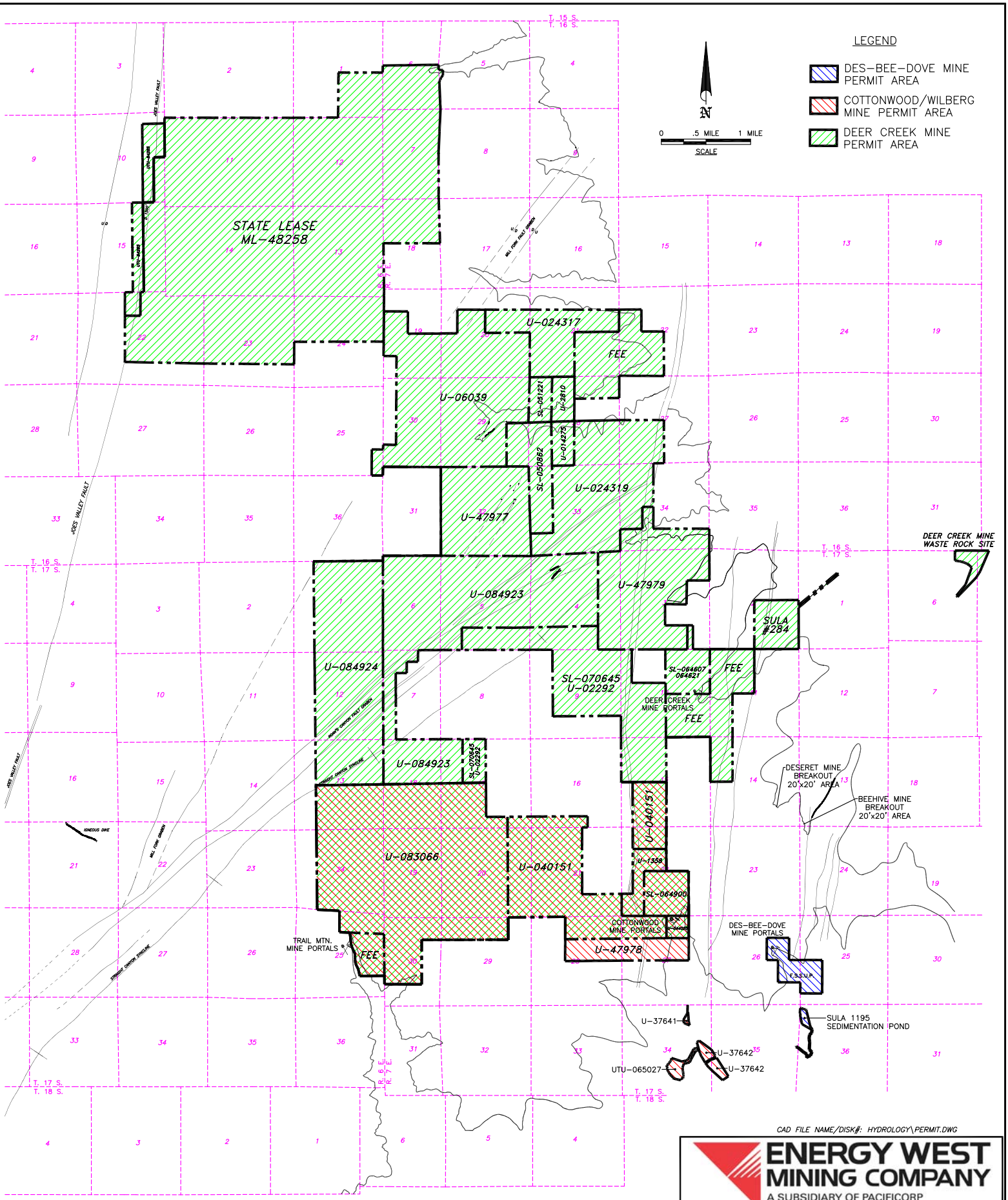
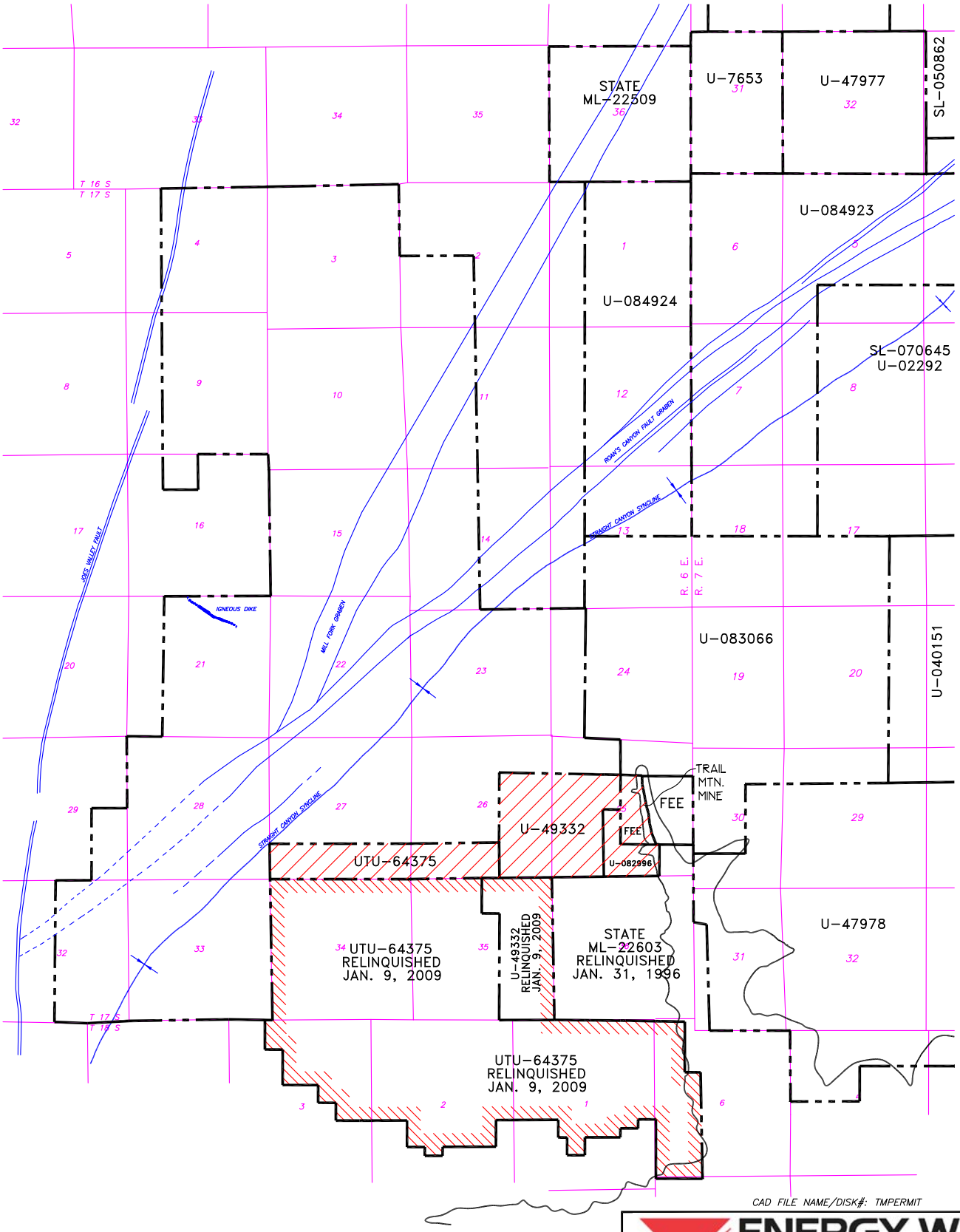


CAD FILE NAME/DISK#: HYDROLOGY\PERMIT.DWG

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

MINE PERMIT BOUNDARIES

DRAWN BY: K. LARSEN	FIGURE 1	
SCALE: AS NOTED	DRAWING #:	
DATE: MARCH 14, 2011	SHEET 1 OF 1	REV. ___



CAD FILE NAME/DISK#: TMPERMIT

TRAIL MOUNTAIN MINE PERMIT AREA

LEASE RELINQUISHMENT AREA

N

SCALE: 1"=1 MILE

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

TRAIL MOUNTAIN MINE
MINE PERMIT BOUNDARY

DRAWN BY: K. LARSEN	FIGURE 1B	
SCALE: 1"=1 MILE	DRAWING #:	
DATE: MARCH 14, 2011	SHEET 1 OF 1	REV. ___

FIGURE 2

EAST MOUNTAIN PRECIPITATION

2010 WATER YEAR

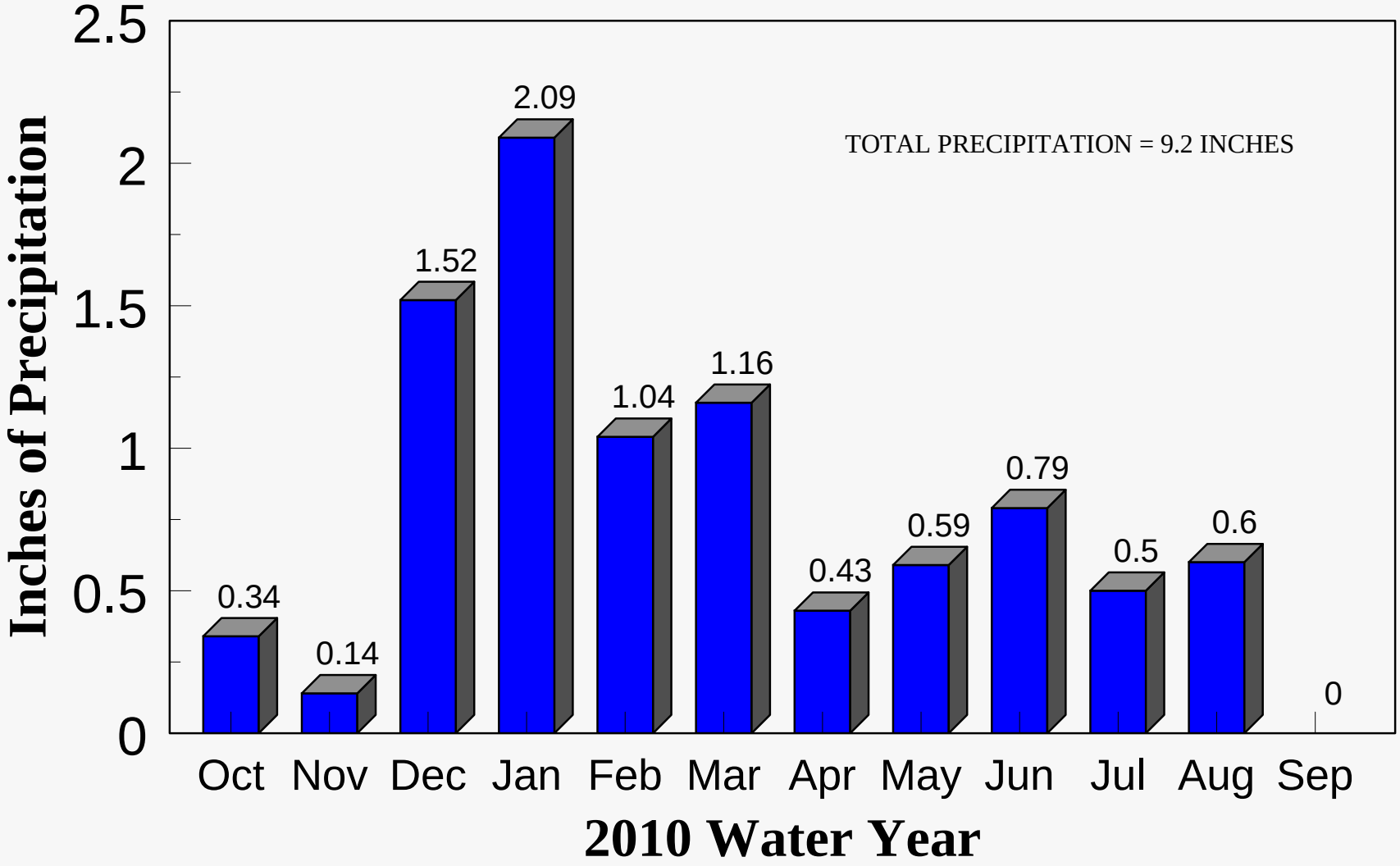
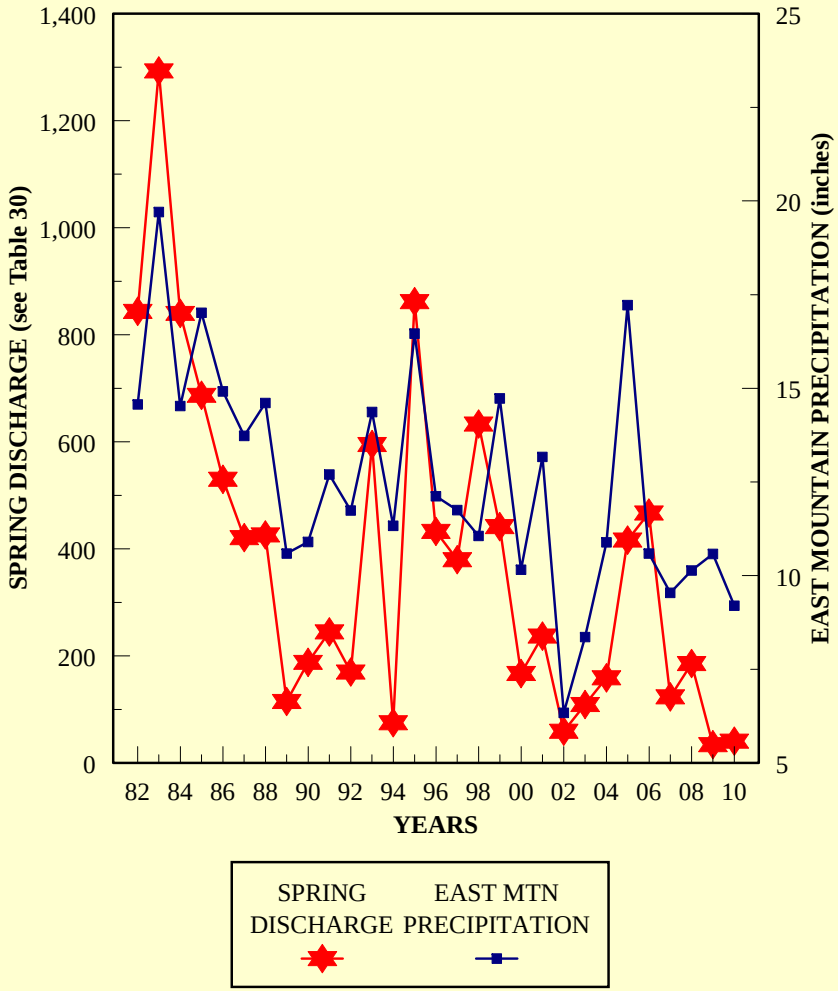


FIGURE 3a
EAST MOUNTAIN
SPRING DISCHARGE vs. PRECIPITATION & TEMPERATURE

Total spring discharge no longer includes Elk Spring or 89-61.



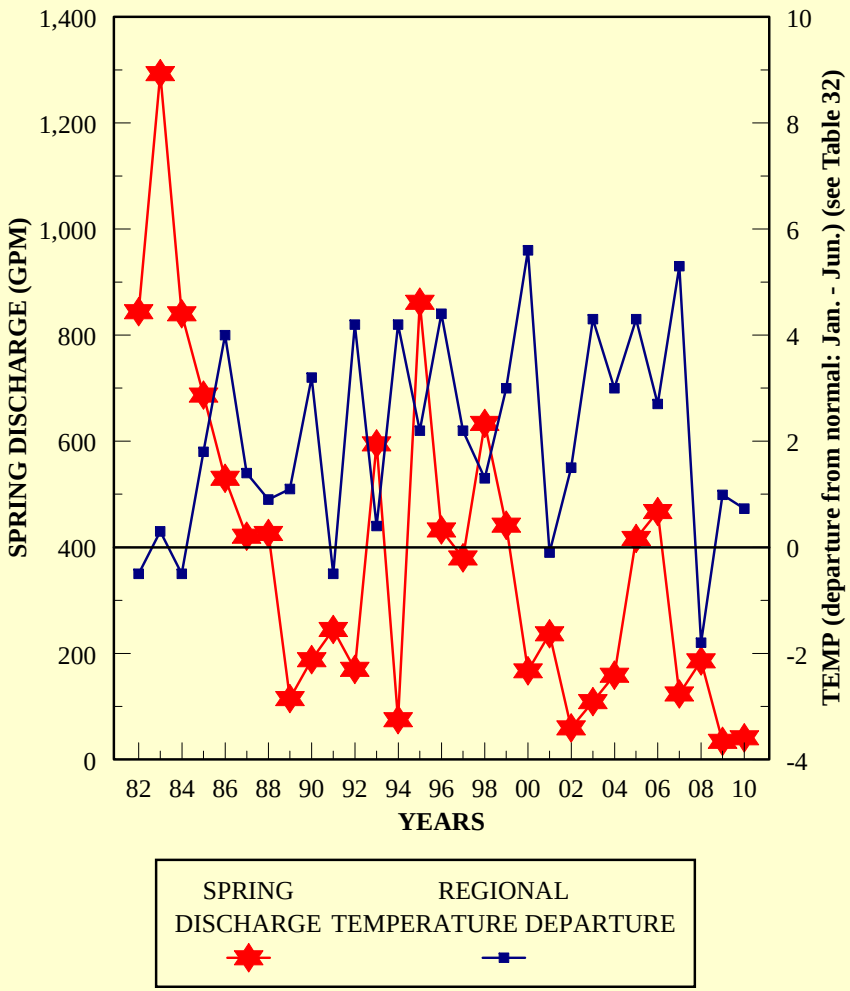


FIGURE 3b
EAST MOUNTAIN
SPRING DISCHARGE vs. PALMER DROUGHT INDEX
(Palmer Data - Average of Region 4 & 5)

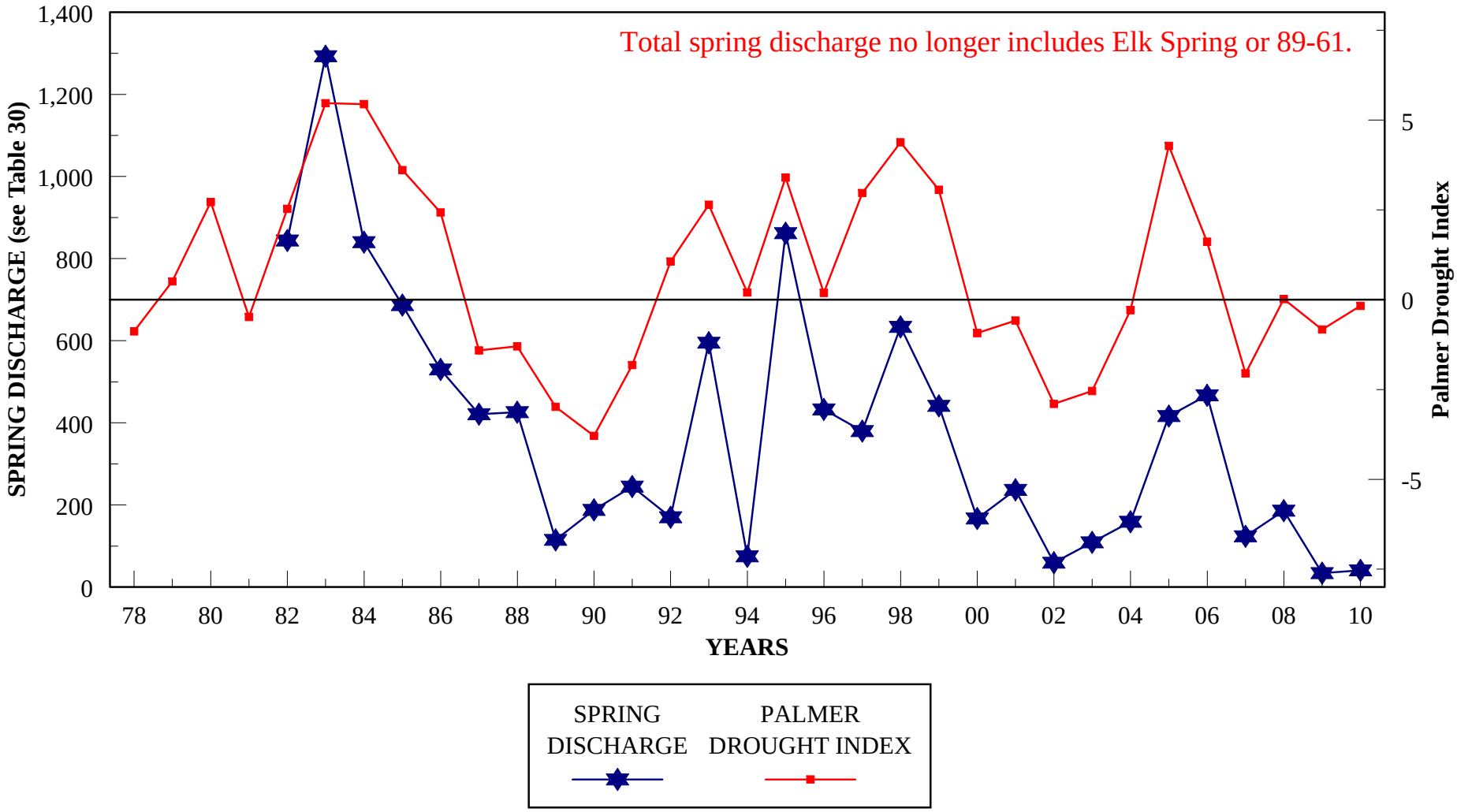


FIGURE 3c
TRAIL MOUNTAIN
SPRING DISCHARGE vs. PALMER DROUGHT INDEX
(Palmer Data - Average of Region 4 & 5)

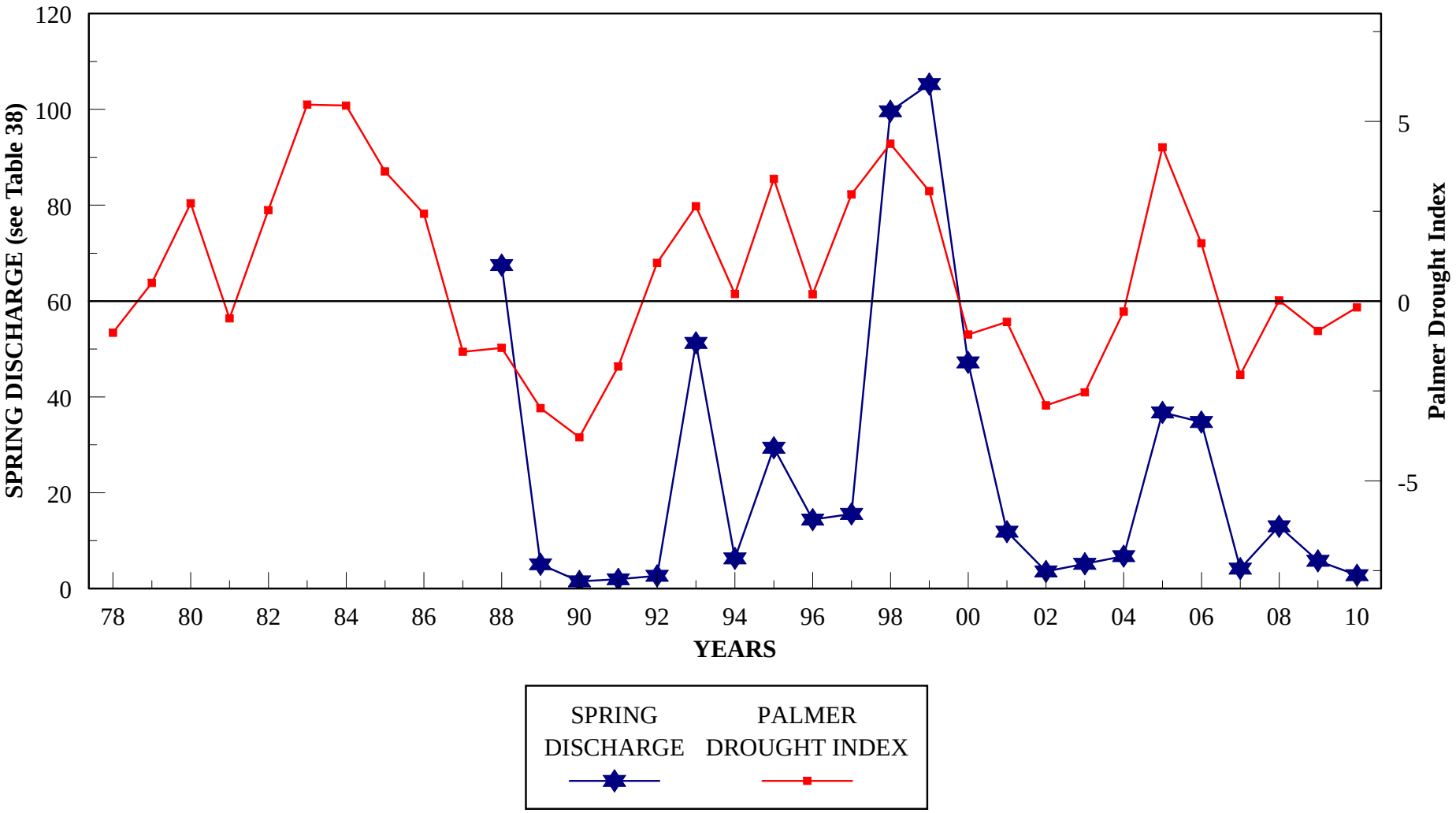


FIGURE 4 (a)

NORTH EMERY WATER USERS ASSOCIATION
RILDA CANYON SPRINGS

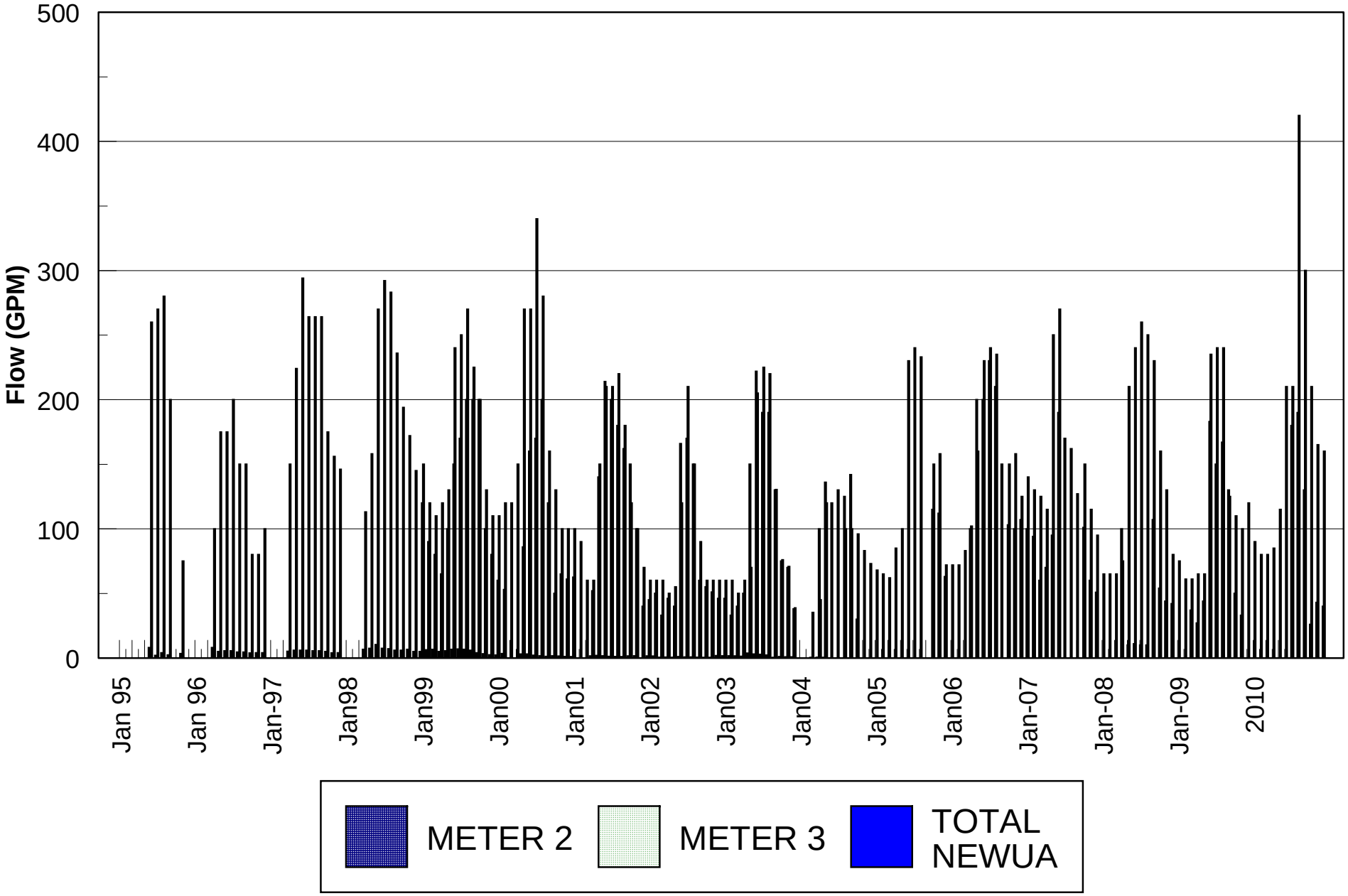
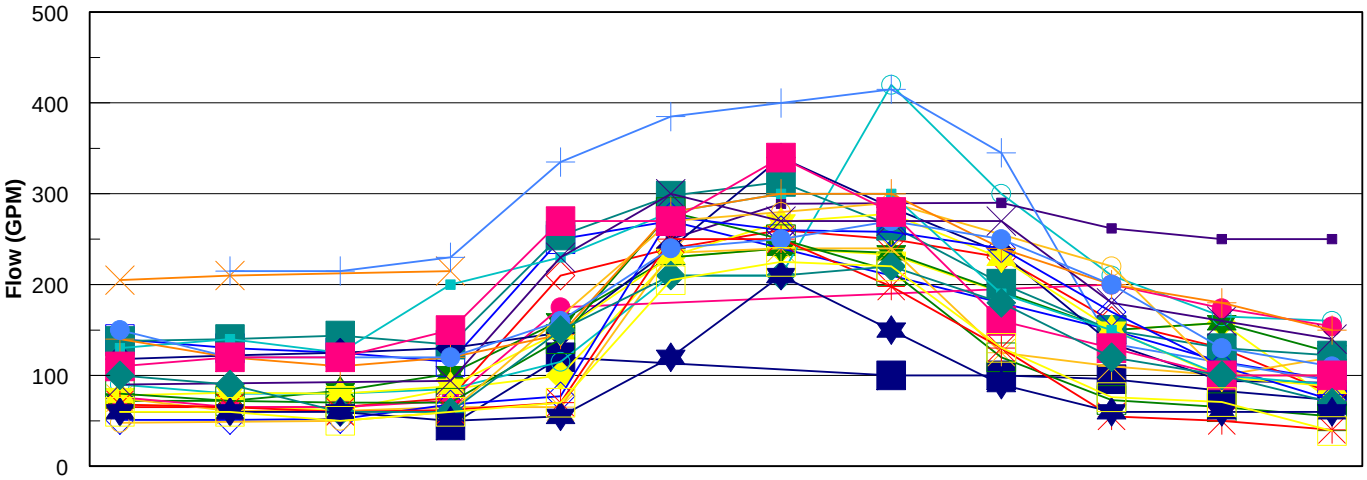


FIGURE 4 (b)

NORTH EMERY WATER USERS ASSOCIATION

RILDA CANYON SPRINGS

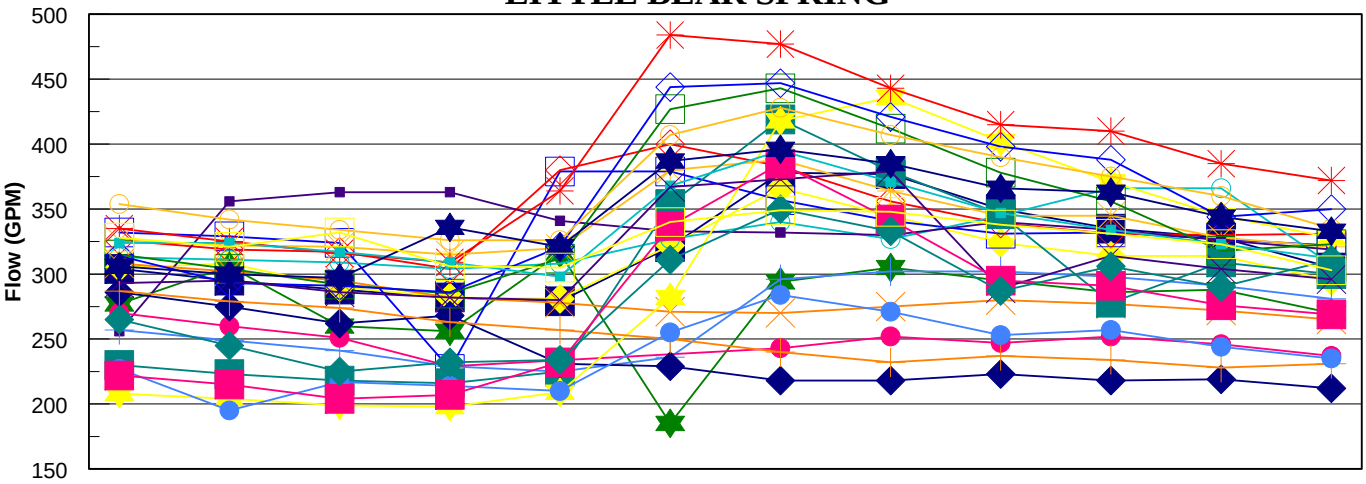


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2004				45.0	120.0			100.0	100.0	96.0	83.0	73.0
2005	68.0	65.0	62.0	85.0	100.0	230.0	240.0	233.0		150.0	158.0	72.0
2006	72.0	72.0	83.0	102.0	160.0	230.0	240.0	235.0		150.0	158.0	125.0
2007	140.0	130.0	125.0	115.0	250.0	270.0				150.0	115.0	95.0
2008	65.0	65.0	65.0	75.0	210.0	240.0	260.0	250.0	230.0	160.0	130.0	80.0
2009	75.0	61.0	61.0	65.0	65.0	235.0	240.0	240.0	125.0	110.0	100.0	120.0
2010	90.0	80.0	80.0	85.0	115.0	210.0	210.0	420.0	300.0	210.0	165.0	160.0
1983						250.0	289.0		290.0	262.0	250.0	250.0
1984	205.0	210.0		215.0								
1987		215.0	215.0	230.0	335.0	385.0	400.0	415.0	345.0	135.0	114.0	94.0
1988	76.0	65.0	65.0	72.0	175.0					200.0	174.0	154.0
1989	138.0	140.0	144.0	134.0	254.0	298.0	313.0	265.0	201.0	150.0	130.0	122.0
1990	118.0	122.0	125.0	130.0	147.0	240.0	340.0	285.0	235.0	135.0	94.0	92.0
1991	78.0	81.0	80.0	88.0	148.0	231.0	269.0	278.0	229.0	151.0	98.0	88.0
1992	80.0	72.0	70.0	70.0	140.0	280.0	250.0	215.0	120.0	73.0	65.0	55.0
1993	51.0	51.0	52.0	68.0	77.0	275.0	260.0	258.0	240.0	170.0	110.0	73.0
1994	68.0	65.0	60.0	62.0	70.0	250.0	250.0	198.0	130.0	55.0	50.0	40.0
1995	48.0		50.0	60.0		270.0	280.0	290.0		220.0	100.0	100.0
1996	130.0	140.0	125.0	200.0	230.0	280.0	300.0	300.0	190.0	150.0	100.0	90.0
1997	90.0			94.0	230.0	300.0	270.0	270.0	270.0	180.0	160.0	140.0
1998	140.0	120.0	110.0	120.0	145.0	280.0	300.0	300.0	240.0	200.0	180.0	150.0
1999	150.0	120.0	120.0	120.0	160.0	240.0	250.0	270.0	250.0	200.0	130.0	110.0
2000	110.0	120.0	120.0	150.0	270.0	270.0	340.0	280.0	160.0	130.0	100.0	100.0
2001	100.0	90.0	60.0	60.0	150.0	210.0	210.0	220.0	180.0	120.0	100.0	70.0
2002	60.0	60.0	60.0	50.0	55.0	120.0	210.0	150.0	90.0	60.0	60.0	60.0
2003	60.0	60.0	50.0	60.0	70.0	205.0	225.0	220.0	130.4	76.0	70.8	38.8

FIGURE 4 (c)

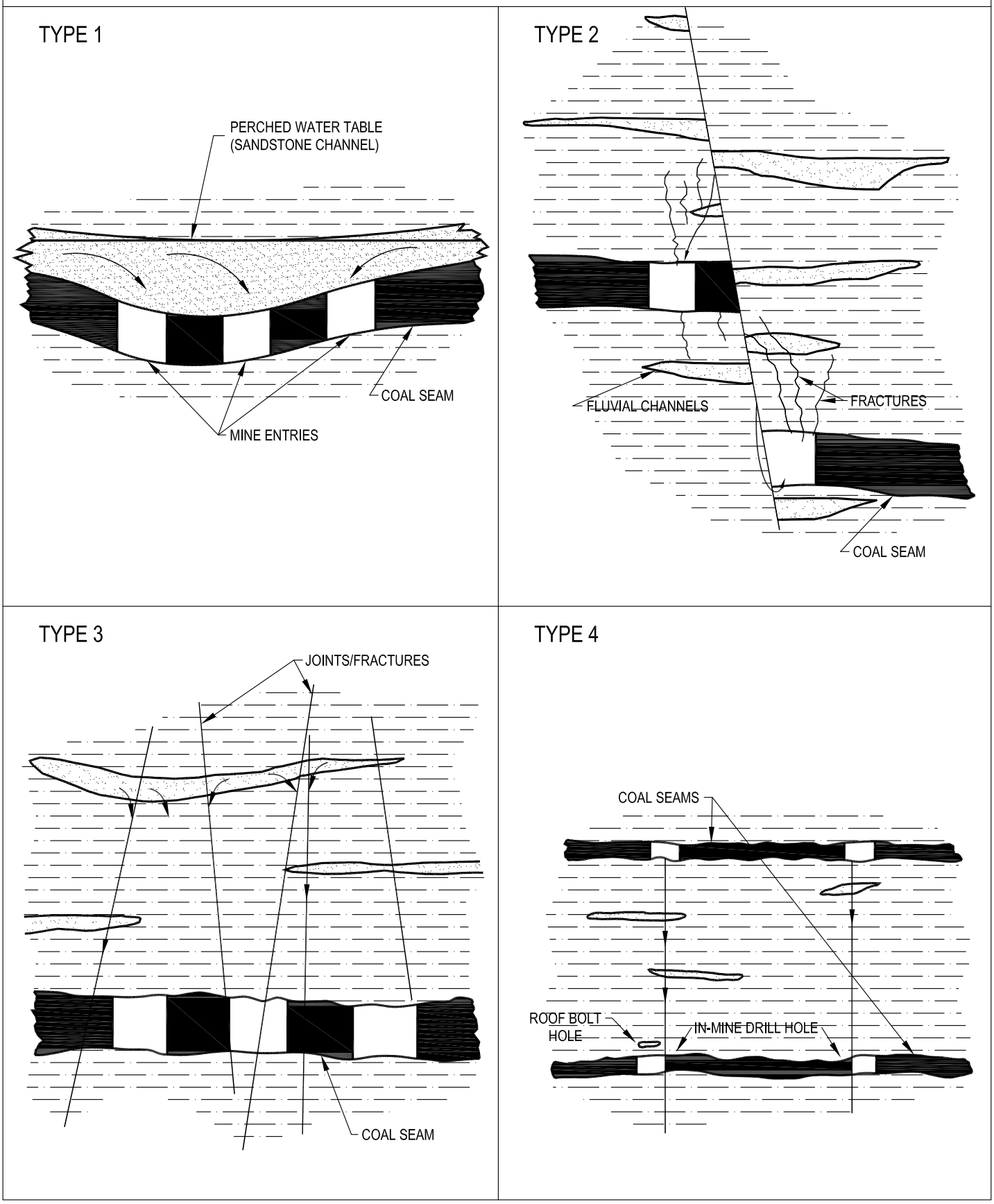
CASTLE VALLEY SPECIAL SERVICE DISTRICT

LITTLE BEAR SPRING



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	304	295	288	282	279	321	378	377	350	335	328	305
2009	305	308	290	282	281	322	366	345	324	314	314	295
2010	277	306	260	256	316	185	294	305	295	286	288	270
1985	332	329	324	227	379	379	357	341	331	332	327	322
1986	326	319	317	304	380	400	383	356	339	331	330	331
1987	326	322	321	315	320	380	388	364	345	345	328	321
1988	313	311	309	304	308	327	340	327	345	366	366	307
1989	256	356	363	363	341	333	332	330	340	334	326	319
1990	308	302	295	282	278	271	270	275	280	277	272	265
1991	257	249	241	229	225	236	296	302	302	298	291	281
1992	270	260	251	229			243	252	247	252	246	237
1993	230	223	218	216	225	354	419	379	346	278	309	300
1994	286	275	262	268	231	229	218	218	223	218	219	212
1995	208	204	199	198	209	282	418	436	402	371	345	328
1996	315	304	292	285	312	427	443	412	378	356	318	323
1997	314	293	291	286	321	444	447	421	398	388	344	350
1998	335	325	316	309	364	484	477	443	415	410	385	372
1999	354	342	334	326	326	407	428	407	390	375	360	335
2000	324	324	317	309	298	368	395	371	347	334	323	312
2001	293	295	286	282	280	367	373	379	289	314	304	296
2002	287	279	274	263	257	250	240	232	237	234	228	231
2003	227	195	217	214	210	255	284	271	253	257	244	235
2004	222	215	204	207	232	337	385	342	295	291	276	269
2005	265	245	225	232	234	311	350	333	287	306	290	311
2006	306	300	297	336	321	387	396	385	366	363	344	333
2007	328	321	332	306	305	340	349	348	338	331	323	303

FIGURE 5
LONG TERM WATER SOURCES



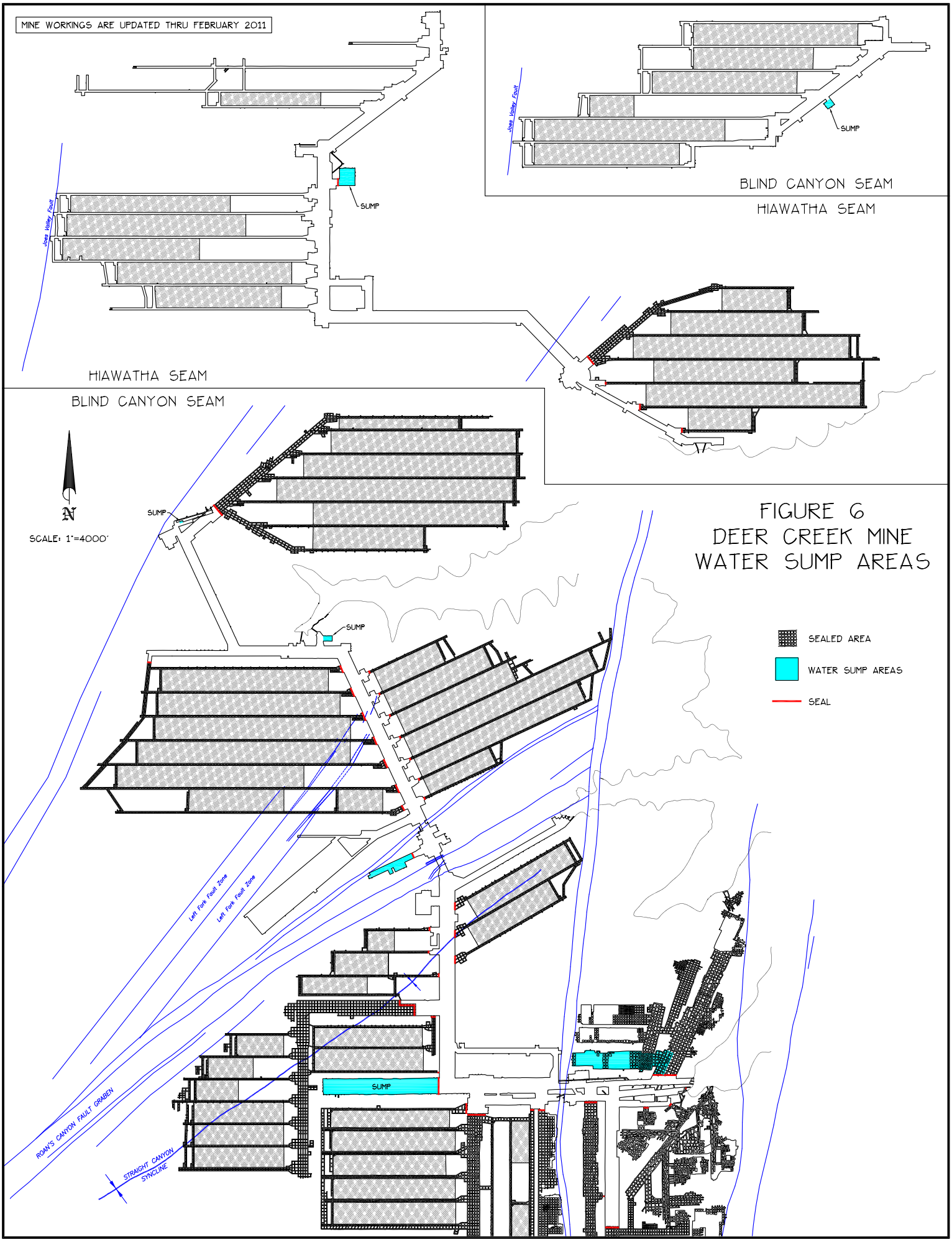


FIGURE 6
DEER CREEK MINE
WATER SUMP AREAS

FIGURE 7

DEER CREEK MINE

2010 MINE WATER DISCHARGE

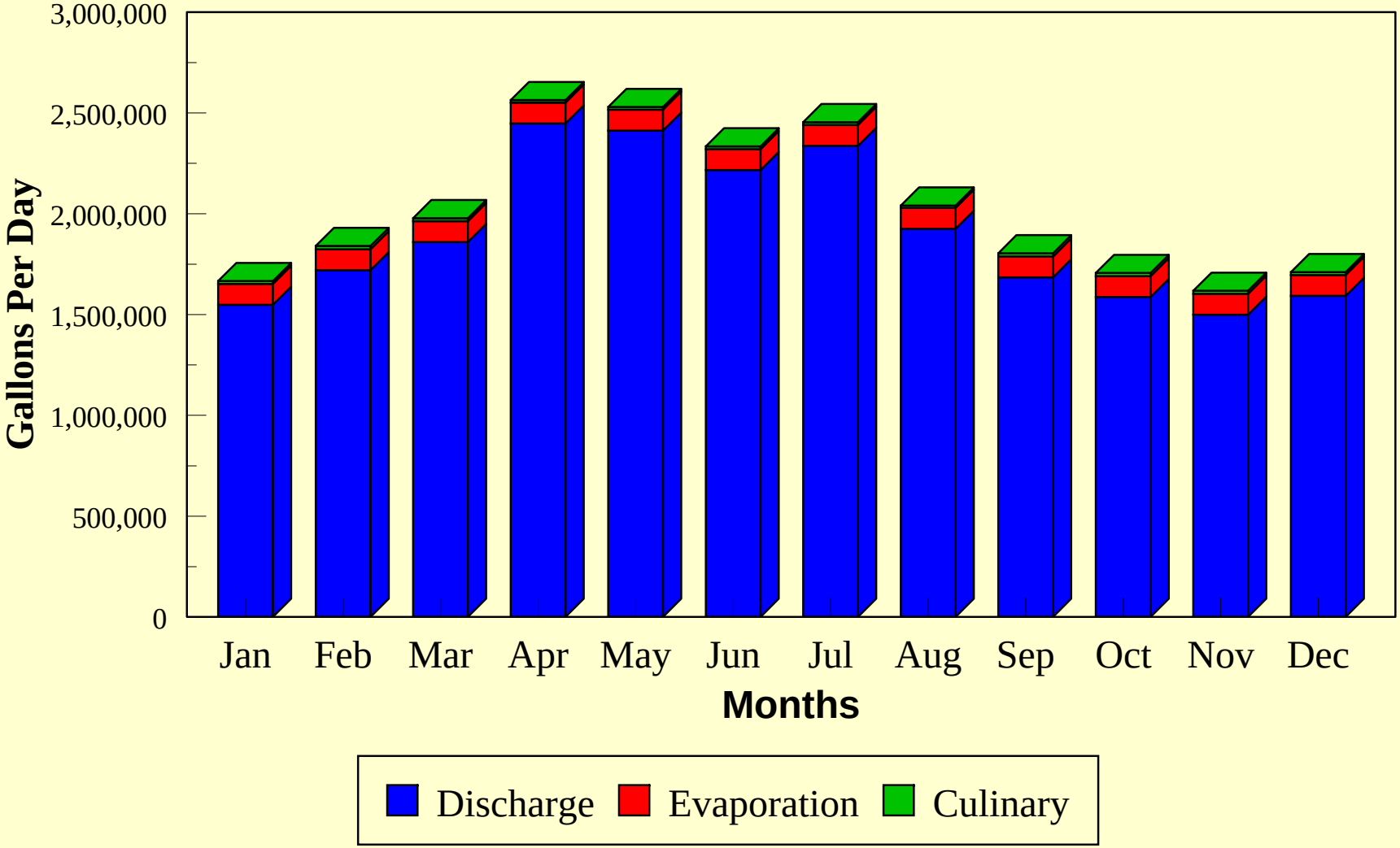
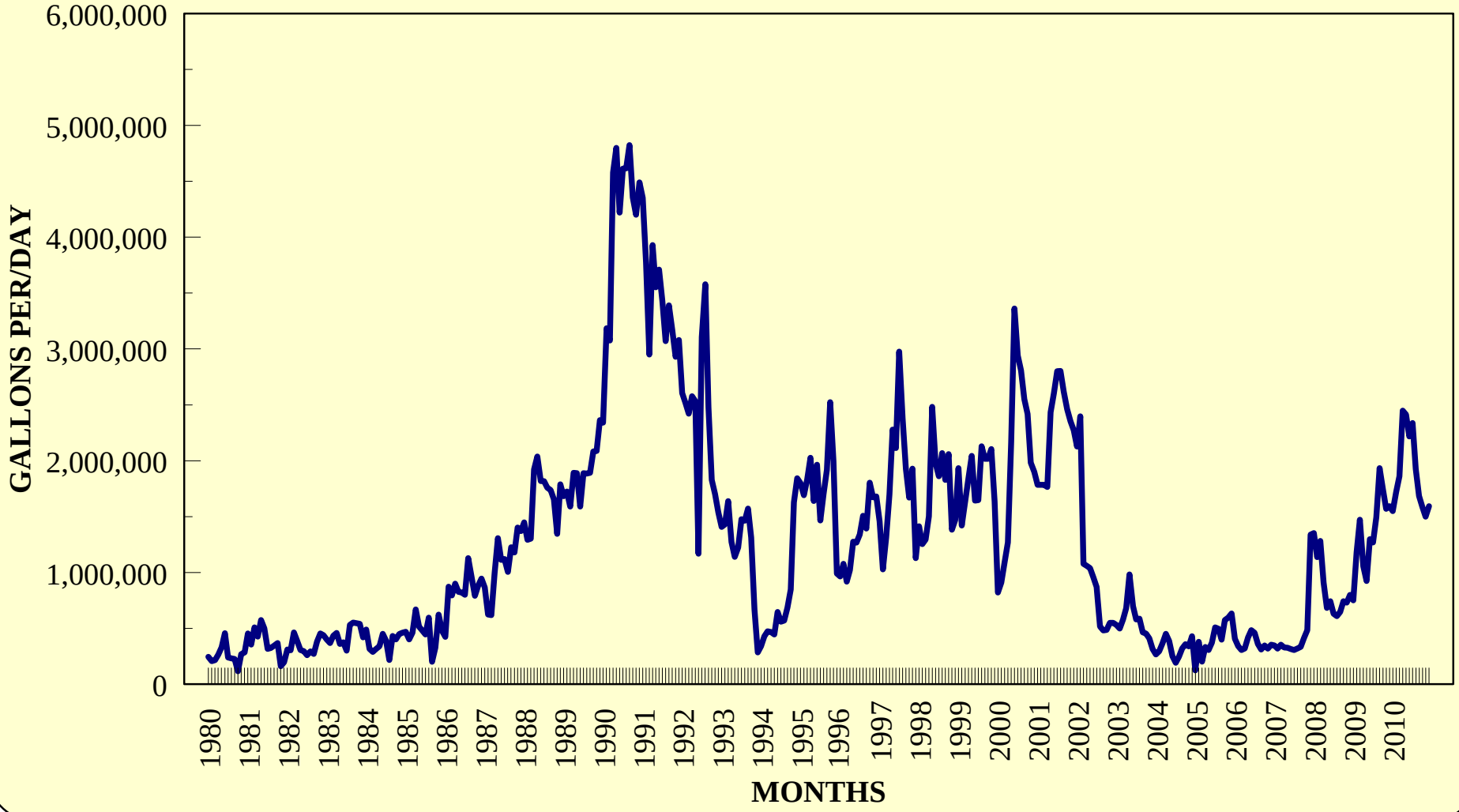


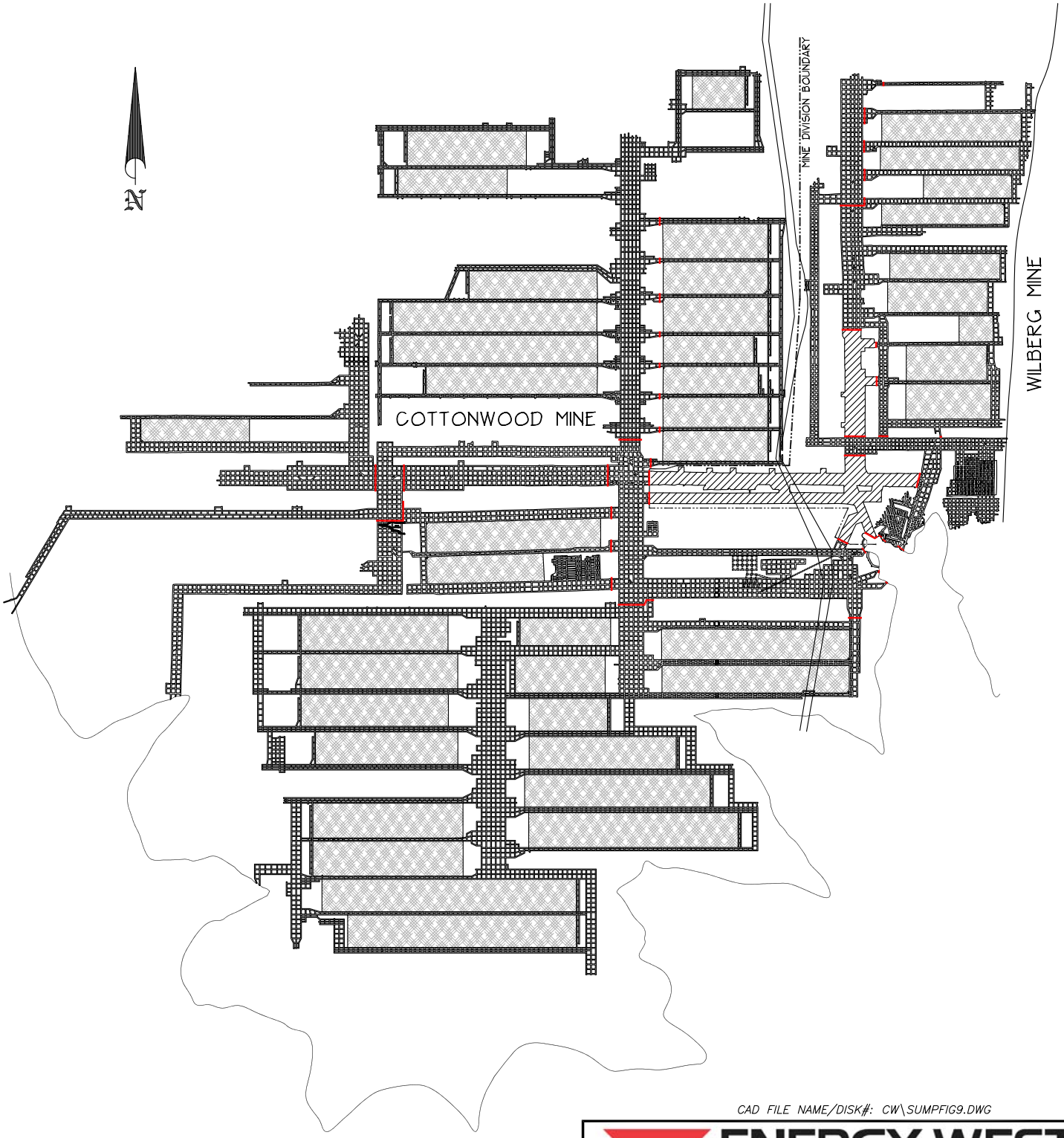
FIGURE 8

DEER CREEK MINE DISCHARGE

@ Deer Creek (UPDES UT-0023604)

January 1980 through December 2010





SEALED AREA

SEAL

SEALED AREA DUE TO THE FIRE

MINE SEALED MAY 2001
WORKINGS ARE UPDATED TO MARCH 1, 1997

CAD FILE NAME/DISK#: CW\SUMPFIG9.DWG

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

COTTONWOOD/WILBERG MINE
WATER SUMP AREAS

DRAWN BY: K. LARSEN	FIGURE 9	
SCALE: 1" =3000'	DRAWING #:	
DATE: MAY 14, 2011	SHEET 1 OF 1	REV. ___

FIGURE 10

WILBERG/COTTONWOOD MINE DISCHARGE

@ Grimes Wash/TMA (UPDES UT-0022986)

April 1979 through December 2010

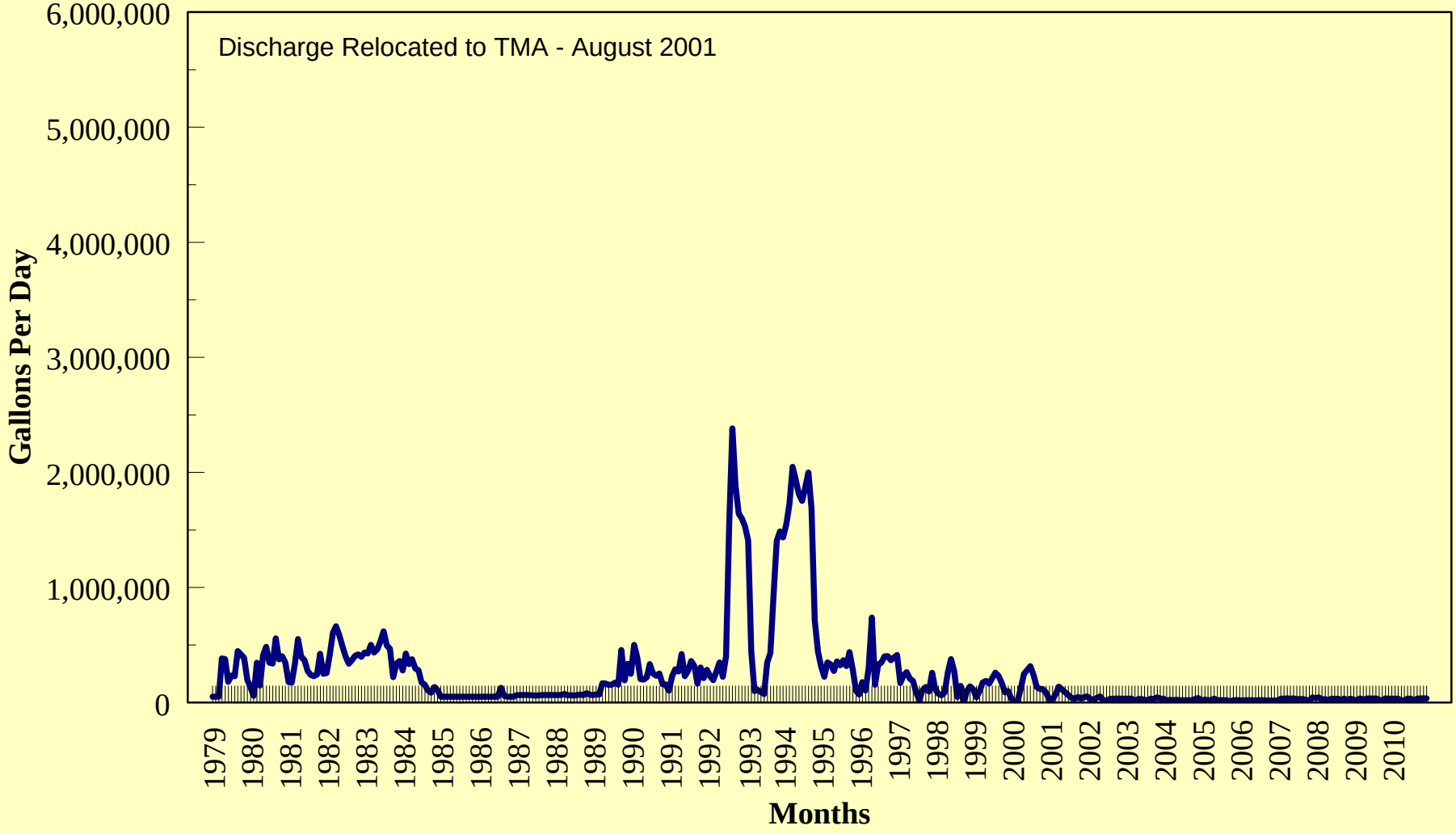
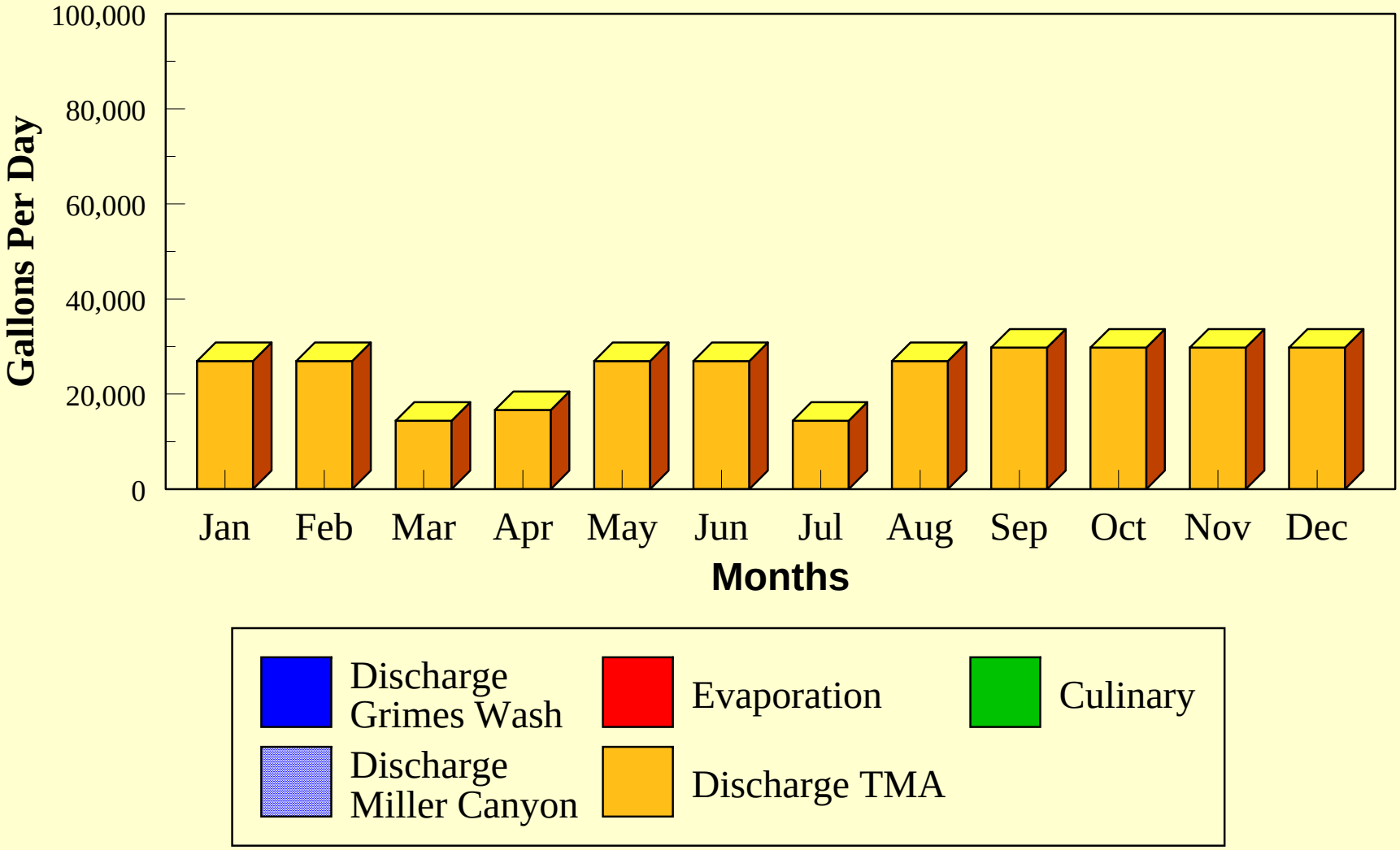
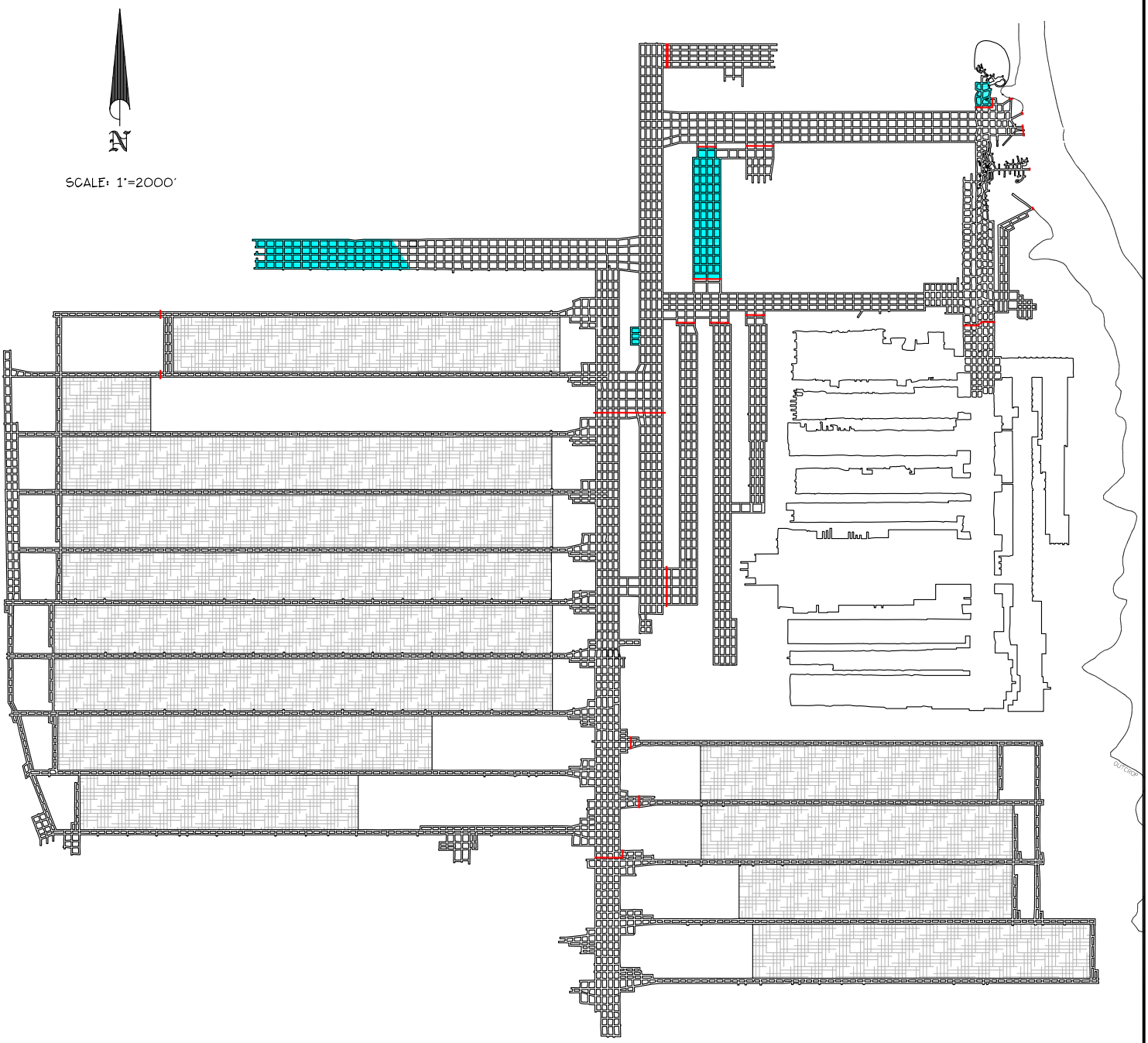


FIGURE 11

WILBERG/COTTONWOOD
2010 MINE WATER DISCHARGE





SEALED AREA

WATER SUMP AREAS

SEAL

MINE SEALED APRIL 2001
WORKINGS ARE UPDATED TO APRIL 2001

CAD FILE NAME/DISK#: SUMP12.DWG

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

TRAIL MOUNTAIN MINE
WATER SUMP AREAS

DRAWN BY:	K. LARSEN	FIGURE 12	
SCALE:	1" =2000'	DRAWING #:	
DATE:	MAY 14, 2011	SHEET 1 OF 1	REV. ___

FIGURE 13

Trail Mountain Mine

@ Cottonwood Canyon Creek (UPDES UT-0023728)

January 1997 through December 2010

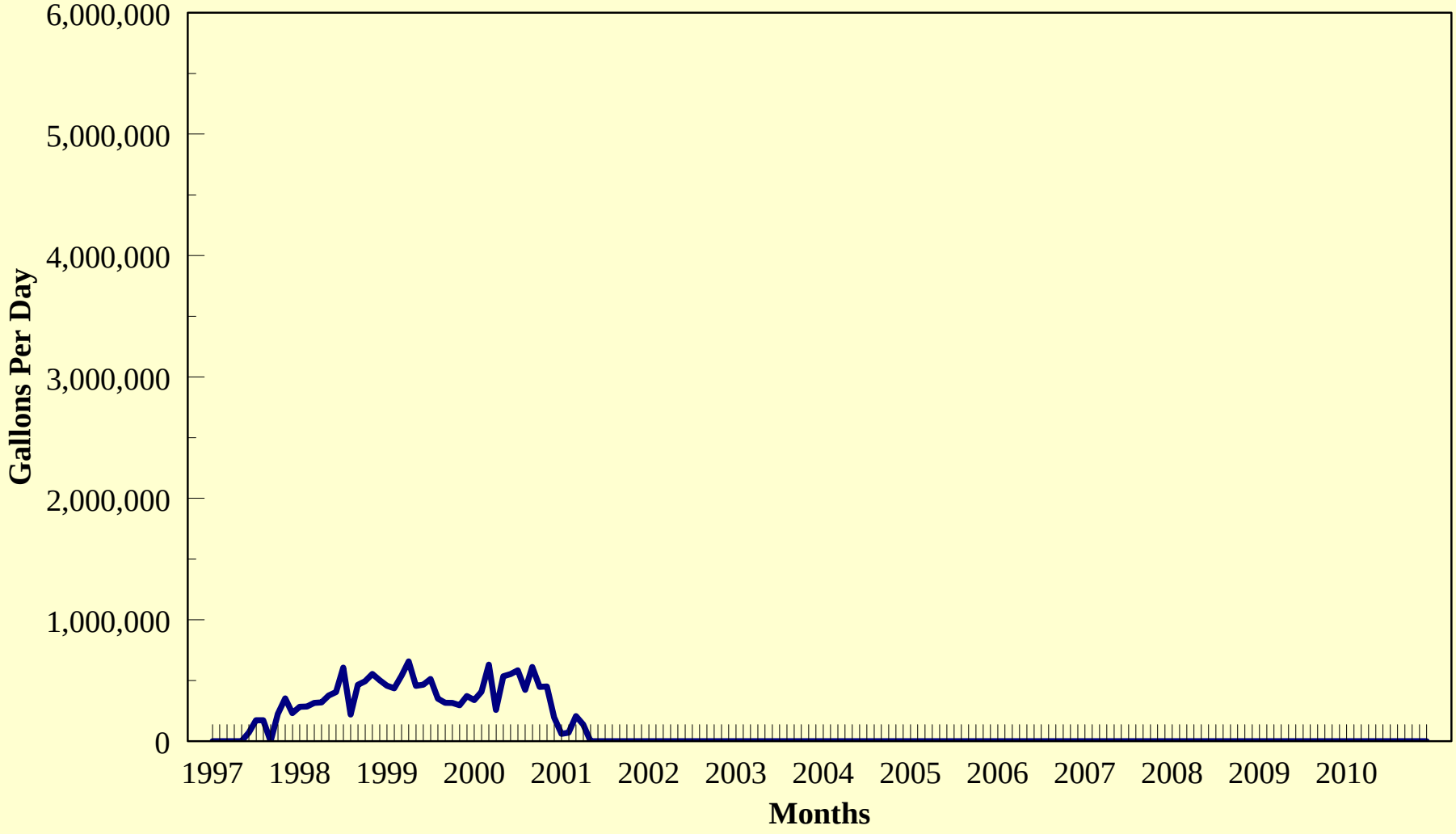
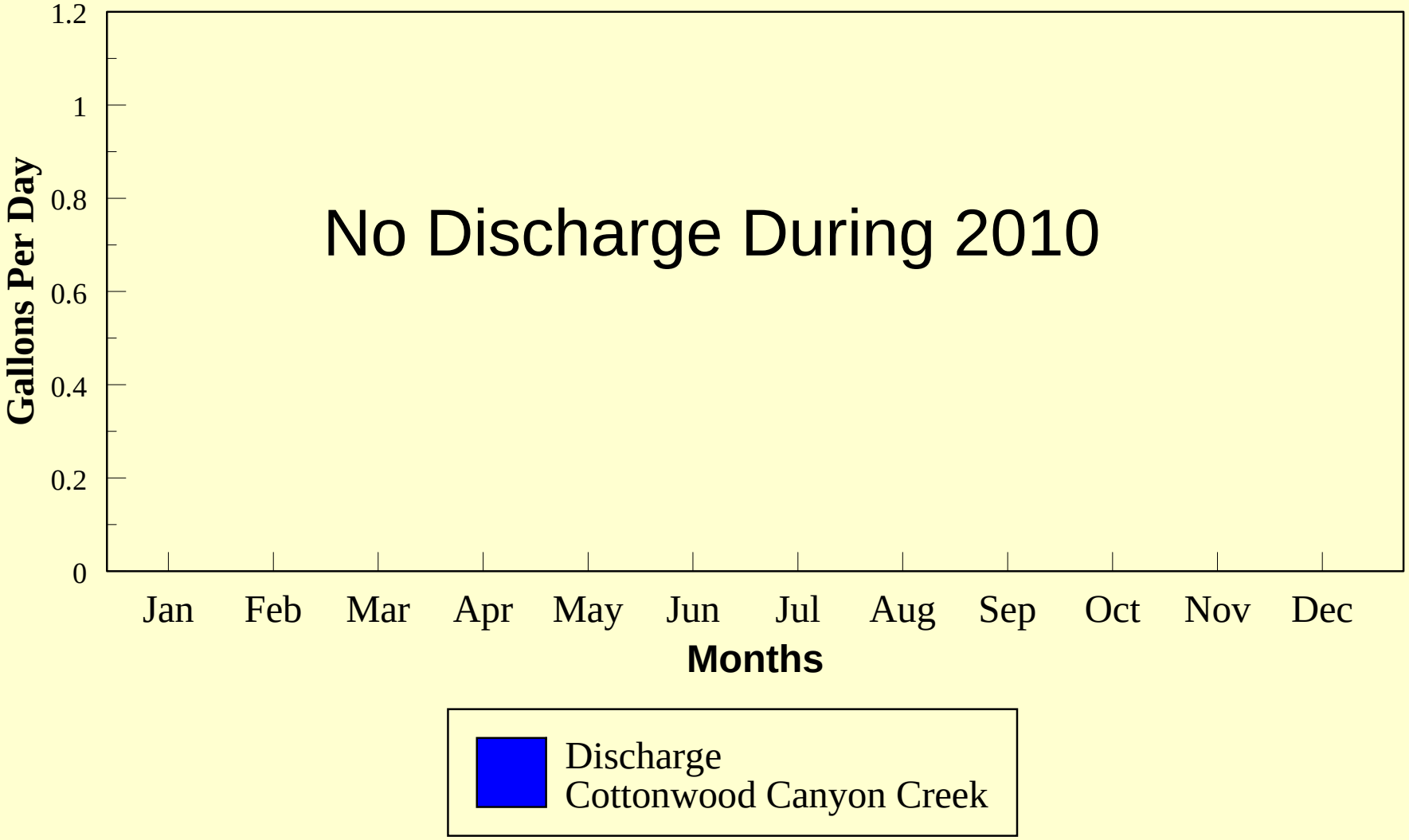


FIGURE 14

TRAIL MOUNTAIN
2010 MINE WATER DISCHARGE