TABLES

Matanuska Watershed Plan Tables

Table 2-1. -- Flow characteristics of Matanuska River at Palmer, Alaska (USGS Site No. 15284000) (Drainage area, 2,070 square miles; period of record, 33 years (1949-73, 1985-86, 1991-92, 2000-04) Discharge Values (Q) in cubic feet per second.)

Month	Mean monthly discharges	Monthly mean 25th	discharges a 50th	t the given 75th	Q75/ Q25
January	623	556	643	681	1.2
February	527	464	532	578	1.2
March	476	439	484	513	1.2
April	648	532	619	711	1.3
May	2,750	1,765	2,618	3,590	2.0
June	10,240	7,673	9,376	11,500	1.5
July	13,130	11,690	13,400	14,050	1.2
August	9,843	8,899	9,854	11,100	1.2
September	4,709	3,561	4,378	5,742	1.6
October	2,005	1,583	1,927	2,360	1.5
November	1,005	756	1,002	1,144	1.5
December	737	628	739	855	1.4

Table 2.2 -- Stream site descriptions and discharge measurements, surveys of Late Summer 2005 in Matanuska River basin [See figure 3 for site locations]

Site no.	Stream site (lat, long)	Matanuska river mile	Date measured (date)	Discharge (ft^3/s)	Width (ft)	Mean depth (ft)	Maximum depth (ft)	Mean velocity (ft/s)	surface velocity (ft/s)	Maximum Bed material (table 2)
1	Matanuska River above Old Glenn Highway Bridge[1] (61˚ 36' 28.34", 149˚ 04' 23.11")	13	07/26/05	11950	240	14.12	23.50	8.02		Cobbles, sands
2	Wolverine Creek (61˚ 39' 59.29", 149˚ 02' 49.15")	18	08/02/05	186	22	2.00	3.00	4.23	6.11	Cobbles
3	Moose Creek (61˚ 40' 57.67", 149˚ 02' 49.76")	19	08/05/05	215	56	1.54	2.35	2.63	4.23	Cobble, gravel
4	Granite Creek (61˚ 42' 37.46", 148˚ 51' 01.83")	26	08/05/05	364	46	1.43	2.50	3.57	9.58	Cobble, gravel
5	Kings River (61˚ 43' 58.83", 148˚ 44' 59.76")	30	08/05/05	585	74	1.34	2.70	2.55	4.95	Cobble, gravel
6	Carpenter Creek (61˚ 45' 03.27", 148˚ 37' 14.03")	36	08/04/05	365	112	0.83	2.00	3.21	7.77	Boulder, cobble
7	Matanuska River at Tram Crossing (61˚46' 26.17", 148˚ 29' 18.74")	41	08/15/05	10301	288	6.50		7.57	12.76	Boulder, cobble
8	Carbon Creek (61˚ 46' 44.58", 148˚ 28' 05.41")	42	08/04/05	104	38	0.96	1.20	3.35	7.08	Boulder, cobble
9	Chickaloon River (61˚ 47' 08.39", 148˚ 27' 14.59")	42	08/04/05	234	60	1.26	2.50	3.12	7.01	Gravel, sand
10	Coal Creek (61˚ 46' 55.35", 148˚ 25' 51.29")	43	08/04/05	162	40	1.00	1.65	6.03	7.18	Cobble, gravel
11	Ninemile Creek (61˚ 47' 09.27", 148˚ 12' 19.39")	51	08/03/05	528	22	6.45	9.98	3.72	6.56	Boulder, cobble
12	Monument Creek (61˚ 46' 16.65", 148˚ 03' 05.15")	56	08/03/05	93	53	0.90	1.00	2.92		Boulder, cobble
13	Gravel Creek (61˚ 46' 34.47", 148˚ 00' 09.86")	58	08/03/05	445	94	1.02	1.70	4.98	6.72	Cobble, gravel
14	Hicks Creek (61˚ 47' 23.91", 147˚ 56' 13.38")	61	08/05/05	108	39	1.05	1.40	2.85	5.31	Boulder, cobble
15	Glacier Creek (61˚ 46' 51.46", 147˚ 47' 52.28")	66	08/03/05	313	67	0.99	1.80	3.64	7.80	Cobble
16	Matanuska River below Glacier Park Bridge (61˚47' 43.00", 147˚ 47' 22.00")	66	09/07/05							Boulder, cobble
17	Caribou Creek (61˚ 48' 06.73", 147˚ 40' 41.30")	71	08/05/05	294	65	1.76	3.70	2.15	4.11	Cobble, gravel
18	South Fork Matanuska (61˚ 47' 33.03", 147˚ 28' 49.82")	76	09/07/05	311	59	1.23	1.80	4.28	6.90	Cobble, gravel
19	East Fork Matanuska (61˚ 47' 30.94", 147˚ 28' 48.81")	76	09/07/05	119	29	1.23	1.80	3.17	6.61	Cobble, gravel

Table 4-0 Comparison of Feasibility of Alternatives

Alternative	Bank Protection Effectiveness	Technical Difficulty	Institutional Feasibility	Inspection And Maintenance Requirements
Gravel Removal	Moderate	High	High permitting constraints	Continuous/High
Bank Stabilization (riprap and spur dikes)	High	Moderate	Moderate permitting constraints	Yearly/Moderate
Non-Structural Approach	Low	High	Local authorization (City and Borough) needed; Highly political.	Infrequent/Low
Combined Actions	Highest	High	High permitting constraints; many stakeholders involved.	Continuous/High
No Action	Low	Low	Locally controversial	None

Table 4-1 Comparison of Costs of Alternatives

Alternative	Initial Capital Cost ($/ft)	Equivalent Annual Cost ($/ft/yr)[1]
1. Gravel Removal[2]	661	31
2. Bank Stabilization	1,236 (major riprap) 706 (spur dikes)	83 47
3. Non-structural Approach[3]	248 (developed land) 135 (undeveloped land)	17 9
4. Combined Actions	804	74
5. No Action	None	4 2

Key:
1 – Based on a current value of 4 percent over a 50-year period.
2 – Annual cost is offset by revenue from sale of gravel.
3 – Assumes that this approach is applied to the entire Study Area, costs will vary for specific locations.
$/ft – dollars per foot
yr – year