

APPENDIX J

Water Quality

This appendix contains additional supplemental water quality information used in Section 4.9 to describe the Water Quality existing condition.

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Table J-1
Mean Monthly Streamflow (cfs) for Hot Creek at Flume
USGS Gage No. 10265150 / Drainage Area = 68.3 square miles

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
1951	37.0	57.7	63.6	43.5	42.4	39.2	37.9	58.8	87.2	59.1	44.7	41.0	51.0
1952	39.0	36.6	39.2	41.4	40.1	38.7	55.5	107.7	164.4	137.4	85.6	65.7	71.1
1953	56.1	48.6	47.1	49.3	43.4	43.3	48.4	47.7	81.1	89.3	48.0	42.4	53.8
1954	40.2	40.0	37.5	37.0	39.1	44.9	51.8	80.7	79.4	64.6	43.1	40.5	50.0
1955	38.0	38.3	38.5	38.6	38.0	40.6	40.9	51.5	100.2	54.3	43.5	39.1	46.8
1956	37.8	37.1	60.4	52.3	47.5	46.2	55.3	81.2	162.4	139.9	80.2	64.0	72.1
1957	60.8	55.8	50.6	48.2	50.3	48.8	49.9	55.8	130.6	76.7	50.6	49.0	60.6
1958	48.1	46.3	43.2	40.5	42.9	44.2	63.8	109.5	142.1	114.6	81.6	66.5	70.4
1959	55.3	52.3	48.1	47.2	44.6	49.0	50.8	51.2	61.0	44.3	40.9	42.7	49.0
1960	39.6	39.8	39.6	40.3	42.6	41.2	41.7	38.7	50.8	38.7	35.7	36.1	40.4
1961	34.5	34.5	34.0	33.9	35.7	36.7	34.9	35.3	40.1	34.5	32.9	34.5	35.1
1962	35.3	35.2	35.5	35.2	37.9	38.8	60.1	62.5	117.9	87.3	52.6	49.2	54.0
1963	48.1	43.4	42.0	38.2	63.6	43.5	46.5	67.5	139.7	105.9	63.3	57.6	63.2
1964	52.6	53.5	45.7	41.8	42.4	41.5	43.3	49.1	67.1	41.8	38.7	38.2	46.3
1965	37.5	38.2	48.6	45.9	41.8	42.6	48.2	57.5	119.3	116.6	94.6	69.1	63.4
1966	58.1	56.2	50.4	49.1	44.9	48.3	51.6	75.2	70.7	48.3	42.2	42.1	53.1
1967	42.0	40.3	51.3	42.2	43.9	51.8	54.6	83.1	165.7	203.6	108.0	88.6	81.5
1968	69.6	61.2	55.9	53.1	54.8	48.4	47.6	54.5	62.7	45.4	41.7	40.0	52.9
1969	39.9	42.4	40.7	40.6	41.4	47.0	70.8	187.2	271.4	206.3	119.7	84.3	99.6
1970	77.9	64.9	59.6	60.5	58.7	58.2	59.3	76.2	113.6	84.4	56.2	53.2	68.6
1971	51.2	53.6	52.6	49.8	49.0	47.5	45.1	68.1	101.8	69.9	50.2	45.5	57.1
1972	47.8	49.1	43.7	43.8	44.6	45.3	42.1	50.7	76.7	43.2	37.1	47.0	47.5
1973	45.5	44.0	43.9	44.1	45.2	43.2	59.9	116.6	146.3	89.2	59.7	52.7	65.9
1974	49.7	59.5	49.9	50.3	47.2	48.7	49.5	97.5	147.6	87.6	60.9	51.6	66.7
1975	50.5	41.6	44.0	43.8	40.9	43.2	42.9	NA	NA	NA	NA	NA	NA
1983	NA	NA	73.9	68.2	68.2	69.1	76	NA	NA	NA	155	103	NA
1984	90.6	84.2	78.3	70.6	67.7	63.4	62.8	112	129	104	76.3	63.8	83.7
1985	65.1	66.1	63.3	58.8	58.3	55.1	62.4	79.9	87.5	60.6	52.2	51.4	63.4
1986	50.3	51.1	53.1	53.8	60.1	75.7	78.4	131	218	135	91.3	75.6	89.5
1987	74	62.3	56.2	53.4	53.6	53.6	48	65.2	62.3	51.3	47.2	45	56.0
1988	42.3	44.3	44	45.9	46.2	45.6	44.3	49.1	57.8	48.9	43.4	41.4	46.1
1989	41.1	42.7	38.8	39	40.9	41.7	41.7	54.2	56	42.7	40.6	40.1	43.3
1990	38.7	39.4	37.2	37.5	38.1	39.3	36.7	39.6	44.5	38.4	38.6	34.6	38.6
1991	32.8	33.7	31.6	32	33.5	36.4	40.1	38.4	69.9	50.4	44.4	42.3	40.4
1992	37.7	37.6	34.1	33.9	34.7	35	35.4	47.7	44.5	40.2	35.8	33.8	37.6
1993	33.5	33.5	29.6	31.9	32.7	39.2	49.9	76.6	118	105	64.8	54	55.8
1994	47.8	43.7	40.6	38.7	37.9	37.7	37.8	50	54.6	41	35.6	32.6	41.5
1995	31.8	32.4	34	36	36.9	44.4	53.7	75.6	159	214	135	92.7	79.1
1996	67.6	57.6	57.7	52.3	54.9	53.1	60.4	113	142	98	72.8	60.5	74.3
1997	52.6	57.9	53.3	94.7	58.2	55.2	59.7	106	119	81.6	64.4	58.8	71.9
1998	52.8	50.8	49.9	52.6	50.9	55.1	57	62.4	137	184	107	84.2	78.8
1999	68.3	64.6	56.1	54.8	55.7	51.7	51.9	78.5	115	77.6	59.2	52.1	65.5
2000	49.1	49.2	44.9	47	48	46.2	45.9	83.8	99.2	62.2	53.8	48.9	56.5
2001	47.2	45.4	44.3	43.1	43.7	48.1	46.5	84.5	68.4	53	46.7	44.4	51.3
2002	40.9	41.1	40.9	39.5	39.6	40.1	44.9	51.2	71.9	47.4	42.7	40	45.0
2003	39.5	47.9	42.1	43.8	42.1	42.7	41.7	56.2	101	60	50.3	42.2	50.8
2004	40	40.4	40.9	41.6	42.1	45.9	44.9	57.5	68.6	49.9	44.1	40.9	46.4
2005	41.3	40.2	37.5	39.6	40.2	42.7	49.4	90.6	140	120.4	76.5	60.4	65.0
Avg	48.5	47.6	46.8	46.2	46.0	46.6	50.5	73.2	105.7	83.7	61.5	52.8	58.7
Max	90.6	84.2	78.3	94.7	68.2	75.7	78.4	187.2	271.4	214.0	155.0	103.0	99.6
Min	31.8	32.4	29.6	31.9	32.7	35.0	34.9	35.3	40.1	34.5	32.9	32.6	35.1

Source: USGS Surface Water Data for USA, <http://nwis.waterdata.usgs.gov>.

Table J-2
 Mean Monthly Streamflow (cfs) for Convict Creek
 USGS Gage No. 10265200 / Drainage Area = 18.2 square miles

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
1960	8.52	6.69	6.27	7.66	8.34	6.41	8.43	18.9	33.9	17.7	13	6.18	11.8
1961	6.92	8.6	7.49	5.27	5.06	4.78	5.95	13	33.3	20	15.4	9.29	11.3
1962	6.54	7	7.23	7.24	12.1	9.45	16.1	27.4	88	78.7	35.2	18.7	26.2
1963	12.9	8.64	7.42	8.62	16	8.91	11.8	23.3	82.5	97.7	40.8	19.8	28.3
1964	14.8	14.3	11.3	10.3	9.46	9.1	8.57	22.6	47.9	33.5	20.2	10.9	17.8
1965	7.42	7.77	9.81	15.8	10	7.17	8.7	23.6	61.1	88.2	73.2	29	28.7
1966	17	15.5	13.7	11.9	8.78	8.11	14.4	44.9	47.4	34.9	21.8	12	20.9
1967	8.11	7.22	15.3	10.2	9.85	10.9	11.2	30.5	91.7	180	74	40.5	41.1
1968	23.8	17.2	15.3	13.6	12.3	10.9	12.2	26	47.8	27.8	18.5	11	19.7
1969	9.36	9.76	10	13.4	21.8	14.6	14.2	73.6	171	162	90.1	39.9	52.7
1970	21.9	18.4	15.2	15.9	14.4	12	13.8	31.2	68.4	59.9	30.8	16.8	26.6
1971	12	11.1	13.1	11.5	9.35	8.56	9.43	19.9	67.1	58.9	37	20.8	23.3
1972	12	10.6	11	10.8	8.83	8.74	10.1	25	58.8	33.6	18.1	21.9	19.1
1973	14.3	13.1	11.7	12.3	13.1	10.5	10.9	64.7	118	63.8	33.5	17.3	32.0
1974	13.6	16.8	14.1	15.5	11.4	13.3	13.1	38.3	104	72.7	42.3	18.1	31.2
1975	15.9	13.1	11.9	10.9	11.5	10.8	11.2	25.1	98.6	68.2	29.8	19.2	27.2
Avg	12.8	11.6	11.3	11.3	11.4	9.6	11.3	31.8	76.2	68.6	37.1	19.5	26.1
Max	23.8	18.4	15.3	15.9	21.8	14.6	16.1	73.6	171	180	90.1	40.5	52.7
Min	6.54	6.69	6.27	5.27	5.06	4.78	5.95	13	33.3	17.7	13	6.18	11.3

Source: USGS Surface Water Data for USA, <http://nwis.waterdata.usgs.gov>.

Mammoth Yosemite Airport (MMH) Aircraft Deicing Plan

Reference A: EPA Deicing Guidelines 821-R-00-016

Background

Deicing operations at MMH generally occur from the months of December – February. Because of moderate ambient temperatures and storm patterns, deicing operations are usually limited to one to two aircraft a winter requiring deicing. From 1992-1995, Trans World Express and United Express with five flights a day did not require a deicing evaluation.

Technical Protocol

The technical protocol for the MMH Deicing Plan is based on the Minneapolis/St. Paul Airport's (MSP) Deicing Plan as outlined in Ref: A. At MSP; "storm water pipes and drains located at the passenger terminal are turned into temporary detention systems by inserting specially designed compression plugs", and "the contaminated storm water is pumped out periodically and transferred by truck to the airport's detention ponds." At MMH, the designated deicing pad sheet flows used deicing fluid to a slotted drain which collects the fluids and then flows to a drop inlet collection basin. The outlet to the collection basin is plugged during deicing operations and collected fluids are then pumped with a mobile motorized evaluation pump into a portable storage tank for appropriated disposal. After deicing fluids are removed, the storm drain is unplugged and returned to normal operation.

Deicing Pad Location

The Deicing Pad is located on aircraft parking apron as depicted in Figure 1. The pad is 120' X 120' and has a 1 degree slope to the slotted drain which collects the used fluids.

Responsibilities

- Deicing Fluid Storage- Airport in Hangar HCFBO-3
- Deicing equipment- Airline
- Decision to deice- Airline PIC in accordance with airline OPSPECS
- Aircraft movement from terminal parking to deicing pad- Airline or FBO personnel
- Deicing operation- Airline or FBO personnel
- Used deicing fluid recovery- Airport personnel
- Used deicing fluid disposal- Airport personnel coordinates with Crane Waste Oil at telephone 800-272-6330

Operational Procedures

1. PIC determines deicing required
2. Aircraft is taxied/towed from terminal ramp to the deicing pad
3. The drop inlet collection basin outlet is plugged
4. Airline/FBO personnel perform deicing operation
5. After used deicing fluids are collected in the collection basin, airport personnel pump fluids to the storage tank
6. Drop inlet collection basin is unplugged
7. Used deicing fluids are disposed of by Crane Waste Oil

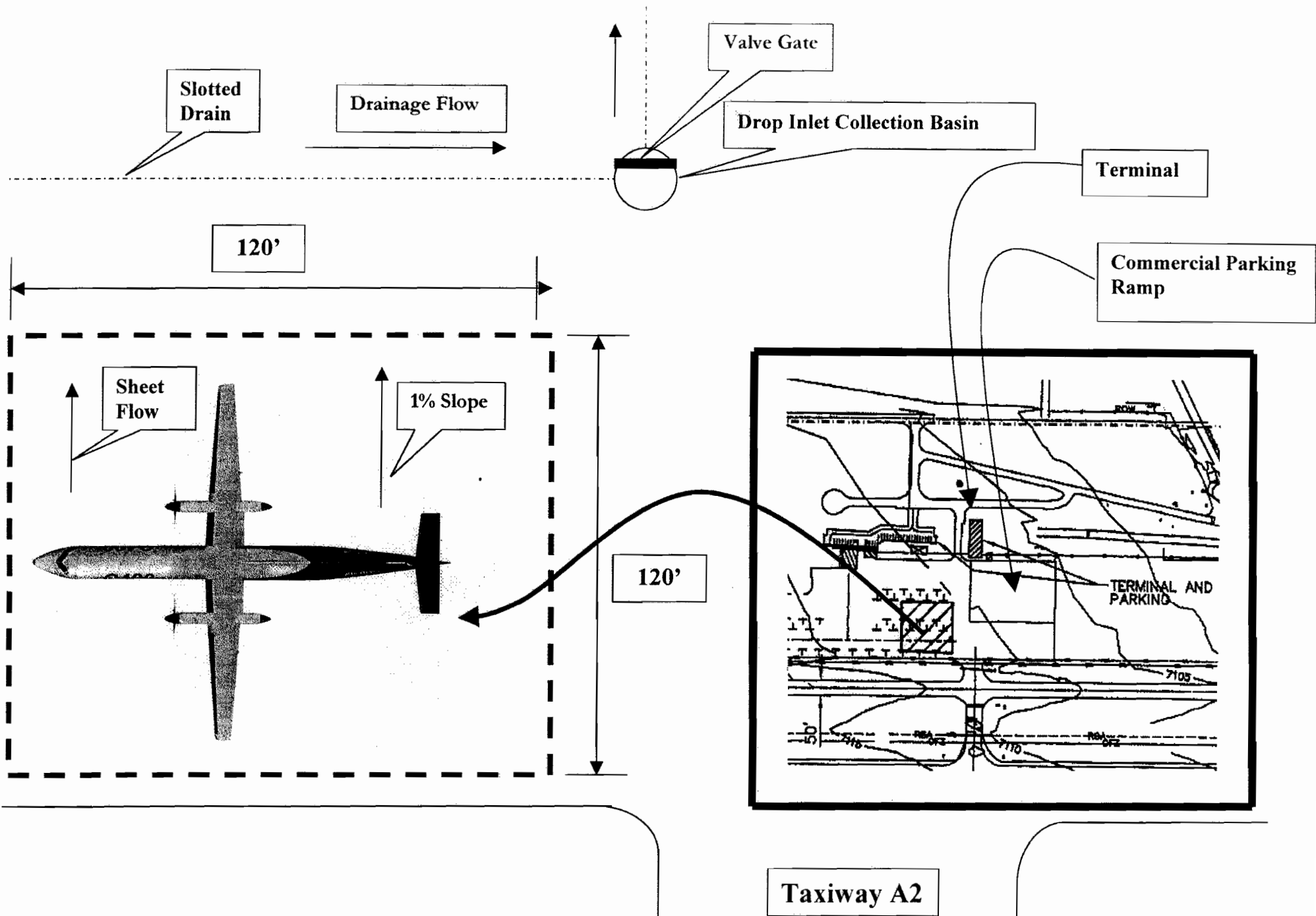


FIGURE 1