



Muddy Creek Mitigation Bank
Chris Kiilsgaard & Jeff Reams Sponsors
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Corvallis, Oregon 97330
Ph: 541.760.0070 or 541.929.7542

JAN 25 2012

January 23, 2012

Ms Dana Field
Oregon Dept State Lands
775 Summer St NE, Suite 100
Salem, Oregon 97301

Ms Jaimee Davis ✓
US Army Corps of Engineers
Portland District
PO Box 2946
Portland, Oregon 97208

RE: As-Built drawing and documentation for **Muddy Creek Mitigation Bank**

Dear Dana and Jaimee:

Enclosed please find the surveyed As-Built drawing and supporting documentation for all berms that were not detailed in the Bank's instrument. In total, there are nine additional berms constructed on phase 1 and phase 2-ground. I have labeled those nine berms in figure 2 in red ink.

With the exception of berm #1, the eight berms in phase 2 were constructed to divert overland water flow out of existing swales onto our non-hydric uplands/creation ground. These eight berms can be characterized as low-lying, low profile water diversions. Following construction, all berms were seeded to the similar mix of native grasses that were planted in the adjoining enhancement ground.

Berm #1 was added to extend inundation for a shallowly flooded part of phase 1 that is frequently used by wading and shorebirds in the late spring.

All grading for the original berms depicted in the As-built drawing were done to grading specifications described in the Bank's instrument.

If you need additional information, or clarification, for any of this material please do not hesitate to contact me at 541-760-0070. I will be in California through the first week of February, but will attend to it first thing when I'm back

Sincerely yours

A handwritten signature in cursive script that reads "Chris".

Chris Kiilsgaard
Muddy Creek Mitigation Bank

Enc.

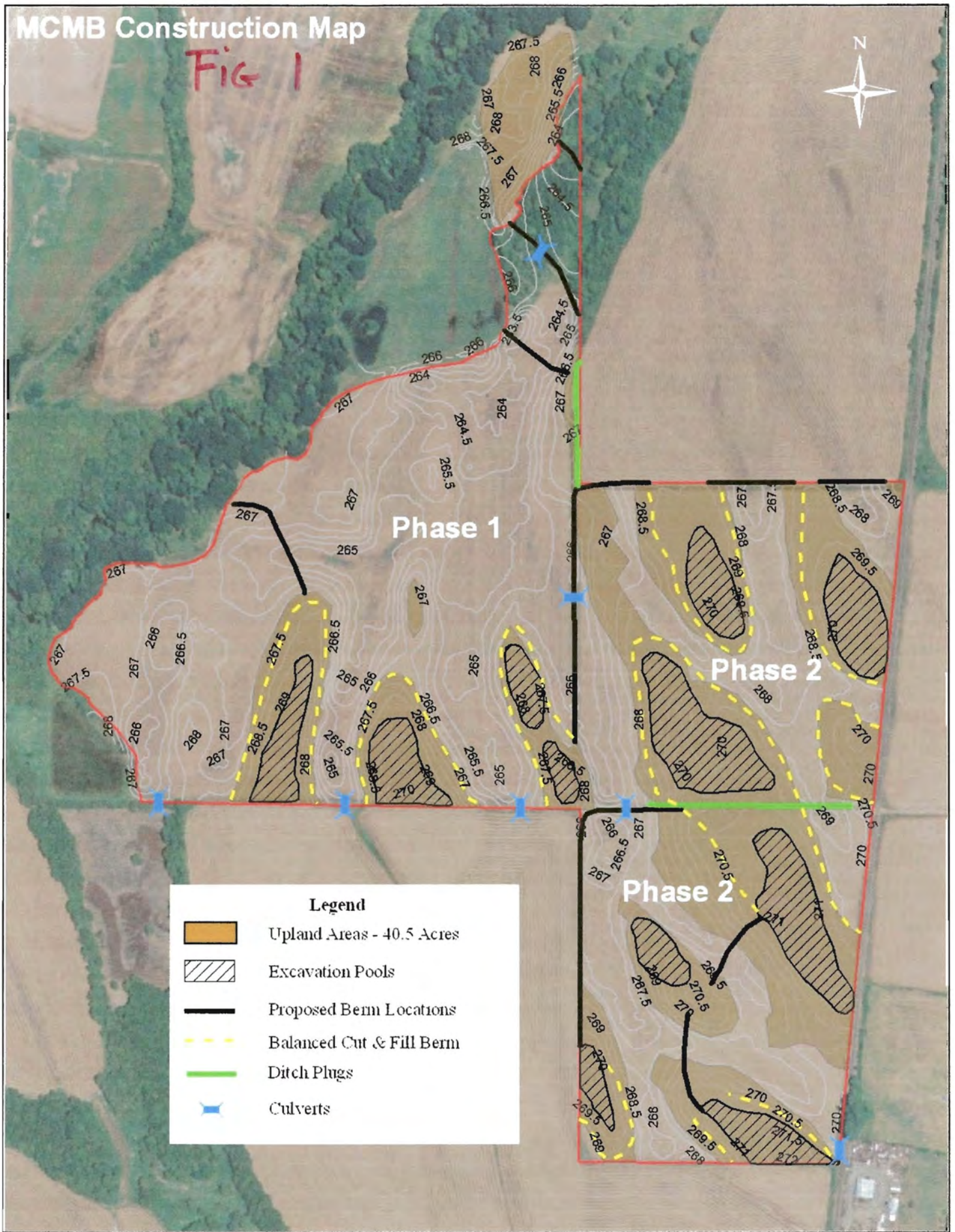
Figure 1. MCMB construction map; the original construction map submitted with the bank's instrument

Figure 2. MCMC As-built map

Figure 3. Volume calculations for the nine berms not listed in the bank's instrument

MCMB Construction Map

FIG 1



Phase 1

Phase 2

Phase 2

Legend

-  Upland Areas - 40.5 Acres
-  Excavation Pools
-  Proposed Berm Locations
-  Balanced Cut & Fill Berm
-  Ditch Plugs
-  Culverts

LEVEE VOLUME CALCULATION					
for					
Berm #1					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	264.4	265.4	1	0	0
30	264.2	265.4	1.2	23	828
60	264.2	265.4	1.2	26	876
90	264.2	265.4	1.2	26	876
120	263.9	265.4	1.5	31	948
126	263.7	265.4	1.7	8	214
180	264	265.4	1.4	70	1879
210	264.4	265.4	1	26	876
240	264.7	265.4	0.7	16	708
250	264.7	265.4	0.7	4	212
SUBTOTAL:				231 CY	7,417 SF
STRIPPING:				137 CY	
TOTAL:				369 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #2					
Right SS= 6					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	266.3	266.3	0	0	0
30	264.6	266.3	1.7	21	657
60	264	266.3	2.3	54	1140
90	264.2	266.3	2.1	62	1224
126	263.9	266.3	2.4	77	1494
SUBTOTAL:				214 CY	4,515 SF
STRIPPING:				84 CY	
TOTAL:				298 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #3					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	267.8	268.9	1.1	0	0
30	267.8	268.9	1.1	23	828
60	267.5	268.9	1.4	28	900
90	267.5	268.9	1.4	33	972
120	267.5	268.9	1.4	33	972
126	266.4	268.9	2.5	12	247
180	266.7	268.9	2.2	136	2570
210	266.8	268.9	2.1	65	1332
240	267.4	268.9	1.5	50	1164
261	267.4	268.9	1.5	26	714
SUBTOTAL:				405 CY	9,700 SF
STRIPPING:				180 CY	
TOTAL:				584 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #4					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	266.2	267.7	1.5	0	0
30	266.2	267.7	1.5	37	1020
60	265.7	267.7	2	47	1140
90	265.9	267.7	1.8	53	1212
120	266.4	267.7	1.3	39	1044
SUBTOTAL:				176 CY	4,416 SF
STRIPPING:				82 CY	
TOTAL:				258 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #5					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	267.8	269.9	2.1	0	0
30	267.8	269.9	2.1	63	1308
60	267.5	269.9	2.4	70	1380
90	267.5	269.9	2.4	78	1452
120	267.5	269.9	2.4	78	1452
126	267.1	269.9	2.8	18	310
180	266.7	269.9	3.2	205	3132
210	268.2	269.9	1.7	86	1476
239	268.8	269.9	1.1	33	940
SUBTOTAL:				629 CY	11,449 SF
STRIPPING:				212 CY	
TOTAL:				841 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #6					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	268.4	269.6	1.2	0	0
30	267.8	269.6	1.8	37	1020
60	267.5	269.6	2.1	56	1236
90	267.8	269.6	1.8	56	1236
120	267.5	269.6	2.1	56	1236
150	269.1	269.6	0.5	35	924
SUBTOTAL:				240 CY	5,652 SF
STRIPPING:				105 CY	
TOTAL:				344 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #7					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	268.4	269.2	0.8	0	0
30	267.8	269.2	1.4	24	828
60	267	269.2	2.2	50	1164
90	267.4	269.2	1.8	58	1260
114	268	269.2	1.2	30	816
SUBTOTAL:				162 CY	4,068 SF
STRIPPING:				75 CY	
TOTAL:				237 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #8					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	268.4	269.5	1.1	0	0
25	267.8	269.5	1.7	28	810
50	267.8	269.5	1.7	37	930
75	268.2	269.5	1.3	31	850
98	269	269.5	0.5	14	561
SUBTOTAL:				110 CY	3,151 SF
STRIPPING:				58 CY	
TOTAL:				169 CY	

LEVEE VOLUME CALCULATION					
for					
Berm #9					
Right SS= 8					
Left SS= 8					
Levee W= 10					
STATION	EXIST GRADE	PROP GRADE	LEVEE HEIGHT	VOL (CY)	AREA (SF)
0	269.2	270	0.8	0	0
20	268.8	270	1.2	14	520
40	268.2	270	1.8	25	680
60	269	270	1	23	648
68	269	270	1	5	208
SUBTOTAL:				67 CY	2,056 SF
STRIPPING:				38 CY	
TOTAL:				105 CY	