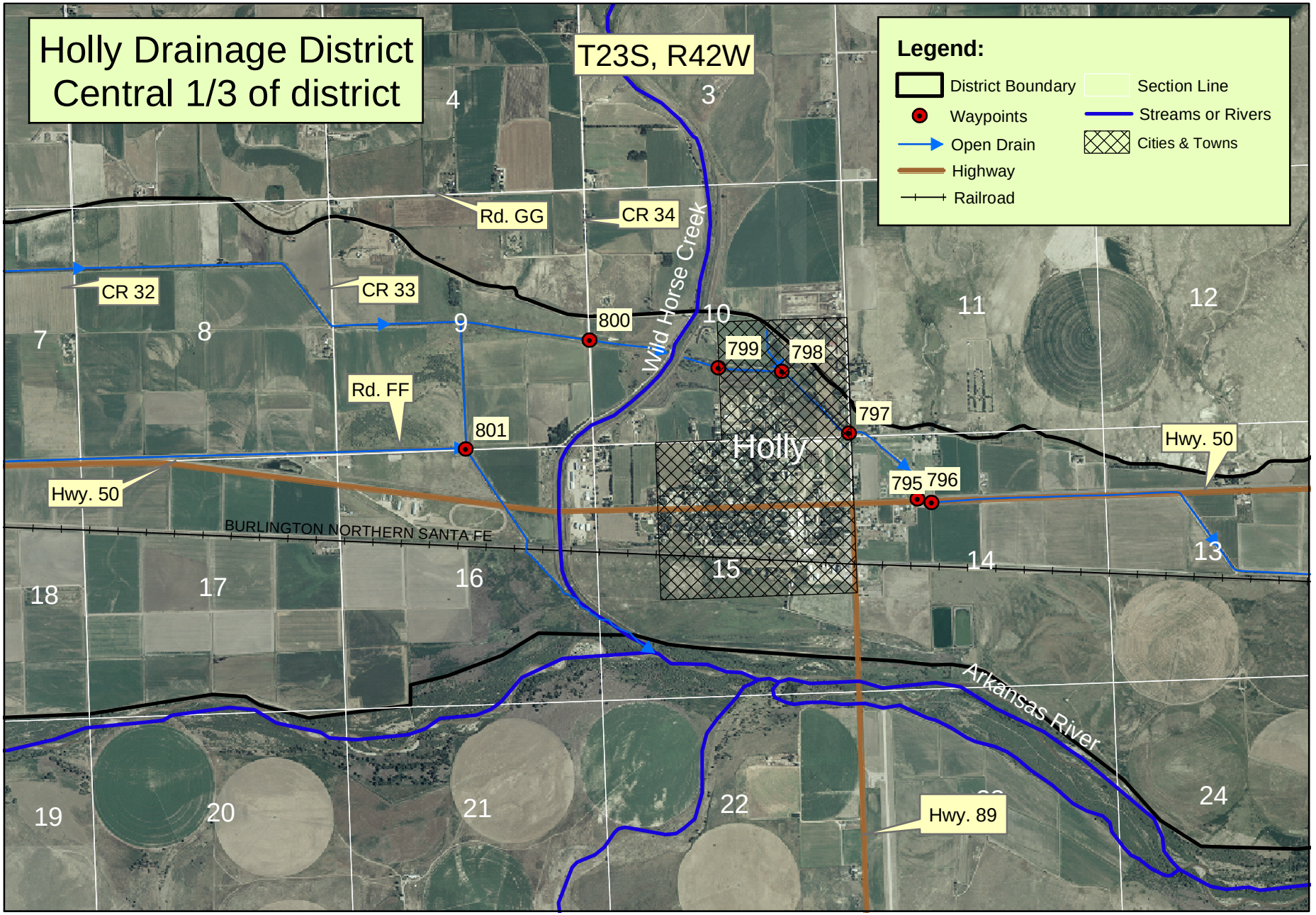




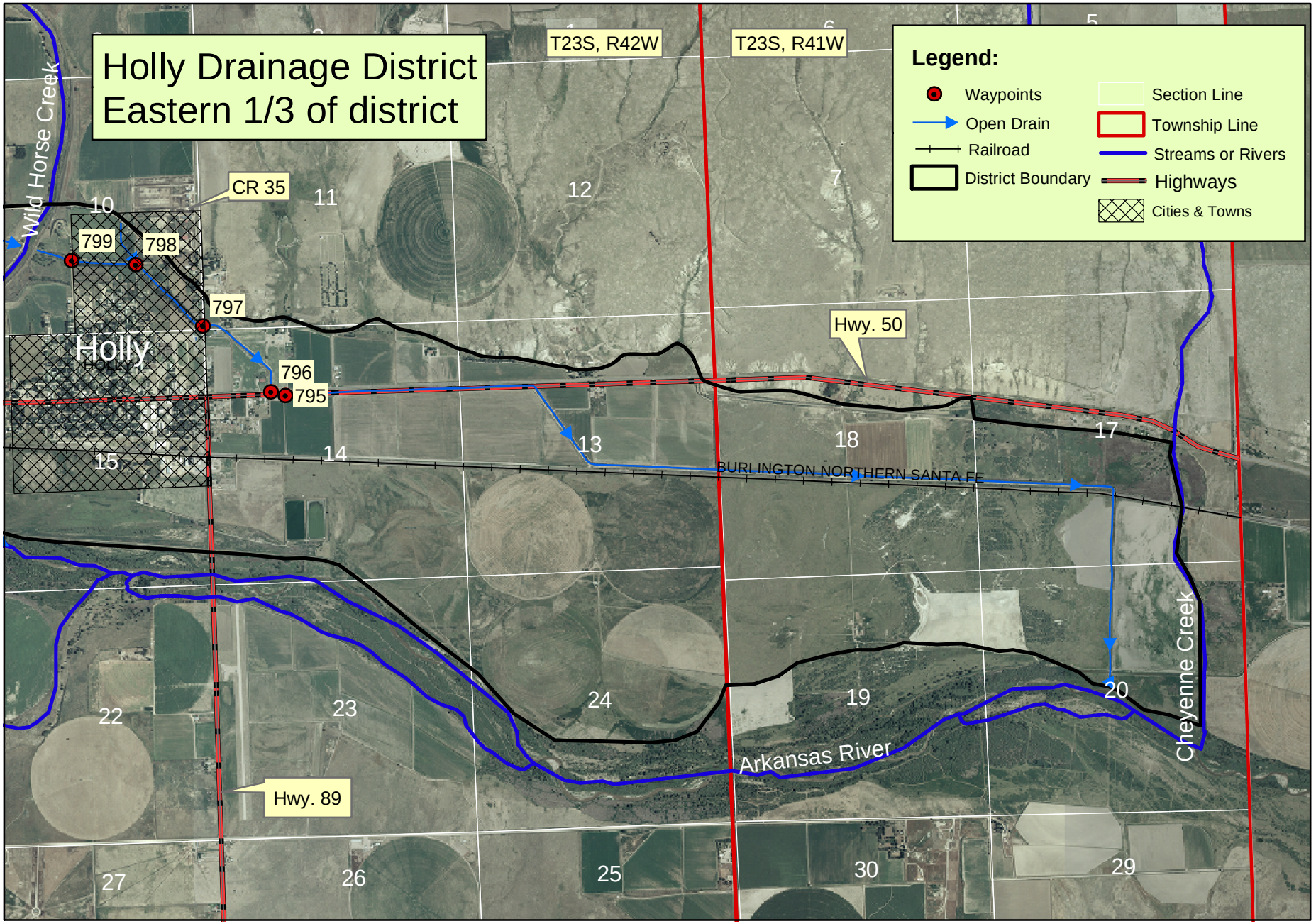
Ark. Valley Drainage Project Oct. 22, 2008



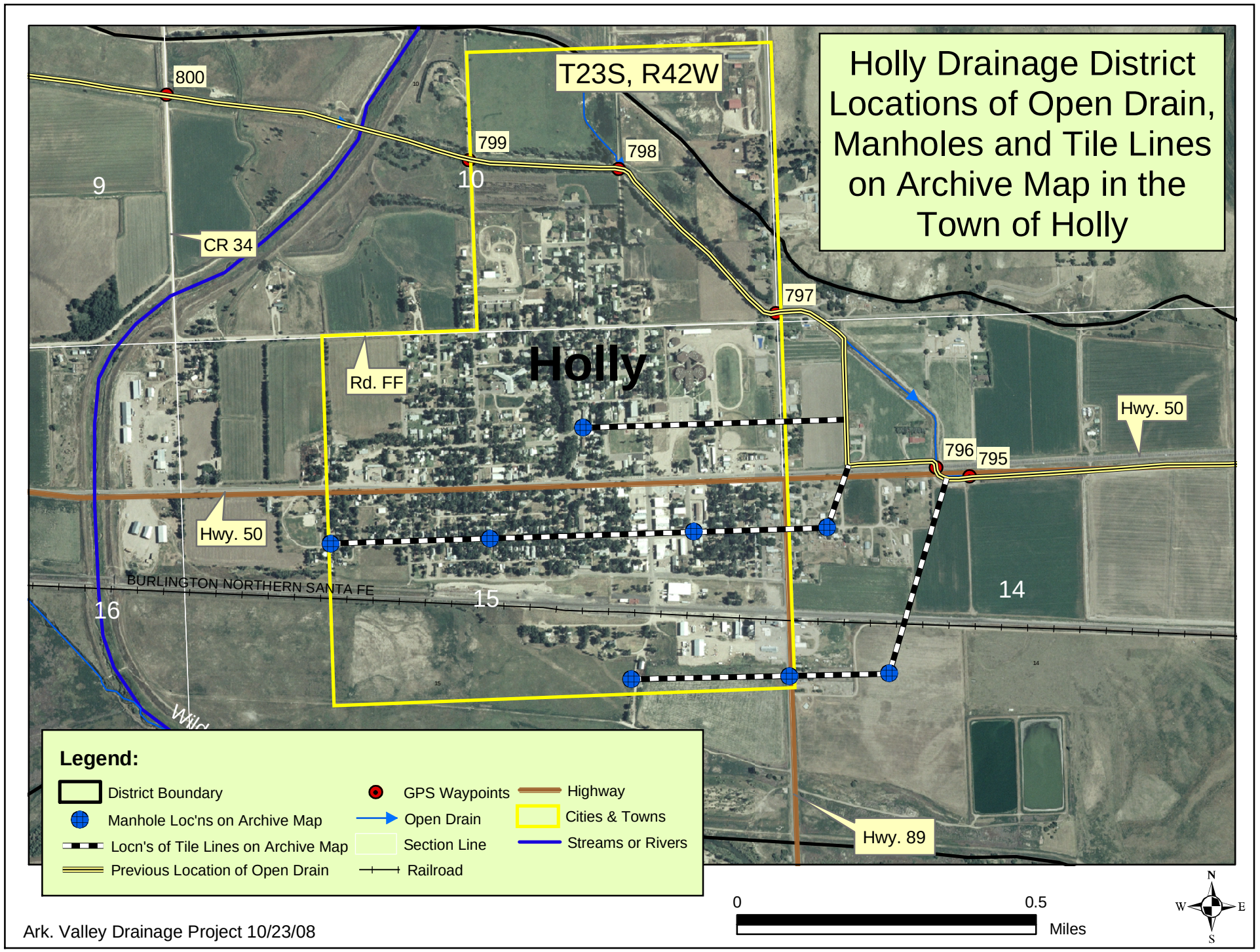
Ark. Valley Drainage Project 5/18/07



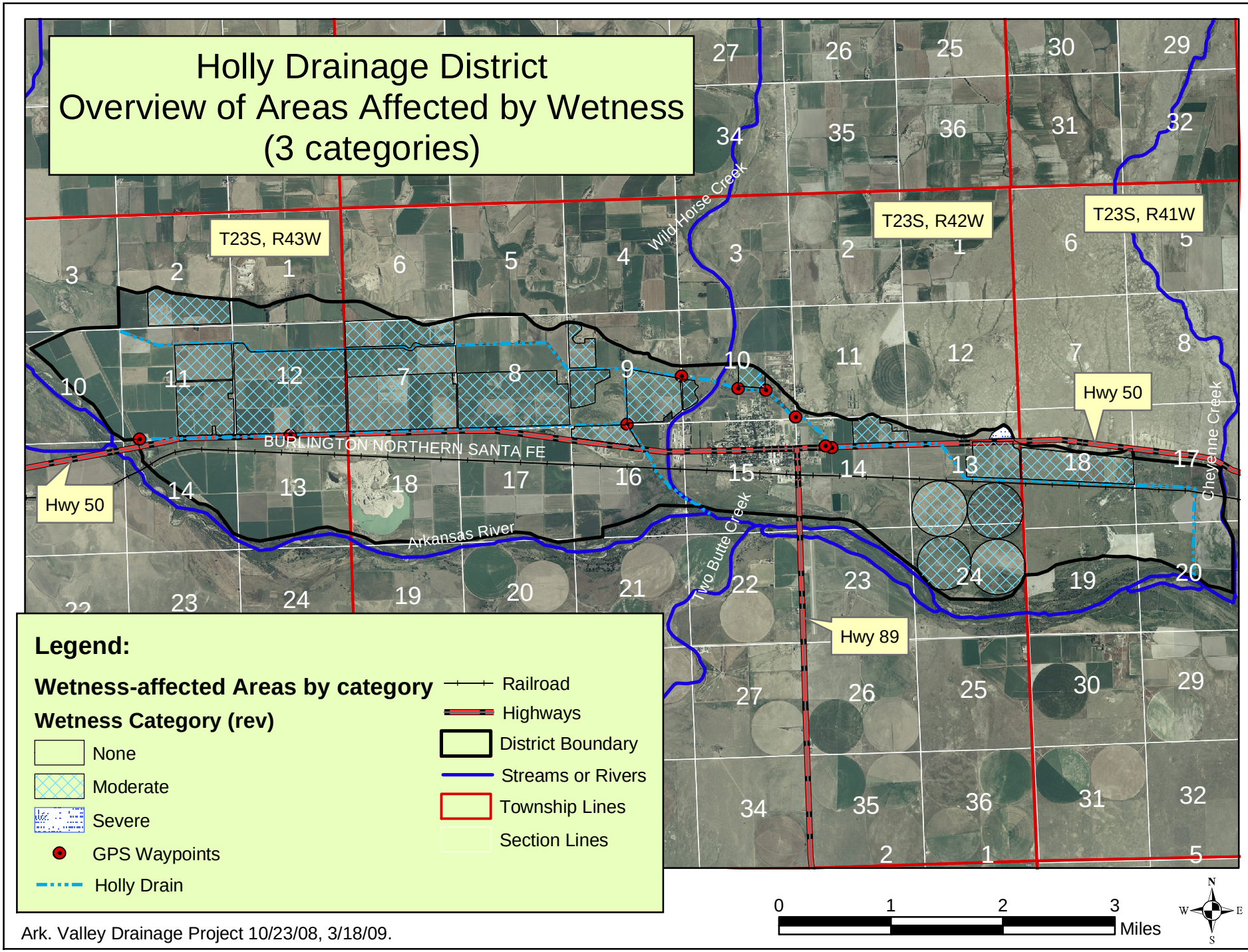
Ark. Valley Drainage Project 5/18/07



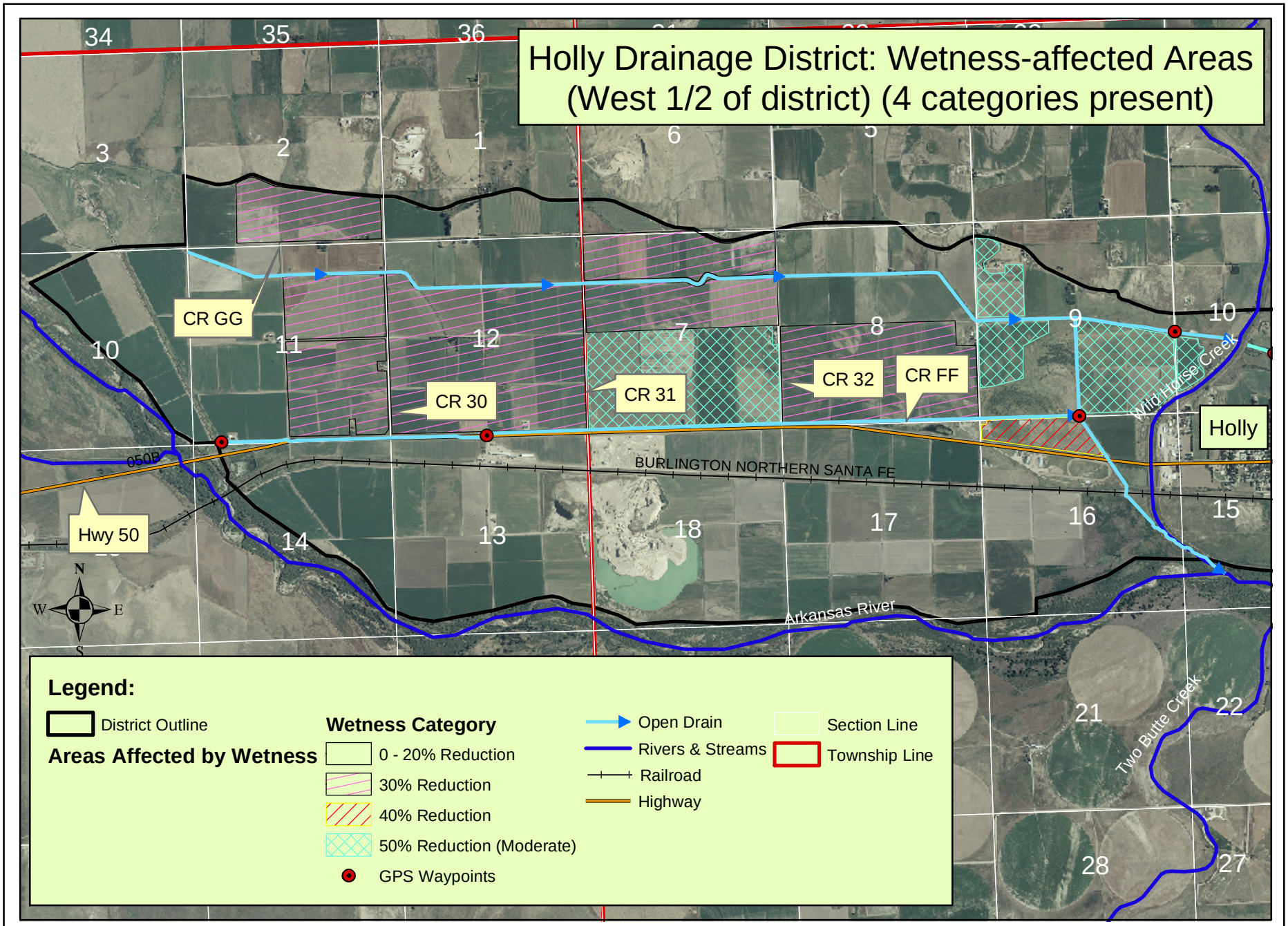
Ark. Valley Drainage Project 5/18/07



Ark. Valley Drainage Project 10/23/08



Ark. Valley Drainage Project 10/23/08, 3/18/09.



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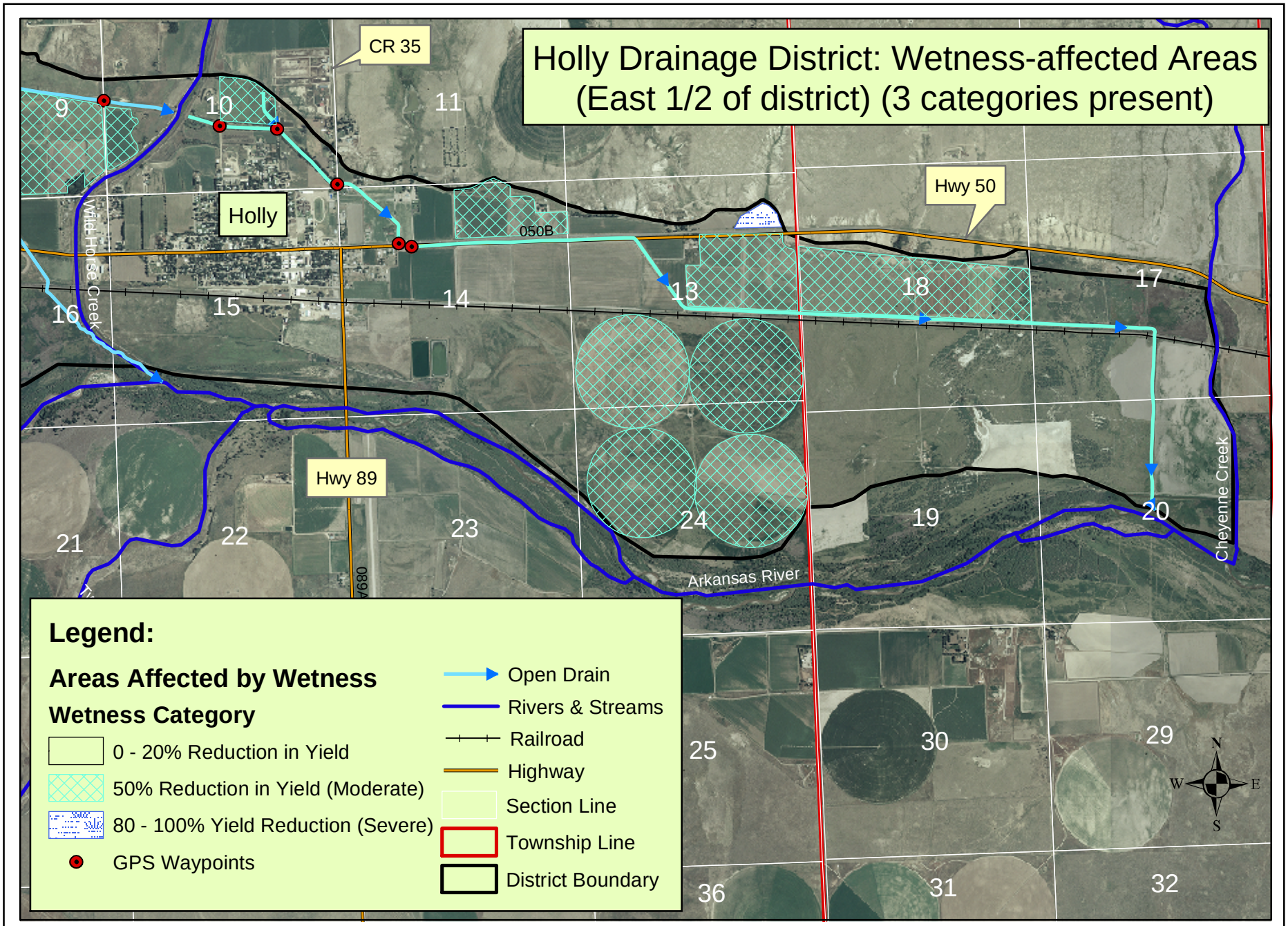

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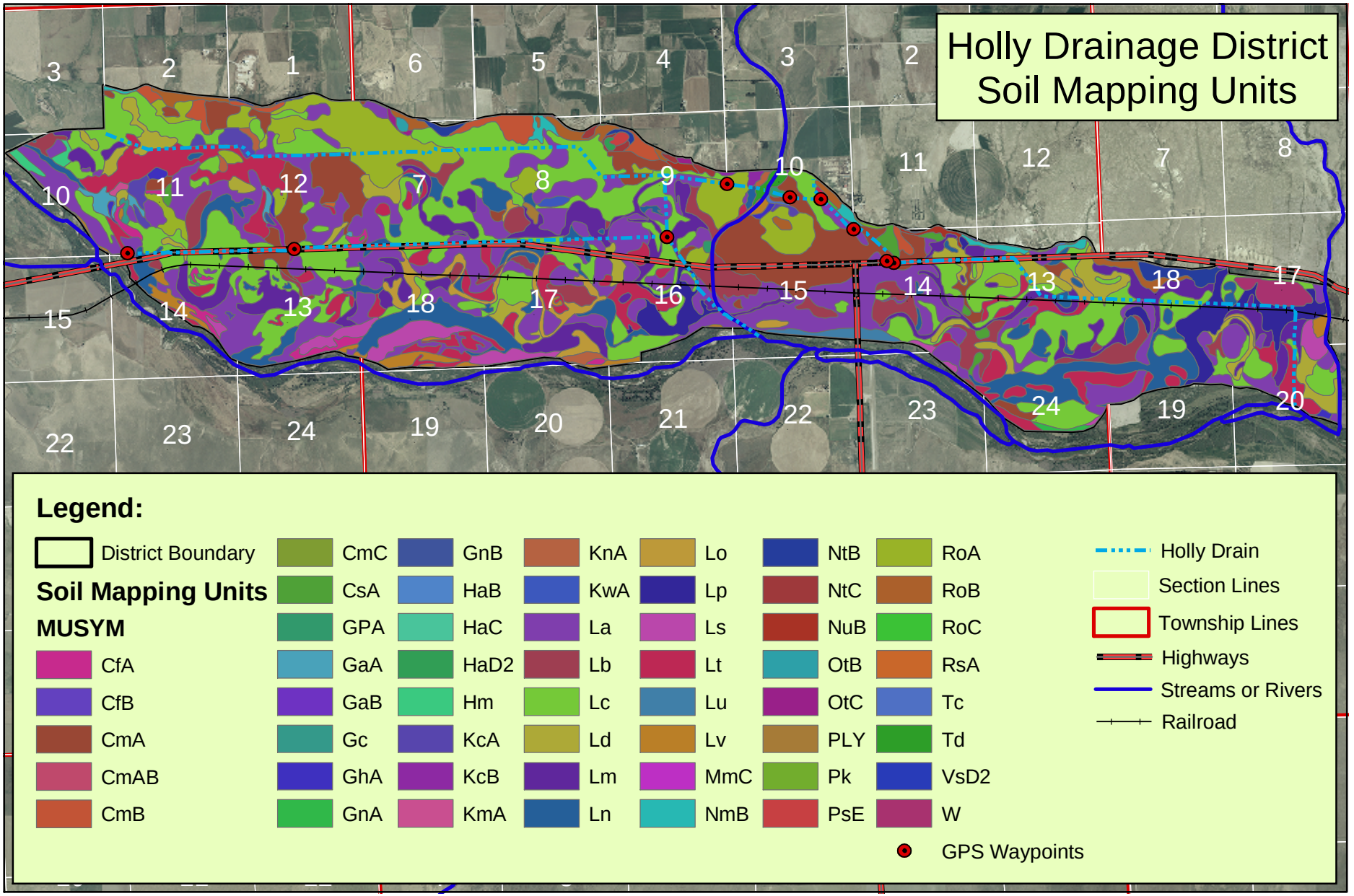
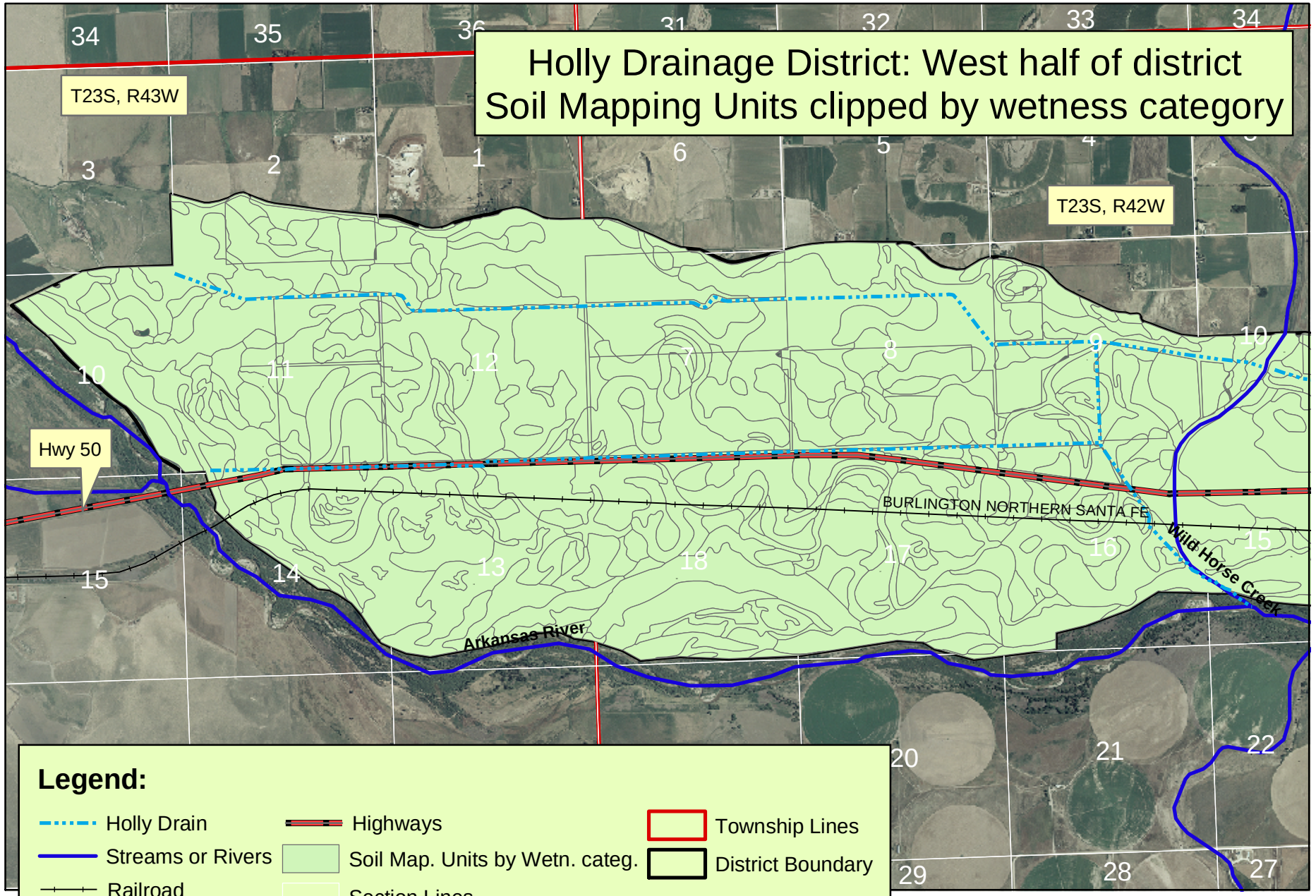


Ark. Valley Drainage Project 10/22/2008



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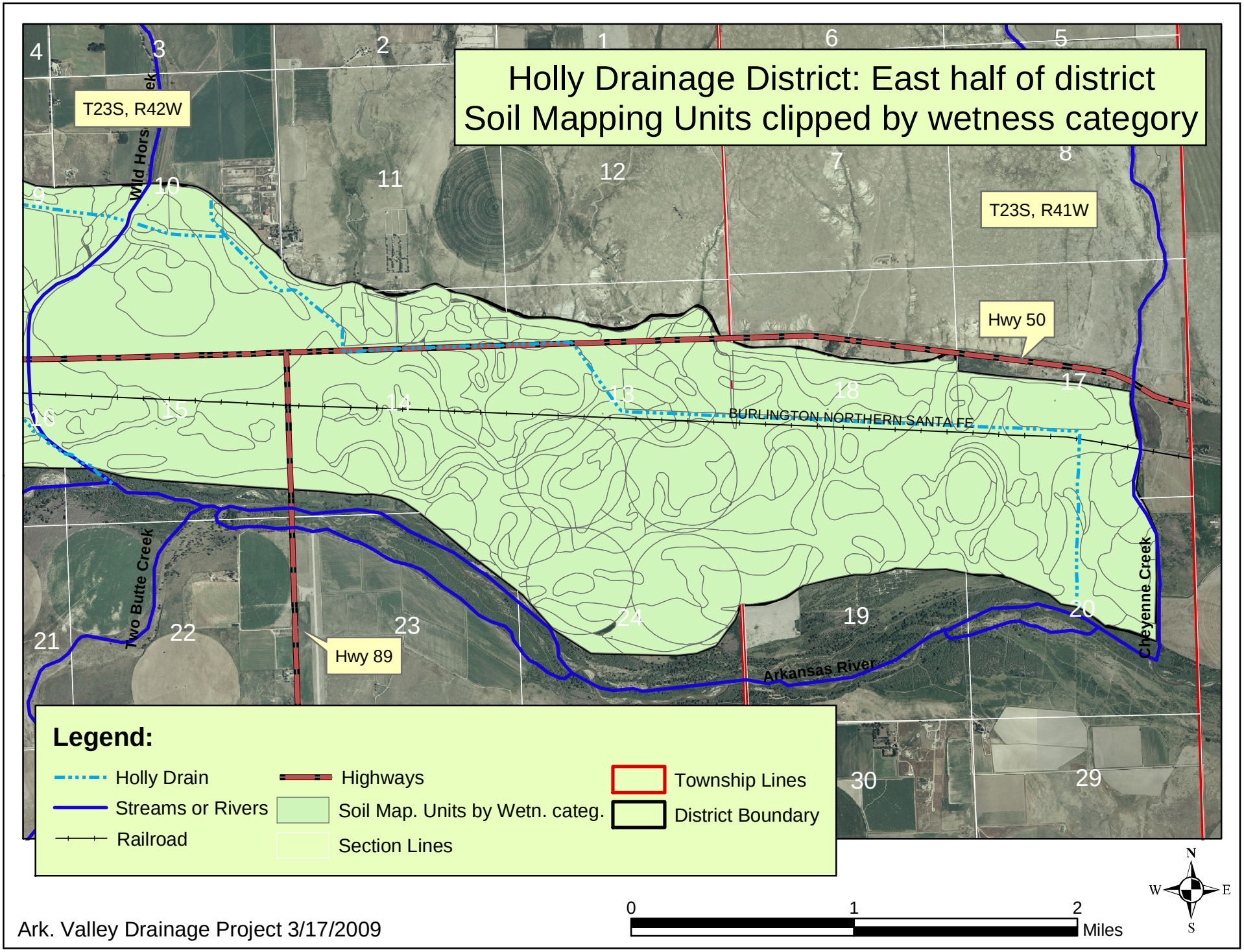

Ark. Valley Drainage Project 3/17/2009

Drainage District Infrastructure notes on the Holly Drainage District located in Prowers County, Colorado. This district includes all or parts of Sections 17 - 20 of T23S, 41W, Sections 5-11, 13-18, 20, 21, 23, 24 of T23S, 42W, and Sections 1-3, 10-14 of T23S, R43W.

A few key waypoints and notes were taken on November 6, 2006. We used the Garmin GPSmap76 handheld unit with a backpack differential correction unit for the waypoints. Waypoints and notes were done with the help of John Golden, Calvin Melcher, Sherry Wagner and Walter Epley.

General Notes:
1. Holly Drainage District, situated around the community of Holly, Colorado on the flat river bottom of the Arkansas River in southeastern Colorado, maintains open drains on lands irrigated with water from the Buffalo Canal lying on the north edge of the district. They were originally constructed in 1923. Tile lines are present within the district boundaries, but are, by district policy, individually maintained. All persons within the district boundaries contribute through the county tax structure to the district revenues collected for ongoing maintenance.
2. For this report, we have located and identified the open drains that are functioning as district drains based on visual inspection with the assistance of Calvin Melcher. In addition, we have used information from several sources including aerial photo interpretation. Black and white aerial photos from the NRCS, and color photos for the year 2005 were used to assist in the location of the drain lines. Archive maps of old tile lines in the district were provided for inspection by John Golden.
3. Maintenance on the open drains is conducted regularly by the district. Mr. Melcher indicated that land in the district is all affected to some degree by wetness issues, and that yields across the district may be reduced by approximately 20% due to issues related to wetness. The map showing wetness categories indicates areas that are affected to a greater degree. Other issues relating to drainage in the district include upkeep on right-of-ways under the jurisdiction of organizations outside the district such as railroads, or state highways. Areas with special issues are indicated by individual notes at the end of the waypoint log.
4. The spreadsheet included at the end of these notes shows the recorded waypoint number (ident), latitude, longitude, and date and time of reading.

Waypoint Log:

Waypoint 795:
Taken on the centerline of the Holly Main Drain. This is the South Main Ditch, with a depth of approximately 20 – 30 feet below the surrounding ground surface elevation. There is water in the bottom flowing eastward with a depth, which appears to be at least 1 foot deep.

Waypoint 796:
Taken on the centerline of Hwy. 50 and the centerline of the North Holly Drain. This drain flows southward at this location.

Waypoint 797:
Taken on the centerline of Hwy. 89 and the centerline of the North Holly Drain.

Waypoint 798:
Taken on the centerline of north Main Street and the centerline of the North Holly Drain on top of a new culvert, which is being installed at this location. The drain is predominantly east-west in orientation west of this point, but turns southeastward from this point eastward and is northwest-southeast in orientation. It flows southeastward from this location.

Waypoint 799:
Taken on the centerline of the North Holly Drain and the centerline of 8th Street in Holly.

Waypoint 800:
Taken on the centerline of CR 34 and the east end of a portion of the North Holly Drain. Flow at this location is toward the west. Originally, before the Horse Creek drain alignment was reconfigured, this drain continued onward around the north side of Holly. The new Horse Creek drain configuration blocked the drain flow at Horse Creek. It now flows westward at this location, and southward in an open drain starting in the center of Section 9, T23S, R42W. Wetness and drain backup issues have increased due to the new alignment of Horse Creek. To the east of this waypoint, water is ponded, and on the west side of this waypoint, water fills the bottom of the ditch where cattails grow.

Waypoint 801:
Taken on the centerline of a portion of the North Holly Drain, a north-south oriented open drain and the South Holly Drain, an east-west oriented open drain on CR FF. The bottom of the drains is approximately 8 to 10 feet below the surrounding ground level, with water at the bottom approximately 8 feet wide and 1 foot deep at the time of this reading.

Waypoint 802:
Taken at the beginning of the South Holly Drain.

Waypoint 803:
Taken at a “jog” in the east-west oriented South Holly Drain, where it crosses under Hwy. 50 in a northeasterly direction moving from the south bar ditch of Hwy. 50 to the north bar ditch of Hwy. 50. This particular location is taken on top of the culvert as it begins going under Hwy. 50 on the south edge of the roadway. At this location, the ditch is approximately 6 feet deep with water flowing northeastward approximately 3 feet wide and 6 inches deep.

Notes on areas causing special wetness issues:

Note 2:
Blocked during the construction of the Horsecreek drain, water at this location in the Holly drain is backed up to the middle of Section 9 where it flows southward. The net effect is to make the area in the east half of Section 9 and the west half of Section 10 wet.

Note 3:
The area around this point, especially to the east of it has increased seepiness due to the backup of water from the Horsecreek Drain.

Note 4:
The culvert under the railroad tracks at this point sits about 2 feet above the drain bottom, causing water to back up behind it to the north of this point.

Note 5:
Another location where the culvert under the railroad carrying drain water to the south sits above the drain bottom, and backs up water to the north and west of this point.

Some infrastructure notes about the district:

Notes on Holly Drainage District – Areas of wetness/drainage infrastructure
Total measured district area(within outside boundary) (ArcView) = 9,821.6 acres
Total Measured Area- Sum of soil Map Unit areas = 9,783.4 acres
Note: some loss due to clipping, and deletion of areas less than 0.1 acre.

Estimation by NRCS staff in Holly of areas experiencing reduction in yields:

Area with 0-20% Yield Reduction	6,948.0	acres
Area with 30% Yield Reduction	1,440.0	"
Area with 40% Yield Reduction	51.2	"
Area with 50% Yield Reduction (Moderate)	1,373.2	"
Area that is not croppable (Severe)	9.1	"

We have done some generalizing to match the estimations in other districts, and for usage in the cost-benefit spreadsheet. The generalized categories are as follows:

Area with no effect on yield	6,948.0 acres
Area with moderate or 50% reduction in yields	2,864.5 acres
Area with severe or 100% reduction in yields	9.1 acres

Length of Open Drain (ArcView)

North Drain	61,016 feet	= 11.56 miles
East Drain	29,672 feet	= 5.62 miles
Total Miles of open drain	90,688 feet	= 17.18 miles

Infrastructure work pending/required:

1. Clean 9 miles of open drain.
2. Clean subdrains.

Following is a spreadsheet of the waypoint logs showing the waypoint number (ident), the occasion of taking the waypoint, or what it was (Type), Latitude and Longitude readings, and the date and time (Comment) when the waypoint was taken. On the page following these logs is a key to the items under "Type".

Ident	Lat	Long	Comment	Type
795	38.05317773	-102.1128178	11/6/2006 16:11	OpenDitch
796	38.05342021	-102.1138332	11/6/2006 16:14	DitchRdCro
797	38.0572753	-102.1185983	11/6/2006 16:20	DitchRdCro
798	38.06088841	-102.123274	11/6/2006 16:23	DitchRdCro
799	38.06121061	-102.127856	11/6/2006 16:28	DitchRdCro
800	38.06302219	-102.1370547	11/6/2006 16:32	DitchRdCro
801	38.05703508	-102.1461681	11/6/2006 16:36	DitchRdCro
802	38.05702737	-102.2260536	11/6/2006 16:48	OpenDitch
803	38.05692268	-102.2013723	11/6/2006 16:56	DitchRdCro

ArcView Field Title	Possible Entry	Explanation Key
Ident		GPS Waypoint Identification Number
Lat		Latitude of reading
Lon		Longitude of reading
Comment		Date and time of reading
Type		
	Manhole	Manhole
	ManhBur	Buried Manhole
	ObsPoint	observation point - generally vert. Pipe extending to tile line from surface
	Inlet	Inlet, or beginning of line
	TileOutlet	End of tile line dumping into seep ditch, or open drain
	BurOutl	Outlet of a tile drain that is buried beneath the surface
	OpenDitch	Open drainage ditch. Seep Ditch
	TileLoc	Location of Tile Line
	TileJunc	Loc. of Tile Junction where more than two lines meet
	TileElbow	Loc. of Elbow in tile line where line bends
	TileRdCross	Crossing of Tile Line under Road
	DitchRdCro	Crossing of Open Ditch under Road
	CanalTileCross	Crossing of Tile Line under Canal
	Repairscar	Location of point where tile has been repaired: generally visible soil disturbance
	Sinkhole	Loc. of place where soil has washed down into tile line, leaving an open hole
	Openhole	Open hole in ground, varying depths and sizes. Relates to tile location.
	FieldObs	Location of relevant condition observed in the field relating to the possible location of tile lines.
	SurfDrainStr	Structure for drainage of surface water. May be culvert, or similar structure.

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Cell: 303-842-0265

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
2	CfA	Moderate	Moderate	CfA	94798	2.7
3	CfA	30pctReduction	Moderate	CfA	94798	3.3
4	CfA		None	CfA	94798	3.6
5	CfA		None	CfA	94798	11.5
6	CfA		None	CfA	94798	0.7
7	CfA		None	CfA	94798	4.6
8	CfA		None	CfA	94798	14
9	CfA		None	CfA	94798	19.4
10	CfA		None	CfA	94798	3.5
11	CmA	Moderate	Moderate	CmA	94802	6.6
12	CmA	Moderate	Moderate	CmA	94802	12.6
13	CmA	Moderate	Moderate	CmA	94802	7.2
14	CmA	Moderate	Moderate	CmA	94802	13
15	CmA	Moderate	Moderate	CmA	94802	5.3
16	CmA	Moderate	Moderate	CmA	94802	7.1
17	CmA	Moderate	Moderate	CmA	94802	17
18	CmA	30pctReduction	Moderate	CmA	94802	5
19	CmA	Moderate	Moderate	CmA	94802	8.2
20	CmA	Moderate	Moderate	CmA	94802	0.8
21	CmA	30pctReduction	Moderate	CmA	94802	4.2
22	CmA	30pctReduction	Moderate	CmA	94802	84.8
23	CmA	30pctReduction	Moderate	CmA	94802	65.3
24	CmA	30pctReduction	Moderate	CmA	94802	8.9
25	CmA	30pctReduction	Moderate	CmA	94802	1.5
26	CmA	30pctReduction	Moderate	CmA	94802	21.8
27	CmA	30pctReduction	Moderate	CmA	94802	5.5
28	CmA		None	CmA	94802	2.5
29	CmA		None	CmA	94802	1.3
30	CmA		None	CmA	94802	8.3
31	CmA		None	CmA	94802	11
32	CmA		None	CmA	94802	6.6
33	CmA		None	CmA	94802	18.5
34	CmA		None	CmA	94802	9.3
35	CmA		None	CmA	94802	339.3
36	CmA		None	CmA	94802	26.3
37	CmA		None	CmA	94802	1.1
38	CmA		None	CmA	94802	7.2
39	CmA		None	CmA	94802	20
40	CmA		None	CmA	94802	1.2
41	CmA		None	CmA	94802	2.4
42	CmB	Moderate	Moderate	CmB	94804	8.2
43	CmB	Moderate	Moderate	CmB	94804	1.4
44	CmB	30pctReduction	Moderate	CmB	94804	5.7
45	CmB	30pctReduction	Moderate	CmB	94804	8.9
46	CmB	30pctReduction	Moderate	CmB	94804	14.5
47	CmB		None	CmB	94804	0.9
48	CmB		None	CmB	94804	2.6
49	CmB		None	CmB	94804	8.5
50	CmB		None	CmB	94804	41.1
51	CmB		None	CmB	94804	17.4
52	CmB		None	CmB	94804	2.1
53	CsA	Moderate	Moderate	CsA	94807	2.5
54	CsA	Moderate	Moderate	CsA	94807	5.5
55	CsA	Moderate	Moderate	CsA	94807	7.5
56	CsA	Moderate	Moderate	CsA	94807	0.6
57	CsA	30pctReduction	Moderate	CsA	94807	2.2
58	CsA	30pctReduction	Moderate	CsA	94807	0.8
59	CsA		None	CsA	94807	3
60	CsA		None	CsA	94807	9.3
61	CsA		None	CsA	94807	2.5
62	CsA		None	CsA	94807	2.3

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
63	CsA		None	CsA	94807	5.7
64	GaA	30pctReduction	Moderate	GaA	94813	7.5
65	GaA	30pctReduction	Moderate	GaA	94813	1
66	GaA		None	GaA	94813	22.3
67	GaA		None	GaA	94813	5.7
68	Gc		None	Gc	94816	6.1
69	GhA	30pctReduction	Moderate	GhA	94818	3.8
70	GhA		None	GhA	94818	7.3
71	GhA		None	GhA	94818	3.2
72	GhA		None	GhA	94818	4.8
73	GhA		None	GhA	94818	3.8
74	GnA		None	GnA	94821	0.5
75	GnA		None	GnA	94821	1.4
76	GnA		None	GnA	94821	8.8
77	GnB	30pctReduction	Moderate	GnB	94823	2.8
78	GPA		None	GPA	94851	5.5
79	GPA		None	GPA	94851	3.7
80	HaD2	Moderate	Moderate	HaD2	94829	2.2
81	HaD2		None	HaD2	94829	1.8
82	Hm		None	Hm	94830	12.6
83	Hm		None	Hm	94830	10.1
84	KcA	30pctReduction	Moderate	KcA	94831	2.2
85	KcA		None	KcA	94831	24.3
86	KcA		None	KcA	94831	5.2
87	KcA		None	KcA	94831	16.9
88	KcA		None	KcA	94831	6.8
89	KcA		None	KcA	94831	5.5
90	KcA		None	KcA	94831	1.5
91	KcB	30pctReduction	Moderate	KcB	94832	7.3
92	KcB		None	KcB	94832	7.3
93	KcB		None	KcB	94832	2
94	KcB		None	KcB	94832	2.8
95	KmA		None	KmA	94833	5.5
96	KnA	30pctReduction	Moderate	KnA	94834	4.4
97	KnA		None	KnA	94834	7.1
98	KnA		None	KnA	94834	4.7
99	KnA		None	KnA	94834	13.3
100	KwA	30pctReduction	Moderate	KwA	94835	10.1
101	La	Moderate	Moderate	La	94836	0.8
102	La	Moderate	Moderate	La	94836	23.1
103	La	Moderate	Moderate	La	94836	4.7
104	La	Moderate	Moderate	La	94836	21
105	La	Moderate	Moderate	La	94836	4.4
106	La	Moderate	Moderate	La	94836	14.5
107	La	Moderate	Moderate	La	94836	3.4
108	La	Moderate	Moderate	La	94836	2.5
109	La	Moderate	Moderate	La	94836	8.8
110	La	40pctReduction	Moderate	La	94836	16.8
111	La	30pctReduction	Moderate	La	94836	33
112	La	30pctReduction	Moderate	La	94836	23.8
113	La	30pctReduction	Moderate	La	94836	23.7
114	La	30pctReduction	Moderate	La	94836	7.9
115	La	Moderate	Moderate	La	94836	6.4
116	La	Moderate	Moderate	La	94836	45
117	La	Moderate	Moderate	La	94836	3.3
118	La	Moderate	Moderate	La	94836	6.4
119	La	30pctReduction	Moderate	La	94836	86.2
120	La	30pctReduction	Moderate	La	94836	41.9
121	La	30pctReduction	Moderate	La	94836	4.9
122	La	30pctReduction	Moderate	La	94836	2.7
123	La	30pctReduction	Moderate	La	94836	32.2

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
124	La	30pctReduction	Moderate	La	94836	23.7
125	La		None	La	94836	9.8
126	La		None	La	94836	12.1
127	La		None	La	94836	84.1
128	La		None	La	94836	7.9
129	La		None	La	94836	14.2
130	La		None	La	94836	8.8
131	La		None	La	94836	42.7
132	La		None	La	94836	5.1
133	La		None	La	94836	1.9
134	La		None	La	94836	1.4
135	La		None	La	94836	6.6
136	La		None	La	94836	3.9
137	La		None	La	94836	17.5
138	La		None	La	94836	58
139	La		None	La	94836	1.6
140	La		None	La	94836	4.3
141	La		None	La	94836	1.5
142	La		None	La	94836	16.6
143	La		None	La	94836	21.8
144	La		None	La	94836	34.4
145	La		None	La	94836	11.4
146	La		None	La	94836	91.1
147	La		None	La	94836	9.3
148	La		None	La	94836	29.4
149	La		None	La	94836	4.2
150	La		None	La	94836	10.6
151	La		None	La	94836	8.5
152	La		None	La	94836	27.5
153	La		None	La	94836	15.6
154	La		None	La	94836	1.7
155	La		None	La	94836	9.6
156	La		None	La	94836	5.9
157	La		None	La	94836	11.3
158	La		None	La	94836	12
159	La		None	La	94836	373.2
160	La		None	La	94836	19.4
161	La		None	La	94836	78
162	La		None	La	94836	8.5
163	La		None	La	94836	14.8
164	La		None	La	94836	4.9
165	La		None	La	94836	23.1
166	La		None	La	94836	1.2
167	La		None	La	94836	21.7
168	La		None	La	94836	23
169	La		None	La	94836	43.7
170	La		None	La	94836	11.1
171	La		None	La	94836	9.3
172	La		None	La	94836	6.6
173	La		None	La	94836	11.9
174	La		None	La	94836	15.4
175	La		None	La	94836	26.2
176	La		None	La	94836	5.6
177	La		None	La	94836	27.5
178	La		None	La	94836	8.8
179	La		None	La	94836	2
180	La		None	La	94836	27.4
181	La		None	La	94836	11.2
182	La		None	La	94836	24.6
183	La		None	La	94836	4.1
184	La		None	La	94836	9.7

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
185	La		None	La	94836	4.4
186	La		None	La	94836	28
187	La		None	La	94836	19.2
188	La		None	La	94836	8.6
189	La		None	La	94836	2.3
190	Lb	Moderate	Moderate	Lb	94837	4.1
191	Lb	Moderate	Moderate	Lb	94837	2.9
192	Lb	Moderate	Moderate	Lb	94837	11.3
193	Lb	Moderate	Moderate	Lb	94837	17.5
194	Lb	30pctReduction	Moderate	Lb	94837	20.8
195	Lb	Moderate	Moderate	Lb	94837	1.2
196	Lb	30pctReduction	Moderate	Lb	94837	21.6
197	Lb	30pctReduction	Moderate	Lb	94837	31.6
198	Lb		None	Lb	94837	14.8
199	Lb		None	Lb	94837	83.2
200	Lb		None	Lb	94837	1.1
201	Lb		None	Lb	94837	4.3
202	Lb		None	Lb	94837	7.7
203	Lb		None	Lb	94837	6.9
204	Lb		None	Lb	94837	5.4
205	Lb		None	Lb	94837	6.4
206	Lb		None	Lb	94837	26.1
207	Lb		None	Lb	94837	13.2
208	Lb		None	Lb	94837	32.4
209	Lb		None	Lb	94837	15.3
210	Lb		None	Lb	94837	41
211	Lb		None	Lb	94837	34.4
212	Lb		None	Lb	94837	8.8
213	Lb		None	Lb	94837	1.7
214	Lc	Moderate	Moderate	Lc	94838	9
215	Lc	Moderate	Moderate	Lc	94838	1.2
216	Lc	Moderate	Moderate	Lc	94838	6.7
217	Lc	Moderate	Moderate	Lc	94838	4.1
218	Lc	Moderate	Moderate	Lc	94838	3.3
219	Lc	Moderate	Moderate	Lc	94838	7.9
220	Lc	Moderate	Moderate	Lc	94838	12.8
221	Lc	Moderate	Moderate	Lc	94838	67.8
222	Lc	Moderate	Moderate	Lc	94838	33.6
223	Lc	Moderate	Moderate	Lc	94838	6.1
224	Lc	Moderate	Moderate	Lc	94838	8.7
225	Lc	Moderate	Moderate	Lc	94838	10.8
226	Lc	Moderate	Moderate	Lc	94838	28.2
227	Lc	Moderate	Moderate	Lc	94838	19.6
228	Lc	Moderate	Moderate	Lc	94838	14.3
229	Lc	Moderate	Moderate	Lc	94838	1
230	Lc	Moderate	Moderate	Lc	94838	37.5
231	Lc	Moderate	Moderate	Lc	94838	11.5
232	Lc	40pctReduction	Moderate	Lc	94838	2.4
233	Lc	40pctReduction	Moderate	Lc	94838	11
234	Lc	30pctReduction	Moderate	Lc	94838	25.2
235	Lc	30pctReduction	Moderate	Lc	94838	30.1
236	Lc	Moderate	Moderate	Lc	94838	62.6
237	Lc	Moderate	Moderate	Lc	94838	53.8
238	Lc	30pctReduction	Moderate	Lc	94838	3.3
239	Lc	30pctReduction	Moderate	Lc	94838	25.8
240	Lc	30pctReduction	Moderate	Lc	94838	37.5
241	Lc	30pctReduction	Moderate	Lc	94838	3.9
242	Lc	30pctReduction	Moderate	Lc	94838	12.6
243	Lc	30pctReduction	Moderate	Lc	94838	3.5
244	Lc	30pctReduction	Moderate	Lc	94838	8.2
245	Lc	30pctReduction	Moderate	Lc	94838	35.9

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
246	Lc	30pctReduction	Moderate	Lc	94838	8.4
247	Lc	30pctReduction	Moderate	Lc	94838	10.2
248	Lc	30pctReduction	Moderate	Lc	94838	5.7
249	Lc	30pctReduction	Moderate	Lc	94838	32.4
250	Lc		None	Lc	94838	26.5
251	Lc		None	Lc	94838	120.1
252	Lc		None	Lc	94838	8.5
253	Lc		None	Lc	94838	8.8
254	Lc		None	Lc	94838	134.2
255	Lc		None	Lc	94838	44.8
256	Lc		None	Lc	94838	125.9
257	Lc		None	Lc	94838	10
258	Lc		None	Lc	94838	21.2
259	Lc		None	Lc	94838	21.3
260	Lc		None	Lc	94838	119.9
261	Lc		None	Lc	94838	46.1
262	Lc		None	Lc	94838	5.6
263	Lc		None	Lc	94838	67.7
264	Lc		None	Lc	94838	7.4
265	Lc		None	Lc	94838	18.5
266	Lc		None	Lc	94838	3.1
267	Lc		None	Lc	94838	46.1
268	Lc		None	Lc	94838	10.1
269	Lc		None	Lc	94838	63.8
270	Lc		None	Lc	94838	23.5
271	Lc		None	Lc	94838	3.7
272	Lc		None	Lc	94838	83.6
273	Lc		None	Lc	94838	2.2
274	Lc		None	Lc	94838	14.5
275	Lc		None	Lc	94838	5.4
276	Lc		None	Lc	94838	12.7
277	Lc		None	Lc	94838	8.3
278	Lc		None	Lc	94838	9.8
279	Lc		None	Lc	94838	5.8
280	Lc		None	Lc	94838	53
281	Lc		None	Lc	94838	5.2
282	Lc		None	Lc	94838	5
283	Lc		None	Lc	94838	29
284	Lc		None	Lc	94838	8.5
285	Lc		None	Lc	94838	12.6
286	Lc		None	Lc	94838	26.1
287	Lc		None	Lc	94838	39.5
288	Lc		None	Lc	94838	21
289	Lc		None	Lc	94838	22.8
290	Lc		None	Lc	94838	4.3
291	Lc		None	Lc	94838	22.7
292	Lc		None	Lc	94838	27.3
293	Lc		None	Lc	94838	18.8
294	Lc	Severe	Severe	Lc	94838	3.7
295	Ld	Moderate	Moderate	Ld	94839	12.1
296	Ld	Moderate	Moderate	Ld	94839	26.9
297	Ld	Moderate	Moderate	Ld	94839	15.9
298	Ld	Moderate	Moderate	Ld	94839	4
299	Ld	Moderate	Moderate	Ld	94839	7.7
300	Ld	Moderate	Moderate	Ld	94839	13.3
301	Ld	40pctReduction	Moderate	Ld	94839	2.9
302	Ld	Moderate	Moderate	Ld	94839	21
303	Ld	30pctReduction	Moderate	Ld	94839	5.8
304	Ld	30pctReduction	Moderate	Ld	94839	10.5
305	Ld	30pctReduction	Moderate	Ld	94839	6.5
306	Ld	30pctReduction	Moderate	Ld	94839	2.6

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
307	Ld	30pctReduction	Moderate	Ld	94839	0.7
308	Ld	30pctReduction	Moderate	Ld	94839	2.7
309	Ld		None	Ld	94839	0.9
310	Ld		None	Ld	94839	36.7
311	Ld		None	Ld	94839	7.5
312	Ld		None	Ld	94839	13.3
313	Ld		None	Ld	94839	5.1
314	Ld		None	Ld	94839	3.6
315	Ld		None	Ld	94839	16.2
316	Ld		None	Ld	94839	52.5
317	Ld		None	Ld	94839	3.1
318	Ld		None	Ld	94839	29.6
319	Ld		None	Ld	94839	10.2
320	Ld		None	Ld	94839	21.4
321	Ld		None	Ld	94839	3.6
322	Ld		None	Ld	94839	39.6
323	Ld	Severe	Severe	Ld	94839	1.2
324	Lm	Moderate	Moderate	Lm	94840	3.6
325	Lm	Moderate	Moderate	Lm	94840	2.8
326	Lm	Moderate	Moderate	Lm	94840	54.2
327	Lm	Moderate	Moderate	Lm	94840	5.7
328	Lm	Moderate	Moderate	Lm	94840	27.1
329	Lm	Moderate	Moderate	Lm	94840	9.6
330	Lm	Moderate	Moderate	Lm	94840	8.3
331	Lm	Moderate	Moderate	Lm	94840	5.2
332	Lm	Moderate	Moderate	Lm	94840	32.9
333	Lm	40pctReduction	Moderate	Lm	94840	10.5
334	Lm	30pctReduction	Moderate	Lm	94840	59.7
335	Lm	Moderate	Moderate	Lm	94840	37.4
336	Lm	Moderate	Moderate	Lm	94840	13.3
337	Lm	30pctReduction	Moderate	Lm	94840	6.7
338	Lm		None	Lm	94840	16.2
339	Lm		None	Lm	94840	4.1
340	Lm		None	Lm	94840	7.3
341	Lm		None	Lm	94840	39.9
342	Lm		None	Lm	94840	44.2
343	Lm		None	Lm	94840	23.1
344	Lm		None	Lm	94840	3.4
345	Lm		None	Lm	94840	49.9
346	Lm		None	Lm	94840	9.8
347	Lm		None	Lm	94840	43.8
348	Lm		None	Lm	94840	8.8
349	Lm		None	Lm	94840	8.6
350	Lm		None	Lm	94840	1.1
351	Lm		None	Lm	94840	9.9
352	Lm		None	Lm	94840	10.3
353	Lm		None	Lm	94840	3.5
354	Lm		None	Lm	94840	2.3
355	Lm		None	Lm	94840	3.8
356	Lm		None	Lm	94840	25.5
357	Lm		None	Lm	94840	58.2
358	Lm		None	Lm	94840	11.3
359	Lm		None	Lm	94840	4.6
360	Lm		None	Lm	94840	37.4
361	Lm		None	Lm	94840	2.4
362	Ln	Moderate	Moderate	Ln	94841	3.5
363	Ln	Moderate	Moderate	Ln	94841	2.5
364	Ln	Moderate	Moderate	Ln	94841	1.4
365	Ln	Moderate	Moderate	Ln	94841	2.5
366	Ln	Moderate	Moderate	Ln	94841	1.7
367	Ln	Moderate	Moderate	Ln	94841	2.9

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
368	Ln	Moderate	Moderate	Ln	94841	1
369	Ln	Moderate	Moderate	Ln	94841	4.7
370	Ln	Moderate	Moderate	Ln	94841	39
371	Ln	Moderate	Moderate	Ln	94841	0.7
372	Ln	Moderate	Moderate	Ln	94841	51.6
373	Ln	Moderate	Moderate	Ln	94841	10.7
374	Ln	Moderate	Moderate	Ln	94841	6.7
375	Ln	Moderate	Moderate	Ln	94841	2.8
376	Ln	30pctReduction	Moderate	Ln	94841	27.1
377	Ln	30pctReduction	Moderate	Ln	94841	4
378	Ln	30pctReduction	Moderate	Ln	94841	5.1
379	Ln	30pctReduction	Moderate	Ln	94841	0.9
380	Ln	Moderate	Moderate	Ln	94841	1.3
381	Ln	Moderate	Moderate	Ln	94841	7.9
382	Ln	Moderate	Moderate	Ln	94841	3.4
383	Ln	Moderate	Moderate	Ln	94841	5.3
384	Ln	Moderate	Moderate	Ln	94841	3.5
385	Ln	30pctReduction	Moderate	Ln	94841	3.6
386	Ln	30pctReduction	Moderate	Ln	94841	1.2
387	Ln	30pctReduction	Moderate	Ln	94841	7.5
388	Ln	30pctReduction	Moderate	Ln	94841	25.6
389	Ln	30pctReduction	Moderate	Ln	94841	3.2
390	Ln		None	Ln	94841	14.1
391	Ln		None	Ln	94841	1.9
392	Ln		None	Ln	94841	3.4
393	Ln		None	Ln	94841	6.3
394	Ln		None	Ln	94841	4.4
395	Ln		None	Ln	94841	7.3
396	Ln		None	Ln	94841	7.2
397	Ln		None	Ln	94841	31.2
398	Ln		None	Ln	94841	1.7
399	Ln		None	Ln	94841	10.6
400	Ln		None	Ln	94841	7.2
401	Ln		None	Ln	94841	14.1
402	Ln		None	Ln	94841	2.3
403	Ln		None	Ln	94841	2.7
404	Ln		None	Ln	94841	0.8
405	Ln		None	Ln	94841	3.5
406	Ln		None	Ln	94841	2.6
407	Ln		None	Ln	94841	1.5
408	Ln		None	Ln	94841	6.8
409	Ln		None	Ln	94841	2.7
410	Ln		None	Ln	94841	128.9
411	Ln		None	Ln	94841	31.3
412	Ln		None	Ln	94841	2.6
413	Ln		None	Ln	94841	7
414	Ln		None	Ln	94841	4.5
415	Ln		None	Ln	94841	3.4
416	Ln		None	Ln	94841	32
417	Ln		None	Ln	94841	4.9
418	Ln		None	Ln	94841	12.8
419	Ln		None	Ln	94841	6.5
420	Ln		None	Ln	94841	100.7
421	Lo	Moderate	Moderate	Lo	94842	14.1
422	Lo	30pctReduction	Moderate	Lo	94842	4.6
423	Lo		None	Lo	94842	106.9
424	Lo		None	Lo	94842	2.4
425	Lo		None	Lo	94842	8.6
426	Lo		None	Lo	94842	20
427	Lo		None	Lo	94842	6
428	Lp	Moderate	Moderate	Lp	94843	11.3

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
429	Lp	Moderate	Moderate	Lp	94843	1.2
430	Lp		None	Lp	94843	1.9
431	Lp		None	Lp	94843	82.9
432	Lp		None	Lp	94843	156.6
433	Lp		None	Lp	94843	11.8
434	Lp		None	Lp	94843	1.4
435	Ls		None	Ls	94844	6.3
436	Ls		None	Ls	94844	34.9
437	Ls		None	Ls	94844	63.3
438	Ls		None	Ls	94844	29.1
439	Ls		None	Ls	94844	31.4
440	Ls		None	Ls	94844	5.3
441	Ls		None	Ls	94844	3.5
442	Ls		None	Ls	94844	2.4
443	Ls		None	Ls	94844	1.8
444	Lt	Moderate	Moderate	Lt	94845	7.1
445	Lt	Moderate	Moderate	Lt	94845	24.6
446	Lt	Moderate	Moderate	Lt	94845	1.5
447	Lt	Moderate	Moderate	Lt	94845	5.9
448	Lt	Moderate	Moderate	Lt	94845	2.4
449	Lt	Moderate	Moderate	Lt	94845	4.1
450	Lt	Moderate	Moderate	Lt	94845	8.5
451	Lt	Moderate	Moderate	Lt	94845	5.8
452	Lt	Moderate	Moderate	Lt	94845	0.9
453	Lt	Moderate	Moderate	Lt	94845	5.5
454	Lt	Moderate	Moderate	Lt	94845	5.9
455	Lt	Moderate	Moderate	Lt	94845	2.4
456	Lt	Moderate	Moderate	Lt	94845	1
457	Lt	Moderate	Moderate	Lt	94845	2.1
458	Lt	40pctReduction	Moderate	Lt	94845	7.3
459	Lt	Moderate	Moderate	Lt	94845	3.3
460	Lt	Moderate	Moderate	Lt	94845	5.3
461	Lt	Moderate	Moderate	Lt	94845	6.3
462	Lt	30pctReduction	Moderate	Lt	94845	3.3
463	Lt	30pctReduction	Moderate	Lt	94845	54.4
464	Lt	30pctReduction	Moderate	Lt	94845	21.3
465	Lt	30pctReduction	Moderate	Lt	94845	1.9
466	Lt	30pctReduction	Moderate	Lt	94845	50.1
467	Lt		None	Lt	94845	88.3
468	Lt		None	Lt	94845	1.2
469	Lt		None	Lt	94845	17.5
470	Lt		None	Lt	94845	5
471	Lt		None	Lt	94845	10.7
472	Lt		None	Lt	94845	10.6
473	Lt		None	Lt	94845	4.5
474	Lt		None	Lt	94845	36.1
475	Lt		None	Lt	94845	6.5
476	Lt		None	Lt	94845	15.9
477	Lt		None	Lt	94845	4.3
478	Lt		None	Lt	94845	7.9
479	Lt		None	Lt	94845	4.4
480	Lt		None	Lt	94845	3
481	Lt		None	Lt	94845	50.8
482	Lt		None	Lt	94845	15.8
483	Lt		None	Lt	94845	1.3
484	Lt		None	Lt	94845	8.8
485	Lt		None	Lt	94845	13.6
486	Lt		None	Lt	94845	3.2
487	Lt		None	Lt	94845	8.9
488	Lt		None	Lt	94845	12
489	Lt		None	Lt	94845	15.9

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
490	Lt		None	Lt	94845	7.1
491	Lt		None	Lt	94845	9.6
492	Lt		None	Lt	94845	5.2
493	Lt		None	Lt	94845	20.2
494	Lt		None	Lt	94845	14.8
495	Lt		None	Lt	94845	13.2
496	Lt		None	Lt	94845	43.6
497	Lt		None	Lt	94845	5.7
498	Lt		None	Lt	94845	16.2
499	Lt		None	Lt	94845	4.6
500	Lt		None	Lt	94845	6
501	Lt		None	Lt	94845	4.2
502	Lt		None	Lt	94845	8.6
503	Lu		None	Lu	94846	38.6
504	Lv		None	Lv	94847	1.7
505	Lv		None	Lv	94847	10
506	Lv		None	Lv	94847	6
507	Lv		None	Lv	94847	23.9
508	Lv		None	Lv	94847	2.5
509	Lv		None	Lv	94847	9.3
510	Lv		None	Lv	94847	1.2
511	Lv		None	Lv	94847	2.7
512	Lv		None	Lv	94847	11.7
513	Lv		None	Lv	94847	3.5
514	Lv		None	Lv	94847	1.9
515	Lv		None	Lv	94847	27.2
516	Lv		None	Lv	94847	1.7
517	Lv		None	Lv	94847	3.5
518	NmB	Moderate	Moderate	NmB	94855	0.5
519	NmB		None	NmB	94855	15.5
520	NmB		None	NmB	94855	3.6
521	NmB		None	NmB	94855	8.8
522	NmB		None	NmB	94855	13.2
523	NmB		None	NmB	94855	4
524	NmB	Severe	Severe	NmB	94855	3.7
525	NtB	Moderate	Moderate	NtB	94860	32.2
526	NtB	Moderate	Moderate	NtB	94860	1.6
527	NtB	30pctReduction	Moderate	NtB	94860	9
528	NtB		None	NtB	94860	3.6
529	NtB		None	NtB	94860	9.8
530	NtC	Moderate	Moderate	NtC	94861	6.3
531	NtC		None	NtC	94861	0.7
532	NtC		None	NtC	94861	3.4
533	NtC		None	NtC	94861	5.7
534	NtC		None	NtC	94861	4.3
535	NuB	Moderate	Moderate	NuB	94862	7.4
536	NuB	Moderate	Moderate	NuB	94862	0.6
537	NuB		None	NuB	94862	7.8
538	NuB		None	NuB	94862	3.3
539	OtB	30pctReduction	Moderate	OtB	94864	4.4
540	OtB		None	OtB	94864	1.1
541	OtC	30pctReduction	Moderate	OtC	94865	3
542	OtC		None	OtC	94865	2.9
543	OtC		None	OtC	94865	3.3
544	Pk		None	Pk	94867	3.2
545	PLY	30pctReduction	Moderate	PLY	679106	6.8
546	PsE		None	PsE	94869	7
547	RoA	Moderate	Moderate	RoA	94881	16.5
548	RoA	Moderate	Moderate	RoA	94881	42.8
549	RoA	30pctReduction	Moderate	RoA	94881	15
550	RoA	Moderate	Moderate	RoA	94881	2

Holly Drainage District
Areas of each soil mapping
unit classified by wetness categories

	A	B	C	D	E	F
1	MUSym	WetnCatOrig	WetnCatRev	MUSym	MUKey	Area_AC
551	RoA	30pctReduction	Moderate	RoA	94881	75
552	RoA	30pctReduction	Moderate	RoA	94881	69
553	RoA	30pctReduction	Moderate	RoA	94881	4.2
554	RoA	30pctReduction	Moderate	RoA	94881	1.4
555	RoA	30pctReduction	Moderate	RoA	94881	10.7
556	RoA	30pctReduction	Moderate	RoA	94881	14
557	RoA	30pctReduction	Moderate	RoA	94881	4.3
558	RoA	30pctReduction	Moderate	RoA	94881	20.9
559	RoA		None	RoA	94881	5.1
560	RoA		None	RoA	94881	8.8
561	RoA		None	RoA	94881	139.1
562	RoA		None	RoA	94881	16.6
563	RoA		None	RoA	94881	3.1
564	RoA		None	RoA	94881	21.9
565	RoA		None	RoA	94881	13.4
566	RoA		None	RoA	94881	73.7
567	RoA		None	RoA	94881	13.9
568	RoA		None	RoA	94881	11.8
569	RoB	Moderate	Moderate	RoB	94882	19.9
570	RoB	Moderate	Moderate	RoB	94882	0.9
571	RoB	Moderate	Moderate	RoB	94882	4.3
572	RoB	30pctReduction	Moderate	RoB	94882	6.5
573	RoB	30pctReduction	Moderate	RoB	94882	16.3
574	RoB		None	RoB	94882	3
575	RoB		None	RoB	94882	20.5
576	RoB		None	RoB	94882	4.1
577	RoB		None	RoB	94882	1.3
578	RoB		None	RoB	94882	4.4
579	RoB		None	RoB	94882	1.3
580	RoB		None	RoB	94882	8.6
581	RoB		None	RoB	94882	7
582	RoB		None	RoB	94882	8.6
583	RoC		None	RoC	94883	1.9
584	RsA	30pctReduction	Moderate	RsA	94885	1.6
585	Tc		None	Tc	94895	3.1
586	Td		None	Td	94896	19.6
587	W		None	W	679107	4.9
588	W		None	W	679107	59
589	Total Acres:					9783.4
590	Total Acreage:Moderate effect:					2888.7
591	Total Acreage: No Effect					6886.1
592	Total Acreage: Severe Effect:					8.6

SUMMARY OF DRAINAGE DISTRICTS — STATE Colorado

WATER DISTRICT OR AREA W. D. No. 67

SUMMARY OF DATA ON HOLLY DRAINAGE DISTRICT — DATE September 19 42

GENERAL

LOCATION: STATE Colorado COUNTY Prowers NEAR Holly

ACRES: GROSS 6200 ASSESSED 5975 SUSTAINING 4000

UNIT OF ASSESSMENT (1) Dollar of assessed benefits

TOTAL UNITS: ORIGINAL 588,017 SUSTAINING $410,000

UNITS OF ASSESSMENT PER ACRE: AVERAGE $ 98 MAXIMUM $ 125 MINIMUM $ 40

LIABILITY FOR DISTRICT OBLIGATIONS Liable to last faithful acre under R.F.C. contract

LOCATION OF ASSESSMENT RECORDS H. F. Decker, Holly, Colo., and Co. Assessor, Lamar, Colo

LAND: BAD ALKALI 25 %; SLIGHT ALKALI 25 %; HIGH WATER TABLE 20 %; TREND stable to slightl; bett

ELEVATION 3400 FT. AVERAGE GROWING SEASON 168 DAYS April 26 TO October 12

PRECIPITATION IN INCHES: ANNUAL AVERAGE 15.37; CHARACTERISTICS OF RAINFALL 80% between 4/1 and 10/. Erratic - maximum 24 in., minimum 8 in.; intense storms in late summer.

ECONOMIC & FINANCIAL CONDITIONS

GENERAL TAXES ON LAND AND IMPROVEMENTS: AVERAGE $ 1.75 PER ACRE irrigated

CAPITAL DEBT AS OF September 1 19 42, BONDS $ 41,000 @ 4 % PAYABLE 19 49-1971

WARRANTS $ @ % PAYABLE 19 ; OTHER DEBTS $ @ % PAYABLE 19

NET CAPITAL DEBT: $ 39,264, ADJUSTED TO AN EQUIVALENT 6% BASIS $ 31,711

OR $ 0.0775 PER SUSTAINING (1) Dollar of assessed benefits

B. & I. ASSESSMENTS FOR PERIOD 19 32-41 AVERAGED $ 0.0154 PER (1) $1 of ass'd benefit

O. & M. ASSESSMENTS FOR PERIOD 19 32-41 AVERAGED $ 0.0007 PER (1) $1 " " "

ESTIMATED FUTURE ANNUAL ASSESSMENTS PER SUSTAINING (1) $1 of assessed benefits

B. & I. $ 0.0056 O. & M. $ (1) 0.003

HISTORY AND TREND OF DEBT AND ASSESSMENTS $105,000 6% bonds 1923, payable 1932-41. Bad defau Refinanced by R.F.C. 1940 for $57,000. Good collection of delinquent taxes, sub sequent to refinancing enabled payment of $16,000 ahead of schedule. Refinanci will materially reduce future B&I assessments. Maintenance poor prior to re-financing and few levies made. Increase expected in future. District receives $500 per year through sale of water, which is used for O&M.

THESE LANDS ARE part SUBJECT TO OTHER ASSESSMENTS BY Buffalo Canal of the Arkansas Valley Sugar Beet & Irrigated Land Co.

PHYSICAL CONDITIONS

EFFECTIVENESS OF SYSTEM AND ADEQUACY OF PAST MAINTENANCE - Open drains only - 22 miles. West of Holly the system is effective; north of or above the north main drain and moderately effective north of U. S. Highway No. 50. East of Holly it is moderat ly effective north of the A.T. & S.F. tracks and ineffective south of the A. T. & S.F. tracks. Poor maintenance prior to 1940 and generally good since that date.

AREA HAS not BEEN ZONED. (SEE ZONE DESCRIPTIONS IF IT HAS BEEN ZONED)

EXPECTED FUTURE ADEQUACY OF MAINTENANCE

Maintenance is expected to be considerably better in the future than in the past but doubtful if it will be first class.

CHARACTER OF FLOODS (2) Overflow from Arkansas River not anticipated upon completion of Caddoa Reservoir. Flash floods in Horse Creekoverflow area about 1 mile wide on either side of stream 1 year in 10.

RECOMMENDATIONS: APPRAISAL FACTORS IN (3) Percentage of assessed benefits

TOTAL DEDUCTION ✱ 7.75% UNTIL 19 June 1 19 43

ANNUAL B. & I. ✱ 0.56% ANNUAL O. & M. 0.3%

(1) Dollar of assessed benefits, or dollar of assessed valuation, or acre- district's method of assessment

(2) Supplement by attaching gage record tables where available

(3) % of assessed benefits, or % of assessed valuation, or dollars per acre

(SEE REVERSE SIDE FOR ADDITIONAL INFORMATION)

Conclusions: The general physical condition of the drainage system is now fair to good and it is believed that the quality of maintenance which may be expected in the future, under a lighter debt load and a measur of control by the R.F.C., will be sufficiently adequate to insure a stable or slightly improved condition in the quality of the irrigated lands. The present debt is not large, the annual B&I charges are reasonable and it is believed that most of the cultivated lands, which are fairly well drained, will be able to meet the district obligations without serious delinquencies.

Recommendations: Federal Land Bank loans may be made on the better class of properties, which are adequately drained, and are located north of the U. S. Highway No. 50 in Twp. 23S, R42 and 43 W. They may also be considered on lands located east of Holly in Twp. 23S, R42W and lying north of the A.T. & S.F. tracks. Land Bank Commissioner loans may be made more generally in these areas.

No loans are recommended for any lands lying south of the A.T. & S.F. Ry. tracks or any lands located in Twp. 23S, R41W.

DRAINAGE DISTRICTS

STATE Colorado
WATER DISTRICT OR AREA W.D. No. 67
DATE OF INSPECTION

NAME OF DISTRICT Holly Drainage District

LAND LOCATION 5 MILES E & W OF Holly
IN Prowers COUNTY. TOWNSHIP 23S RANGE 41, 42 & 43W

ORGANIZATION

DATE OF ORGANIZATION 1922 UNDER LAW OF 1911 and 1919
AMENDMENTS TO ORIGINAL ORGANIZATION none
ACRES: GROSS 6200 , ASSESSED 5975 , SUSTAINING 4,000
UNIT OF ASSESSMENT (1) Dollar of assessed benefits
TOTAL UNITS: ORIGINAL $588,017 SUSTAINING 410,000
UNITS OF ASSESSMENT PER ACRE: AVERAGE $ 98 , MAXIMUM $ 1257 , MINIMUM $ 40
LIABILITY FOR DISTRICT OBLIGATIONS Liable to last faithful acre under R.F.C. contract
NAME AND ADDRESS OF SECRETARY H. F. Decker, Holly, Colorado
LOCATION OF ASSESSMENT RECORDS " " " and County Assessor, Lamar

TYPE OF LAND U.S.B.R. classification: Cl. 1 - 20%; Cl. 2 - 55%; Cl. 5 & 6 - 25%
GENERAL Narrow strip of first and second bottom land lying below the Buffalo Canal and at average distance ½ to ¾ mile from Arkansas River.
TOPOGRAPHY Gently sloping to relatively level.

SOILS: PREDOMINANT TYPES Las Animas C.L. - 70%; Manvel F.S.L. to si.l.-30%. Variable depth with gravel at 3 to 5 ft. Intersected by clay dikes.
PER CENT OF AREA: BAD ALKALI 25% %, SLIGHT ALKALI 25%%, HIGH WATER TABLE 20 %
TREND Slightly improved in last few years and trend is stable to slightly better.

CLIMATE

ELEVATION 3400 FT., AVERAGE GROWING SEASON 168 DAYS April 26 TO October 12
RAINFALL AT Holly STATION 0 MILES FROM DISTRICT- 15.37 inches
LENGTH OF RECORD 47 YEARS 1894 TO 1941 , ACCURACY Good
CHARACTERISTICS OF RAINFALL 80% between 4/1 & 10/1 - Erratic with maximum annual of 24 in. amd minimum of 8 in. Maximum daily - 3.25 in. Intense storms in summer months.

CROPS

CROPS	% OF AREA	CROPS	% OF AREA	CROPS	% OF AREA
ALFALFA	24	POTATOES			
CLOVER		SUGAR BEETS	8		
OTHER HAY	1	Town Holly	2.7		
PASTURE	35	Row & waste	6.3		
CEREALS	11	Gardens & other	1		
CORN	3	crops			
SORGHUMS	8				

SOURCE OF INFORMATION U.S.B.R. Survey & W.C. Reports ACCURACY fair
YIELDS AND TRENDS Consistently good yields on good lands but production spotty. Generally better yeilds in last few years.
DISPOSITION OF CROPS About 50% disposed of in cash, including good part of alfalfa crop.

ECONOMIC CONDITIONS

NO. OF FARMS 50 . TENANCY APPROX. 60 %. CONDITION OF FARM IMPROVEMENTS fair to poor

GENERAL CHARACTER OF FARMS AND FARMERS - A few good farmers on better units, usually owner operated. High percentage of tenants and only fair tenants are attracted to the area.
GENERAL TAXES ON LAND AND IMPROVEMENTS: AVERAGE $ 1.75 PER ACRE irrigated
TRANSPORTATION FACILITIES A.T. & S.F. Ry. and U.S. Highway No. 50 intersect area.

MARKETING FACILITIES Beet dump, packing sheds, feed lots, turkey co-op. at Holly. Alfalfa mill at Hartman, 5 miles distant. Fair to good marketing facilities for surplus feed crops.

(1) Dollar of assessed benefits, or dollar of assessed valuation, or acre - district's method of assessme

HOLLY DRAINAGE DISTRICT

OPERATION AND MAINTENANCE ACCOUNT AS OF September 1 19 42

ASSETS		LIABILITIES	
CASH ON HAND	$ 152.56	WARRANTS OUTSTANDING	$ 2,808.79
ASSESSMENTS RECEIVABLE		OTHER	
MISCELLANEOUS RECEIVABLE			
TOTAL	$ 152.56	TOTAL	$ 2,808.79

CAPITAL DEBT SCHEDULE

INDEBTEDNESS	AMOUNT	INT. RATE	AMOUNT PER UNIT	REPAYMENT PERIOD
BONDS R.F.C.	$ 41,000	4 %	$ 0.07 PER $1 benefits	6/1/49-6/1/71
BONDS		%	PER	
BONDS		%	PER	
WARRANTS		%	PER	
OTHER			PER	
TOTAL	$ 41,000	%	0.07 PER $1 benefits	

NOTE: IF ANNUAL PAYMENTS ARE VARIABLE ATTACH DETAILED REPAYMENT SCHEDULES

CAPITAL DEBT ACCOUNT AS OF September 1 1942

ASSETS		LIABILITIES	
CASH ON HAND	$ 2146.	WARRANTS OUTSTANDING	$
CURRENT ASSESSMENTS RECEIVABLE		BOND PRINCIPAL UNMATURED	41,000
DELINQUENT ASSESSMENTS RECEIVABLE		BOND PRINCIPAL DELINQUENT	
MISCELLANEOUS RECEIVABLE		INTEREST ~~DELINQUENT~~	
		accrued to 9/1/42	410
TOTAL	$ 2146.	TOTAL	$ 41,410

CAPITAL DEBT IF ALL ASSESSMENTS ARE COLLECTED	$ 39,264
ESTIMATED CURRENT AND DELINQUENT ASSESSMENTS COLLECTIBLE	
NET CAPITAL DEBT	39,264
NET DEBT ADJUSTED TO AN EQUIVALENT 6% BASIS	31,711
NET ADJUSTED DEBT PER SUSTAINING (1) Dollar of assessed benefits	0.0775

PAST ANNUAL ASSESSMENTS IN DOLLARS PER $1 of assessed benefits

ITEM:	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	AVE.
A											
B	$.0135	.0142	.0142	.028	0.67	.0150	.0215	.0215	.0045	.0045	.0154
SUB-TOTAL											
C	-	-	-	-	-	-	-	-	.0012	.005	.0007
TOTAL:									.0057	.0095	

A - WARRANTS. B - BONDS & INTEREST. C - O. & M.

ESTIMATED FUTURE ANNUAL ASSESSMENTS PER SUSTAINING (1) Dollar of assessed benefits

ANNUAL B. & I. $ 0.0056 ANNUAL O. & M. $ 0.003

HISTORY AND TREND OF DEBT AND ASSESSMENTS District issued $105,000 of 6% bonds in 1923, payable 1933-42. Bad default and in 1940 R.F.C. refinanced $109,078 of bonds, interest and warrants for $57,000 - 4% loan payable 1944-72. Collection of delinquent taxes since refinancing has enabled district to retire $16,000 in bonds ahead of schedule leaving balance of $41,000 maturing 6/1/49-6/1/71. District collects $500 per year through saleof drainage water and no O&M assessments levied for period 1932-39. Anticipated O&M $1200 per year exclusive of revenue derived from sale of water. B&I assessments much less than average of last 10 years due to refinancing.

THESE LANDS ARE part SUBJECT TO OTHER ASSESSMENTS BY Buffalo Canal of Arkansas Valley Sugar Beet & Irrigated Land Co.

(1) Dollar of assessed benefits, or dollar of assessed valuation, or acre - district's method of assessment