FERNIE - SPARWOOD - ELKFORD AREA HIGHWATER MARKS
JUNE 1995

HIGH WATER MARK SUMMARY

NOTE:

This information is considered historical as it represents channel conditions and configuration at the time of the survey only. User must accept responsibility of ensuring that the accuracy and completeness of provided data is suitable for the needs of the project or study. It is provided "as is" without warranty of any kind, whether express or implied. Under no circumstances will the Government of British Columbia be liable to any person or business entity for any direct, indirect, special, incidental, consequential, or other damages based on any use of this information.

ELK RIVER AT FERNIE

A5196 SHEET 7	4 HWM'S
A5196 SHEET 6	4 HWM'S
A5196 SHEET 5	3 HWM'S
A5196 SHEET 4	31 HWM'S
A5196 SHEET 3	2 HWM'S
A5196 SHEET 2	4 HWM'S
A5196 SHEET 1	6 HWM'S
TOTAL SHEETS 1 TO 7	**54 HWM'S**

ELK RIVER AND MICHEL CREEK AT SPARWOOD

91-2 SHEETS 1 AND 2	7 HWM'S
A5196 SHEET 1A AND 2	5 HWM'S
91-2 SHEET 3	4 HWM'S
(INCLUDES CUMMINGS CREEK)	
91-2 SHEET 4	3 HWM'S
91-2 SHEET 5	2 HWM'S
TOTAL NEAR SPARWOOD	**16 HWM'S**

ELK RIVER NEAR ELKFORD

87-30 SHEET 7	5 HWM'S
87-30 SHEET 6	2 HWM'S
87-30 SHEET 5	3 HWM'S
TOTAL NEAR ELKFORD	**10 HWM'S**
TOTAL HWM'S	**80 HWM'S**

NOTE: ELK RIVER NEAR ELKFORD
HWM'S 1-10
DECISION - NO ELEVATIONS REQUIRED

LOCATIONS OF HIGH WATER MARKS
ARE SHOWN ON FLOODPLAIN MAPPING DWG. LISTED ABOVE
ELEVATIONS ACQUIRED FOR HWM'S IN
FERNIE & SPARWOOD AREAS UNDER PROJECTS
9511F033 & 9512F033 IN SEPTEMBER 1995

Province of British Columbia
MINISTRY OF ENVIRONMENT, LANDS AND PARKS

BC Environment
WATER MANAGEMENT DIVISION

MEMORANDUM

To: Mr. Bernd Schubert
Manager
Technical Support Section

Date: July 5,1995

File: FPM-1

Re: HW Marks Fernie/Sparwood Area

Further to the "E" mail of June 27/95, Mr. Corner has assembled a "binder" on the above noted area which accompanies this memo.

The data was requested under the FPM program to assess the adequacy of the existing FPM projects as a result of a significant flood.

The number of HW marks totals 80 and includes 10 in the Elkford area. However, **elevations are required for 66 (or possibly only 35) HWM's as follows:**

Elk at Fernie-	50 HWM's
ELK / Michel at Sparwood-	16 HWM's

Of the 54 HWM'S in the Fernie area, 31 are located on A5196 Sheet 4:an additional 4 are located upstream of A5196 Sheet 7 (of no apparent value to a FPM review).

Apparently, P.J.Wood's has arranged that the City of Fernie obtain the elevation data from sheet 4 (I.E. Fernie "dyked" area). As discussed, if the sheet 4 level data has not been obtained by the time your staff visits the area, please ensure that this information is obtained as part of your survey.

Can you provide an "order of magnitude" cost estimate of carrying out the above and keep me advised in this matter? As previously discussed, the costs are chargeable to the FPM program.

R.W. Nichols. P.Eng.
FPM Program

CCs. P.J. Woods
S.Corner

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FERNIE - SPARWOOD - ELKFORD AREA HIGHWATER MARKS
JUNE 1995

Following reports recieved June 6, 1995 of flooding on the Elk River in the communities of Fernie Sparwood and Elkford, Mssrs P.J. Woods and D.R. Finlay (staff members from the Water Protection Section in Victoria) were dispatched to the area for flood assessments and acquisition of high water mark data. Mssrs. D. Boyer, M.S. Springman and E. Shaw (staff members from the Nelson and Cranbrook Water Management Branch) provided initial flood response at the scene. Mr. Boyer and Mr. Springman also assisted in the collection of the high water mark data. Additional assistance was provided by Mr. F. deBoon, Conservation Officer from Fernie.

The enclosed package contains photo identified High Water Marks at 80 locations throughout the Elk River Valley from as covered by Floodplain Mapping projects at or near the communities of Fernie, Sparwood and Elkford. Accompanying the photos and descriptions of the High Water Marks are portions of the pertinent floodplain mapsheets to assist the survey crew. Additionally, complete floodplain mapsheets are enclosed with the High Water Mark locations identified. Also included in the package, are copies of newspaper articles and flood incident reports.

The collection of this type of data following flood events of significance is invaluable to the Floodplain Mapping program as it is used as part of an ongoing maintenance program to ensure the adequacy, accuracy and usefulness of the mapsheets. The program wishes gratefully acknowledge the efforts of the Regional Office Staff and Victoria Water Protection Staff for their contributions to this end.

Steve Corner
Project Technician

NOTE: ELK RIVER NEAR ELKFORD
HWM'S 1-10
DECISION - NO ELEVATIONS REQUIRED

ELEVATIONS ONLY REQUIRED
IN THE FERNIE AND SPARWOOD AREAS

MICHEL CREEK JUNE 1995 HWMS

FROM MICHEL
DOWNSTREAM TO ELK RIVER AT SPARWOOD

HWM NO.	HWM ELEV.	1995 SURVEY DATE	FLOODPLAIN DWG NO.	PWL ELEV.	TOP RIVER BANK ELEV.	TOP HWY-R/R-DYKE	AT HWM G/L ELEV.
S7	1175.94	SEPT. 21	91-2-1	1173.50	1175.71	1176.53 (HWY)	1175.08
S5	1152.46	SEPT. 21	91-2-1	1149.81	1152.43	1153.42 (HWY)	1152.43
* S3	1141.98	SEPT. 21	91-2-2	1139.78	1145.08	1145.08 (HWY)	
S4	1141.29	SEPT. 21	91-2-1	1139.68	1145.33	1145.33 (HWY)	
# S2	1135.02	SEPT. 22	91-2-2	1132.82	1135.38	1135.38 (DYKE L/B)	1134.49
% S1	1125.63	SEPT. 23	91-2-2	1123.21	1124.43	1132.31 (HWY)	1124.53
& S9	1119.78	SEPT. 23	91-2-2	1118.18	1122.95	1123.25 (R/R)	
CONF. WITH ELK R.		SEPT. 23	91-2-2	1115.40			

NEAR WSC GAUGE 08NK020

* AT XS-24 HWY 3 BRIDGE BOTTOM CHORD U/S R/B ELEV. 1143.78
AT XS-24 HWY 3 BRIDGE BOTTOM CHORD U/S L/B ELEV. 1143.77

\# AT XS-15 CP RAIL BRIDGE BOTTOM CHORD U/S R/B ELEV. 1135.11
AT XS-15 CP RAIL BRIDGE BOTTOM CHORD U/S L/B ELEV. 1134.44

% AT XS-8 HWY 43 BRIDGE BOTTOM CHORD U/S R/B ELEV. 1129.66
AT XS-8 HWY 43 BRIDGE BOTTOM CHORD U/S L/B ELEV. 1131.44

& AT XS-3 CP RAIL BRIDGE BOTTOM CHORD U/S R/B ELEV. 1122.48
AT XS-3 CP RAIL BRIDGE BOTTOM CHORD U/S L/B ELEV. 1121.98

LEGEND

HWM ----- HIGH WATER MARK
PWL ----- PRESENT WATER LEVEL
R/R ----- RAILWAY
G/L ----- GROUND LEVEL

NOTE: ALL ELEVATIONS ARE IN METRES - GEODETIC DATUM

CUMMINGS CREEK JUNE 1995 HWMS

FROM UPSTREAM END MOBILE HOME PARK
DOWNSTREAM TO HWY 43 BRIDGE

HWM NO.	HWM ELEV.	1995 SURVEY DATE	FLOODPLAIN DWG NO.	PWL ELEV.	TOP RIVER BANK ELEV.	TOP HWY-R/R-DYKE	AT HWM G/L ELEV.
S12	1161.00	SEPT. 23	91-2-3	1159.86	1161.00		1161.00
* S13	1149.92	SEPT. 23	91-2-3	1148.91	1151.97	1156.15 (HWY)	

* AT XS-9 HWY 43 BRIDGE BOTTOM CHORD U/S R/B ELEV. 1154.40
AT XS-9 HWY 43 BRIDGE BOTTOM CHORD U/S L/B ELEV. 1155.27

LEGEND

HWM ----- HIGH WATER MARK
PWL ----- PRESENT WATER LEVEL
G/L ----- GROUND LEVEL

NOTE: ALL ELEVATIONS ARE IN METRES - GEODETIC DATUM

ELK RIVER JUNE 1995 HWMS

FROM WSC GAUGE 08NK016
DOWNSTREAM TO SPARWOOD

HWM NO.	HWM ELEV.	1995 SURVEY DATE	FLOODPLAIN DWG NO.	PWL ELEV.	TOP RIVER BANK ELEV.	TOP HWY-R/R-DYK	AT HWM G/L ELEV.
08NK016	1193.22	SEPT. 22	91-2-5	1191.79			
S17	1191.55	SEPT. 22	91-2-5	1190.62	1192.45		1191.30
S18	1170.48	SEPT. 22	91-2-5	1168.63	1170.23		1170.23
XS-7	1168.72	SEPT. 22	91-2-5		1168.72		1168.72
* S20	1154.13	SEPT. 22	91-2-4	1152.33	1158.71	1162.01 (R/R)	1154.13
S16	1144.21	SEPT. 23	91-2-4	1142.19	1150.48	1147.24 (R/R)	1143.21
S19	1137.73	SEPT. 22	91-2-4	1135.78	1137.73		1137.73
S15	1127.57	SEPT. 23	91-2-3	1125.58	1126.72	1140.67 (R/R)	1126.72
S14	1124.57	SEPT. 23	91-2-3	1122.33	1123.97	1132.47 (R/R)	1123.97
S10	1121.20	SEPT. 21	91-2-2	1118.48	1123.60		1120.50
S11	1117.41	SEPT. 23	91-2-2	1115.40	1118.10		1117.01
CONF. WITH MICHEL CR.		SEPT. 23	91-2-2	1115.40			
S8	1114.16	SEPT. 23	91-2-2	1112.24	1116.08	1116.58 (R/R)	1114.16
S24	1105.20	SEPT. 21	A5196-1A	1102.87	1105.75	1108.53 (R/R)	
S25	1098.92	SEPT. 21	A5196-1A			1102.10 (R/R)	

* AT XS-12 CP RAIL BRIDGE BOTTOM CHORD D/S L/B ELEV. 1160.68
AT XS-12 CP RAIL BRIDGE BOTTOM CHORD D/S R/B ELEV. 1159.35

LEGEND

HWM ----- HIGH WATER MARK
PWL ----- PRESENT WATER LEVEL
R/R ----- RAILWAY
G/L ----- GROUND LEVEL

NOTE: ALL ELEVATIONS ARE IN METRES - GEODETIC DATUM