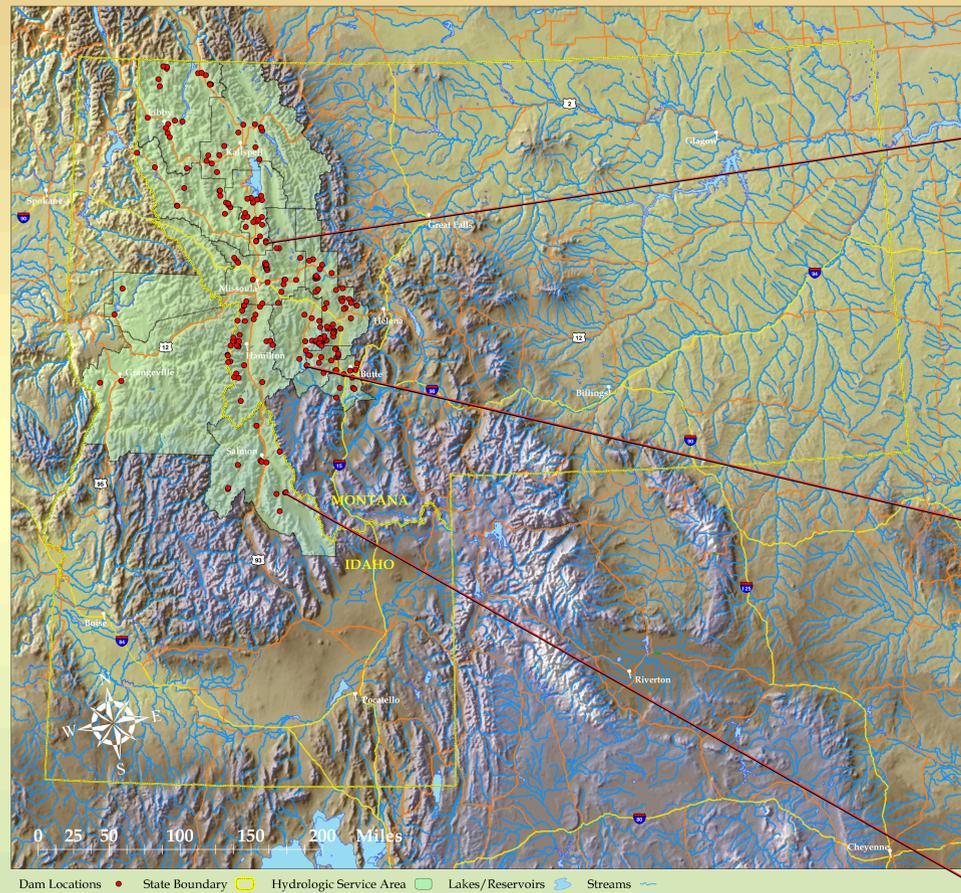


DAMBREAK CATALOG UPDATING USING THE NWS SIMPLIFIED DAMBREAK PROGRAM AND 3-D MAPPING SOFTWARE IN WESTERN MONTANA AND IDAHO

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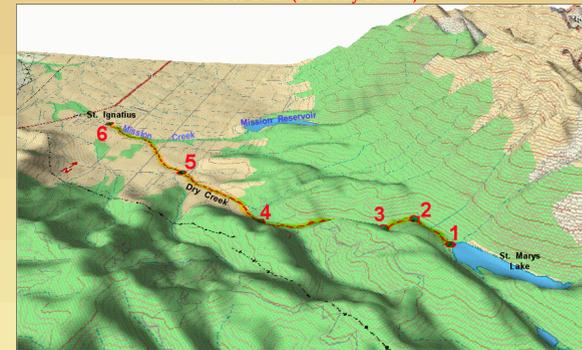
Dam Locations



Approximately 250 dams across western Montana and north central Idaho were reanalyzed using the NWS simplified dambreak program and the Delorme 3-D mapping software. Cross section data and nearest town downstream were derived from the mapping software. The analysis from the simplified dambreak program was used to update all the dams in the dambreak catalog. The 3-D maps and dambreak analysis were then transferred to the Missoula Internal Web for meteorologists to access during possible dambreak events.

3D Mapping

Tabor Dam (St. Mary's Lake)



- WPT1 - BASE OF DAM
0.00 MILES
- WPT2 - CROSS SECTION
0.59 MILES
- WPT3 - CROSS SECTION
0.91 MILES
- WPT4 - CROSS SECTION
3.12 MILES
- WPT5 - CROSS SECTION
5.50 MILES
- WPT6 - ST. IGNATIUS
9.00 MILES

RVR MILE FROM DAM	MAX FLOW (CFS)	MAX ELEV (FT-MSL)	MAX DEPTH (FT)	TIME (HR)	TIME (HR)	TIME (HR)	FLOOD DEPTH (FT)
0.00	132180.	4006.65	56.65	.11	.00	.00	90.00
.59	128304.	3928.09	18.09	.15	.00	.00	50.00
.91	119621.	3823.79	23.79	.15	.00	.00	80.00
3.12	118425.	3645.84	15.84	.32	.00	.00	50.00
5.50	117240.	3301.18	31.18	.45	.00	.00	50.00
9.00	116068.	3002.99	22.99	.68	.00	.00	40.00

DAMCAT Replacement Analysis

Name of Dam		Name of River			
TABOR (ST. MARY'S LAKE)		DRY CREEK			
Nearest Town Downstream	Distance	Invert Elev.	Travel Time		
ST IGNATIUS	9 miles	2980.0 ft	0.68 hours		
Peak Flow at Dam	Peak Depth at Dam	Peak Flow at Town	Peak Depth at Town	Fld Depth at Town	Time Fld Depth at Town
132180 cfs	56.7 ft	116068 cfs	22.9 ft	0 ft	0 hrs

Dam I.D.: 00588 County Fips Code: 047 Latitude: 47.27° Longitude: 113.93°
 Dam Height: 63 ft Crest Length: 535 ft Volume: 23300 Acre-ft
 Breach Width: 189 ft Failure Time: 6 minutes Slope: 107 ft/mile
 CWO: MSO WFO: MSO RFC: NWRFC COUNTY: LAKE

Storm Lake Dam



- WPT1 - BASE OF DAM
0.00 MILES
- WPT2 - CAMP SILVERCLOUD
6.85 MILES
- WPT3 - SPRING HILL CAMPGROUND
8.35 MILES
- WPT4 - YANKEE FLAT DEVELOPMENTS
10.00 MILES
- WPT5 - WEST VALLEY
17.00 MILES

RVR MILE FROM DAM	MAX FLOW (CFS)	MAX ELEV (FT-MSL)	MAX DEPTH (FT)	TIME (HR)	TIME (HR)	TIME (HR)	FLOOD DEPTH (FT)
0.00	40587.	8162.67	12.67	.05	.00	.00	.00
6.85	36487.	6476.19	6.19	.55	.00	.00	.00
8.35	34800.	6321.19	11.19	.72	.00	.00	.00
10.00	33408.	6076.13	6.13	.85	.00	.00	.00
17.00	33094.	5514.96	4.96	1.86	.00	.00	.00

Name of Dam		Name of River			
STORM LAKE DAM		STORM LAKE CREEK			
Nearest Town Downstream	Distance	Invert Elev.	Travel Time		
WEST VALLEY	17 miles	5510.0 ft	1.86 hours		
Peak Flow at Dam	Peak Depth at Dam	Peak Flow at Town	Peak Depth at Town	Fld Depth at Town	Time Fld Depth at Town
40587 cfs	12.7 ft	33094 cfs	5.0 ft	.0 ft	.0 hrs

Dam I.D.: 01357 County Fips Code: 023 Latitude: 46.07° Longitude: 113.27°
 Dam Height: 29 ft Crest Length: 500 ft Volume: 2150 Acre-ft
 Breach Width: 87 ft Failure Time: 2 minutes Slope: 155 ft/mile
 CWO: MSO WFO: MSO RFC: NWRFC COUNTY: DEER LODGE

Upper Ellesworth Dam



- WPT1 - BASE OF DAM
0.00 MILES
- WPT2 - CROSS SECTION
1.37 MILES
- WPT3 - CROSS SECTION
1.89 MILES
- WPT4 - CROSS SECTION
3.13 MILES
- WPT5 - LEMHI
4.67 MILES

RVR MILE FROM DAM	MAX FLOW (CFS)	MAX ELEV (FT-MSL)	MAX DEPTH (FT)	TIME (HR)	TIME (HR)	TIME (HR)	FLOOD DEPTH (FT)
0.00	19387.	5532.67	7.67	.04	.00	.00	.00
1.37	16244.	5366.89	11.89	.21	.00	.00	.00
1.89	15404.	5282.03	12.03	.23	.00	.00	.00
3.13	12623.	5243.11	13.11	.41	.00	.00	.00
4.67	10057.	5196.53	6.53	.63	.00	.00	.00

Name of Dam		Name of River			
ELLSWORTH-UPPER (SHINER)		YEARIAN CREEK			
Nearest Town Downstream	Distance	Invert Elev.	Travel Time		
LEMHI	4.6 miles	5190 ft	.63 hours		
Peak Flow at Dam	Peak Depth at Dam	Peak Flow at Town	Peak Depth at Town	Fld Depth at Town	Time Fld Depth at Town
19387 cfs	7.67 ft	10057 cfs	6.53 ft	.0 ft	.0 hrs

Dam I.D.: 00142 County Fips Code: 59 Latitude: 44.84 ° Longitude: 113.57°
 Dam Height: 23.0 ft Crest Length: 445.0 ft Volume: 250.00 Acre-ft
 Breach Width: 92.00 ft Failure Time: 2.3 minutes Slope: 72 ft/mile
 CWO: MSO WFO: MSO RFC: NWRFC COUNTY: LEMHI



Poster Created November 2002
 Elevation Data, Stream Layer (USA), Lake Layer (USA) and Lake Layer (Canada) from ESRI DATA & Maps 2002
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 Dam Layer adopted from the MT NWS and National Inventory of Dams
 3D images created with Delorme 3-D Topo-Quad