

APPENDIX E

FISH HABITAT EVALUATION METRIC SUMMARY

RED DEER RIVER

Red Deer River (RD1) IFN = 20% reduction from natural with EBF

Stripped Weeks (14-22, 29-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-2.47%	-3.15%
WALL - Juvenile	-0.39%	-0.56%
GOLD - Adult	-6.02%	-7.66%
GOLD - Juvenile	-4.29%	-5.48%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-2.23%	-2.57%
WALL - Juvenile	0.81%	1.15%
GOLD - Adult	-6.30%	-7.37%
GOLD - Juvenile	-3.69%	-4.28%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-3.75%	-5.01%
WALL - Juvenile	-2.37%	-3.25%
GOLD - Adult	-7.82%	-10.34%
GOLD - Juvenile	-6.42%	-8.47%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-3.02%	-3.84%
WALL - Juvenile	-0.87%	-1.17%
GOLD - Adult	-7.14%	-9.04%
GOLD - Juvenile	-5.20%	-6.62%

BSP1 - WEEKS (14-15) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.34%	-0.56%
WALL - Juvenile	1.92%	2.34%
GOLD - Adult	-2.42%	-3.28%
GOLD - Juvenile	-1.26%	-1.74%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	0.86%	0.63%
WALL - Juvenile	6.74%	8.44%
GOLD - Adult	-3.35%	-4.12%
GOLD - Juvenile	1.05%	0.89%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.38%	-1.64%
WALL - Juvenile	-1.17%	-1.54%
GOLD - Adult	-2.57%	-3.83%
GOLD - Juvenile	-3.12%	-3.86%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.38%	-0.64%
WALL - Juvenile	2.14%	2.64%
GOLD - Adult	-2.89%	-3.95%
GOLD - Juvenile	-1.47%	-2.00%

BSP2 - WEEKS (16-34) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.30%	-0.53%
WALL - Juvenile	2.13%	2.52%
GOLD - Adult	-3.71%	-5.01%
GOLD - Juvenile	-1.37%	-2.08%
WALL - Spawning	-6.21%	-8.20%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	0.56%	0.49%
WALL - Juvenile	4.93%	6.00%
GOLD - Adult	-4.85%	-6.31%
GOLD - Juvenile	-0.15%	-0.59%
WALL - Spawning	-3.74%	-5.03%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.36%	-1.89%
WALL - Juvenile	-0.42%	-0.76%
GOLD - Adult	-4.34%	-6.01%
GOLD - Juvenile	-3.05%	-4.32%
WALL - Spawning	-9.76%	-12.77%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.46%	-0.76%
WALL - Juvenile	2.03%	2.34%
GOLD - Adult	-4.52%	-6.05%
GOLD - Juvenile	-1.79%	-2.69%
WALL - Spawning	-7.71%	-10.12%

BSP3 - WEEKS (29-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.51%	-0.74%
WALL - Juvenile	1.89%	2.29%
GOLD - Adult	-3.85%	-4.99%
GOLD - Juvenile	-1.75%	-2.37%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	0.26%	0.33%
WALL - Juvenile	4.33%	5.44%
GOLD - Adult	-3.60%	-4.36%
GOLD - Juvenile	-0.42%	-0.45%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.74%	-2.47%
WALL - Juvenile	-0.52%	-0.93%
GOLD - Adult	-5.45%	-7.34%
GOLD - Juvenile	-3.72%	-5.16%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.78%	-1.13%
WALL - Juvenile	1.73%	2.03%
GOLD - Adult	-4.62%	-6.01%
GOLD - Juvenile	-2.26%	-3.08%

BSP4 - (WEEKS 38-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-5.85%	-7.24%
WALL - Juvenile	-3.96%	-4.94%
GOLD - Adult	-8.88%	-11.07%
GOLD - Juvenile	-7.60%	-9.35%
WALL - Fry	-1.78%	-2.14%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-5.61%	-6.19%
WALL - Juvenile	-4.05%	-4.52%
GOLD - Adult	-7.66%	-8.53%
GOLD - Juvenile	-6.07%	-6.70%
WALL - Fry	-0.65%	-0.65%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-8.22%	-10.74%
WALL - Juvenile	-5.54%	-7.34%
GOLD - Adult	-12.46%	-15.94%
GOLD - Juvenile	-11.48%	-14.49%
WALL - Fry	-4.12%	-5.13%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-7.00%	-8.63%
WALL - Juvenile	-4.80%	-5.98%
GOLD - Adult	-10.41%	-12.78%
GOLD - Juvenile	-9.13%	-11.10%
WALL - Fry	-2.46%	-2.99%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	20%	25%
WALL - Adult	-7.27%	-9.14%
WALL - Juvenile	-6.32%	-8.06%
GOLD - Adult	-12.02%	-14.85%
GOLD - Juvenile	-9.37%	-11.70%
WALL - Fry	-2.19%	-2.51%
WALL - Spawning	-15.36%	-18.94%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-15.78%	-15.49%
WALL - Juvenile	-15.16%	-14.08%
GOLD - Adult	-22.54%	-26.04%
GOLD - Juvenile	-17.14%	-21.44%
WALL - Fry	-13.90%	-19.57%
WALL - Spawning	-23.44%	-28.99%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-4.56%	-5.84%
WALL - Juvenile	-3.05%	-3.92%
GOLD - Adult	-11.56%	-14.99%
GOLD - Juvenile	-8.61%	-11.03%
WALL - Fry	-6.53%	-7.99%
WALL - Spawning	-20.96%	-25.35%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-6.05%	-7.26%
WALL - Juvenile	-7.06%	-8.46%
GOLD - Adult	-10.36%	-12.32%
GOLD - Juvenile	-7.78%	-9.34%
WALL - Fry	-1.89%	-2.07%
WALL - Spawning	-13.88%	-15.36%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-10.22%	-12.94%
WALL - Juvenile	-7.59%	-9.98%
GOLD - Adult	-14.29%	-17.99%
GOLD - Juvenile	-12.86%	-16.15%
WALL - Fry	-4.70%	-5.69%
WALL - Spawning	-22.07%	-27.69%

No Data for RD2 - use RD1 IFN

Red Deer River (RD3) IFN = 20% reduction from natural with EBF

Stripped Weeks (14-22, 28-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-2.61%	-3.35%
WALL - Juvenile	-0.57%	-0.80%
GOLD - Adult	-6.22%	-7.94%
GOLD - Juvenile	-4.44%	-5.69%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-2.51%	-2.90%
WALL - Juvenile	0.52%	0.70%
GOLD - Adult	-6.12%	-7.24%
GOLD - Juvenile	-4.09%	-4.72%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-3.88%	-5.22%
WALL - Juvenile	-2.52%	-3.42%
GOLD - Adult	-8.41%	-11.08%
GOLD - Juvenile	-6.52%	-8.67%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-3.22%	-4.11%
WALL - Juvenile	-1.09%	-1.48%
GOLD - Adult	-7.40%	-9.42%
GOLD - Juvenile	-5.43%	-6.92%

BSP1 - WEEKS (14-15) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.24%	-1.73%
WALL - Juvenile	1.02%	1.14%
GOLD - Adult	-3.62%	-4.82%
GOLD - Juvenile	-2.08%	-2.86%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.68%	-2.27%
WALL - Juvenile	3.16%	3.65%
GOLD - Adult	-4.57%	-5.95%
GOLD - Juvenile	-1.76%	-2.34%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.32%	-1.94%
WALL - Juvenile	-0.47%	-0.75%
GOLD - Adult	-4.27%	-5.80%
GOLD - Juvenile	-2.93%	-4.07%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.47%	-2.05%
WALL - Juvenile	1.11%	1.19%
GOLD - Adult	-4.27%	-5.76%
GOLD - Juvenile	-2.49%	-3.37%

BSP2 - WEEKS (16-23) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.57%	-0.91%
WALL - Juvenile	1.89%	2.19%
GOLD - Adult	-4.14%	-5.57%
GOLD - Juvenile	-1.85%	-2.70%
WALL - Spawning	-7.41%	-9.74%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.15%	-0.38%
WALL - Juvenile	4.41%	5.24%
GOLD - Adult	-4.98%	-6.56%
GOLD - Juvenile	-1.36%	-2.01%
WALL - Spawning	-5.15%	-6.63%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.46%	-2.08%
WALL - Juvenile	-0.61%	-0.98%
GOLD - Adult	-5.21%	-7.03%
GOLD - Juvenile	-3.35%	-4.75%
WALL - Spawning	-11.25%	-14.67%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.82%	-1.25%
WALL - Juvenile	1.70%	1.89%
GOLD - Adult	-5.03%	-6.74%
GOLD - Juvenile	-2.44%	-3.49%
WALL - Spawning	-9.13%	-11.89%

BSP3 - WEEKS (24-37) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.79%	-1.07%
WALL - Juvenile	1.60%	1.94%
GOLD - Adult	-4.07%	-5.29%
GOLD - Juvenile	-2.06%	-2.74%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-0.26%	-0.25%
WALL - Juvenile	3.82%	4.79%
GOLD - Adult	-3.87%	-4.65%
GOLD - Juvenile	-0.89%	-0.89%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.97%	-2.79%
WALL - Juvenile	-0.78%	-1.22%
GOLD - Adult	-5.79%	-7.85%
GOLD - Juvenile	-4.13%	-5.71%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-1.14%	-1.56%
WALL - Juvenile	1.36%	1.58%
GOLD - Adult	-4.93%	-6.45%
GOLD - Juvenile	-2.68%	-3.58%

BSP4 - (WEEKS 38-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-5.90%	-7.32%
WALL - Juvenile	-4.21%	-5.29%
GOLD - Adult	-9.08%	-11.28%
GOLD - Juvenile	-7.49%	-9.26%
WALL - Fry	-1.77%	-2.18%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-5.07%	-5.61%
WALL - Juvenile	-4.16%	-4.67%
GOLD - Adult	-7.35%	-8.18%
GOLD - Juvenile	-5.53%	-6.16%
WALL - Fry	-0.65%	-0.71%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-8.76%	-11.30%
WALL - Juvenile	-5.97%	-7.94%
GOLD - Adult	-13.11%	-16.69%
GOLD - Juvenile	-11.59%	-14.61%
WALL - Fry	-3.99%	-4.91%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
WALL - Adult	-7.07%	-8.72%
WALL - Juvenile	-5.10%	-6.39%
GOLD - Adult	-10.68%	-13.12%
GOLD - Juvenile	-8.98%	-10.97%
WALL - Fry	-2.39%	-2.90%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	20%	25%
WALL - Adult	-6.94%	-8.62%
WALL - Juvenile	-6.22%	-7.86%
GOLD - Adult	-11.24%	-13.87%
GOLD - Juvenile	-8.97%	-11.12%
WALL - Fry	-1.98%	-2.45%
WALL - Spawning	-15.17%	-18.80%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-11.52%	-14.47%
WALL - Juvenile	-10.90%	-13.83%
GOLD - Adult	-22.52%	-26.02%
GOLD - Juvenile	-17.14%	-21.44%
WALL - Fry	-15.21%	-15.62%
WALL - Spawning	-23.42%	-28.98%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-4.74%	-6.08%
WALL - Juvenile	-3.08%	-3.70%
GOLD - Adult	-10.99%	-14.20%
GOLD - Juvenile	-8.47%	-10.58%
WALL - Fry	-6.67%	-8.18%
WALL - Spawning	-20.16%	-24.24%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-6.02%	-6.75%
WALL - Juvenile	-5.48%	-6.31%
GOLD - Adult	-8.45%	-10.21%
GOLD - Juvenile	-8.52%	-9.20%
WALL - Fry	-1.44%	-1.71%
WALL - Spawning	-13.77%	-14.79%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%
WALL - Adult	-10.19%	-12.79%
WALL - Juvenile	-8.44%	-11.09%
GOLD - Adult	-14.62%	-18.40%
GOLD - Juvenile	-12.93%	-16.70%
WALL - Fry	-4.70%	-5.79%
WALL - Spawning	-22.72%	-28.14%

No Data for RD4 - use RD5 IFN

Red Deer River (RD5) IFN = 25% reduction from Natural with EBF

Stripped Weeks (14, 35-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	3.87%	4.72%	5.52%
WALL - Juvenile	2.54%	3.06%	3.55%
GOLD - Adult	-1.94%	-2.55%	-3.16%
GOLD - Juvenile	-0.48%	-0.76%	-1.06%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	5.96%	7.38%	8.77%
WALL - Juvenile	4.38%	5.26%	6.07%
GOLD - Adult	-1.77%	-2.20%	-2.59%
GOLD - Juvenile	0.97%	1.02%	1.12%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	1.57%	1.70%	1.73%
WALL - Juvenile	-0.12%	-0.28%	-0.50%
GOLD - Adult	-4.02%	-5.30%	-6.66%
GOLD - Juvenile	-3.34%	-4.40%	-5.55%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	3.61%	4.35%	5.01%
WALL - Juvenile	2.02%	2.35%	2.63%
GOLD - Adult	-2.95%	-3.84%	-4.74%
GOLD - Juvenile	-1.33%	-1.87%	-2.44%

BSP1 - WEEKS (14-15) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	4.96%	6.06%	7.20%
WALL - Juvenile	4.37%	5.35%	6.32%
GOLD - Adult	0.68%	0.66%	0.54%
GOLD - Juvenile	2.40%	2.68%	2.95%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	11.69%	14.39%	17.33%
WALL - Juvenile	11.97%	14.49%	16.95%
GOLD - Adult	2.67%	2.74%	2.29%
GOLD - Juvenile	6.71%	7.70%	8.58%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	1.10%	1.06%	0.94%
WALL - Juvenile	-0.08%	-0.14%	-0.25%
GOLD - Adult	-0.84%	-1.20%	-1.48%
GOLD - Juvenile	-0.12%	-0.47%	-0.81%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	5.46%	6.55%	7.68%
WALL - Juvenile	4.92%	5.94%	6.90%
GOLD - Adult	0.69%	0.49%	0.16%
GOLD - Juvenile	2.74%	2.97%	3.14%

BSP2 - WEEKS (16-28) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	11.28%	14.28%	17.36%
WALL - Juvenile	11.00%	13.92%	16.91%
GOLD - Adult	8.01%	9.95%	11.85%
GOLD - Juvenile	10.10%	12.71%	15.37%
WALL - Spawning	4.35%	4.88%	5.11%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	21.74%	28.01%	34.56%
WALL - Juvenile	22.54%	29.20%	36.23%
GOLD - Adult	18.60%	23.56%	28.55%
GOLD - Juvenile	19.67%	25.56%	31.89%
WALL - Spawning	12.77%	14.89%	16.51%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	8.23%	10.06%	11.81%
WALL - Juvenile	7.63%	9.18%	10.59%
GOLD - Adult	3.73%	4.28%	4.70%
GOLD - Juvenile	7.32%	8.66%	9.82%
WALL - Spawning	-0.62%	-1.24%	-2.20%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	13.29%	16.80%	20.36%
WALL - Juvenile	13.12%	16.57%	20.07%
GOLD - Adult	9.43%	11.68%	13.87%
GOLD - Juvenile	11.89%	14.94%	18.03%
WALL - Spawning	4.35%	4.76%	4.78%

BSP3 - WEEKS (29-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	5.21%	6.44%	7.58%
WALL - Juvenile	4.04%	4.95%	5.79%
GOLD - Adult	-0.32%	-0.60%	-0.90%
GOLD - Juvenile	1.53%	1.73%	1.88%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	7.64%	9.54%	11.35%
WALL - Juvenile	6.88%	8.45%	9.90%
GOLD - Adult	1.30%	1.40%	1.47%
GOLD - Juvenile	4.86%	5.86%	6.79%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	2.94%	3.46%	3.84%
WALL - Juvenile	1.02%	1.06%	1.04%
GOLD - Adult	-3.28%	-4.40%	-5.57%
GOLD - Juvenile	-2.19%	-3.04%	-3.97%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
WALL - Adult	5.12%	6.27%	7.31%
WALL - Juvenile	3.76%	4.52%	5.18%
GOLD - Adult	-1.14%	-1.69%	-2.29%
GOLD - Juvenile	1.02%	1.02%	0.94%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	20%	25%	30%
WALL - Adult	0.26%	0.11%	-0.06%
WALL - Juvenile	-0.45%	-0.67%	-0.88%
GOLD - Adult	-4.44%	-5.65%	-6.78%
GOLD - Juvenile	-3.29%	-4.22%	-5.07%
WALL - Spawning	-4.10%	-5.74%	-7.53%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	20%	25%	30%
WALL - Adult	-17.30%	-18.37%	-19.30%
WALL - Juvenile	-12.75%	-14.76%	-15.73%
GOLD - Adult	-8.40%	-10.59%	-12.91%
GOLD - Juvenile	-7.40%	-9.49%	-11.60%
WALL - Spawning	-28.14%	-32.82%	-39.04%

South Saskatchewan River Basin Instream Flow Needs Determination

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
WALL - Adult	2.00%	2.34%	2.62%
WALL - Juvenile	0.78%	0.80%	0.79%
GOLD - Adult	-3.97%	-4.96%	-5.86%
GOLD - Juvenile	-2.16%	-2.74%	-3.38%
WALL - Spawning	-10.92%	-13.16%	-15.85%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
WALL - Adult	0.53%	0.78%	1.01%
WALL - Juvenile	-0.50%	-0.63%	-0.64%
GOLD - Adult	-3.73%	-4.61%	-5.25%
GOLD - Juvenile	-2.75%	-3.13%	-3.27%
WALL - Spawning	-9.09%	-11.30%	-12.88%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
WALL - Adult	-1.08%	-1.82%	-2.59%
WALL - Juvenile	-1.32%	-1.83%	-2.46%
GOLD - Adult	-6.65%	-8.58%	-10.64%
GOLD - Juvenile	-5.63%	-7.28%	-9.03%
WALL - Spawning	-5.12%	-7.30%	-9.49%

Red Deer River (RD6) IFN = 20% reduction from natural with EBF

Stripped Weeks (14-19, 30-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-3.74%	-5.03%	-6.31%
MNWH - Juvenile	-2.64%	-3.57%	-4.49%
BNTR - Adult	-1.03%	-1.43%	-1.84%
MNWH - Spawning	-3.98%	-5.42%	-6.89%
WALL - Adult	3.11%	4.03%	4.92%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-4.72%	-5.81%	-6.60%
MNWH - Juvenile	-3.47%	-4.37%	-4.99%
BNTR - Adult	-1.14%	-1.44%	-1.60%
MNWH - Spawning	-5.80%	-7.43%	-8.74%
WALL - Adult	5.93%	8.00%	10.11%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-4.56%	-6.52%	-8.69%
MNWH - Juvenile	-3.23%	-4.61%	-6.22%
BNTR - Adult	-2.57%	-3.59%	-4.73%
MNWH - Spawning	-4.57%	-6.54%	-8.79%
WALL - Adult	0.43%	0.19%	-0.20%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-4.59%	-6.16%	-7.71%
MNWH - Juvenile	-3.31%	-4.47%	-5.61%
BNTR - Adult	-1.88%	-2.56%	-3.24%
MNWH - Spawning	-5.06%	-6.87%	-8.69%
WALL - Adult	2.83%	3.60%	4.30%

ESP1 - WEEKS (14-26) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-0.64%	-1.07%	-1.59%
MNWH - Juvenile	0.02%	-0.13%	-0.34%
BNTR - Adult	2.48%	3.14%	3.71%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	8.47%	11.40%	14.39%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-1.02%	-1.80%	-2.66%
MNWH - Juvenile	-0.33%	-0.69%	-1.08%
BNTR - Adult	5.15%	6.47%	7.61%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	16.28%	22.00%	27.92%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-1.52%	-2.22%	-3.08%
MNWH - Juvenile	-0.81%	-1.26%	-1.83%
BNTR - Adult	-0.57%	-0.86%	-1.25%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	5.31%	7.02%	8.61%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-1.28%	-2.01%	-2.85%
MNWH - Juvenile	-0.58%	-0.98%	-1.46%
BNTR - Adult	1.97%	2.40%	2.69%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	9.37%	12.58%	15.79%

BSP2 - WEEKS (27-37) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-1.85%	-2.55%	-3.29%
MNWH - Juvenile	-0.87%	-1.22%	-1.60%
BNTR - Adult	0.79%	0.95%	1.06%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	7.11%	9.42%	11.70%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-2.82%	-3.48%	-4.00%
MNWH - Juvenile	-1.48%	-1.90%	-2.19%
BNTR - Adult	1.55%	1.99%	2.39%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	12.23%	16.54%	20.87%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-2.59%	-3.88%	-5.37%
MNWH - Juvenile	-1.62%	-2.38%	-3.32%
BNTR - Adult	-1.36%	-1.98%	-2.70%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	4.06%	5.02%	5.84%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-2.66%	-3.65%	-4.68%
MNWH - Juvenile	-1.54%	-2.12%	-2.74%
BNTR - Adult	0.02%	-0.09%	-0.28%
MNWH - Spawning	0.00%	0.00%	0.00%
WALL - Adult	7.44%	9.79%	12.06%

BSP3 - WEEKS (38-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-6.13%	-8.13%	-10.05%
MNWH - Juvenile	-4.80%	-6.39%	-7.95%
BNTR - Adult	-2.79%	-3.73%	-4.64%
MNWH - Spawning	-10.25%	-13.59%	-16.80%
WALL - Adult	-0.79%	-1.18%	-1.61%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-6.06%	-7.32%	-8.02%
MNWH - Juvenile	-5.20%	-6.32%	-6.95%
BNTR - Adult	-2.57%	-3.15%	-3.44%
MNWH - Spawning	-11.97%	-14.42%	-15.77%
WALL - Adult	-0.29%	-0.10%	0.24%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-8.33%	-11.48%	-14.82%
MNWH - Juvenile	-6.24%	-8.76%	-11.54%
BNTR - Adult	-4.23%	-5.86%	-7.63%
MNWH - Spawning	-12.66%	-17.53%	-22.72%
WALL - Adult	-2.88%	-4.32%	-5.88%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-7.33%	-9.66%	-11.86%
MNWH - Juvenile	-5.75%	-7.63%	-9.44%
BNTR - Adult	-3.45%	-4.58%	-5.66%
MNWH - Spawning	-12.32%	-16.26%	-19.99%
WALL - Adult	-1.65%	-2.34%	-3.03%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	15%	20%	25%
MNWH - Adult	-7.50%	-9.92%	-12.19%
MNWH - Juvenile	-6.41%	-8.51%	-10.48%
BNTR - Adult	-3.63%	-4.81%	-5.94%
MNWH - Spawning	-13.98%	-18.47%	-22.67%
WALL - Adult	-3.95%	-5.33%	-6.64%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-10.95%	-14.66%	-18.51%
MNWH - Juvenile	-10.43%	-13.89%	-17.40%
BNTR - Adult	-5.64%	-7.45%	-9.36%
MNWH - Spawning	-23.80%	-30.57%	-36.82%
WALL - Adult	-10.63%	-14.09%	-17.61%

South Saskatchewan River Basin Instream Flow Needs Determination

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-5.34%	-7.12%	-9.11%
MNWH - Juvenile	-3.91%	-5.25%	-6.74%
BNTR - Adult	-2.89%	-3.86%	-4.88%
MNWH - Spawning	-19.63%	-24.53%	-29.99%
WALL - Adult	-0.02%	-0.42%	-0.76%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-7.50%	-10.06%	-12.31%
MNWH - Juvenile	-6.70%	-9.10%	-11.24%
BNTR - Adult	-2.96%	-3.62%	-4.04%
MNWH - Spawning	-14.73%	-17.79%	-19.15%
WALL - Adult	-4.62%	-5.69%	-6.25%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-10.23%	-13.86%	-17.57%
MNWH - Juvenile	-8.60%	-11.81%	-15.20%
BNTR - Adult	-5.09%	-6.89%	-8.83%
MNWH - Spawning	-17.60%	-23.83%	-30.19%
WALL - Adult	-4.67%	-6.90%	-9.44%

Red Deer River (RD7) IFN = 25% reduction from Natural with :

Stripped Weeks (14-19, 30-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-2.74%	-3.39%	-4.00%
MNWH - Juvenile	-4.48%	-5.49%	-6.42%
BNTR - Adult	-2.02%	-2.47%	-2.88%
WALL - Adult	-0.89%	-1.01%	-1.11%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-2.54%	-2.75%	-2.88%
MNWH - Juvenile	-3.08%	-3.27%	-3.37%
BNTR - Adult	-0.94%	-1.00%	-1.02%
WALL - Adult	2.61%	3.67%	4.78%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-3.29%	-4.40%	-5.49%
MNWH - Juvenile	-6.30%	-8.02%	-9.62%
BNTR - Adult	-2.33%	-3.00%	-3.63%
WALL - Adult	-2.71%	-3.50%	-4.27%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-2.91%	-3.58%	-4.20%
MNWH - Juvenile	-4.78%	-5.79%	-6.69%
BNTR - Adult	-1.65%	-2.03%	-2.36%
WALL - Adult	-0.31%	-0.27%	-0.18%

BSP1 - WEEKS (14-37) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-2.51%	-3.15%	-3.78%
MNWH - Juvenile	-4.06%	-5.06%	-5.99%
BNTR - Adult	-3.78%	-4.67%	-5.51%
WALL - Adult	-5.26%	-6.54%	-7.80%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-1.58%	-1.80%	-1.94%
MNWH - Juvenile	-3.14%	-3.50%	-3.72%
BNTR - Adult	-1.74%	-2.00%	-2.15%
WALL - Adult	-3.22%	-3.57%	-3.61%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-3.08%	-3.94%	-4.77%
MNWH - Juvenile	-5.37%	-6.89%	-8.39%
BNTR - Adult	-5.00%	-6.20%	-7.34%
WALL - Adult	-5.99%	-7.81%	-9.79%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-2.35%	-2.90%	-3.39%
MNWH - Juvenile	-4.31%	-5.28%	-6.19%
BNTR - Adult	-3.47%	-4.22%	-4.88%
WALL - Adult	-4.75%	-5.91%	-7.01%

BSP2 - WEEKS (38-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-3.79%	-4.63%	-5.35%
MNWH - Juvenile	-4.64%	-5.61%	-6.47%
BNTR - Adult	-1.66%	-2.04%	-2.36%
MNWH - Spawning	-4.47%	-5.43%	-6.27%
WALL - Adult	2.91%	3.55%	4.14%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-3.46%	-3.52%	-3.52%
MNWH - Juvenile	-2.80%	-2.84%	-2.84%
BNTR - Adult	-1.29%	-1.30%	-1.28%
MNWH - Spawning	-3.45%	-3.51%	-3.51%
WALL - Adult	6.37%	8.17%	9.77%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-5.27%	-7.01%	-8.50%
MNWH - Juvenile	-6.69%	-8.42%	-9.87%
BNTR - Adult	-2.00%	-2.81%	-3.49%
MNWH - Spawning	-6.23%	-8.08%	-9.66%
WALL - Adult	1.79%	1.78%	1.75%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-4.37%	-5.31%	-6.10%
MNWH - Juvenile	-4.84%	-5.78%	-6.56%
BNTR - Adult	-1.63%	-2.05%	-2.40%
MNWH - Spawning	-4.88%	-5.89%	-6.74%
WALL - Adult	3.89%	4.73%	5.48%

South Saskatchewan River Basin Instream Flow Needs Determination

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	20%	25%	30%
MNWH - Adult	-6.19%	-7.82%	-9.37%
MNWH - Juvenile	-6.29%	-7.91%	-9.47%
BNTR - Adult	-6.88%	-8.49%	-10.14%
MNWH - Spawning	-5.97%	-7.26%	-8.40%
WALL - Adult	-10.49%	-12.82%	-15.12%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-14.08%	-17.47%	-20.27%
MNWH - Juvenile	-11.91%	-14.29%	-16.21%
BNTR - Adult	-16.37%	-20.09%	-23.96%
MNWH - Spawning	-10.94%	-13.69%	-16.02%
WALL - Adult	-22.84%	-27.45%	-32.06%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-5.36%	-7.01%	-8.28%
MNWH - Juvenile	-6.08%	-7.74%	-9.19%
BNTR - Adult	-7.04%	-8.51%	-10.06%
MNWH - Spawning	-7.80%	-9.44%	-11.64%
WALL - Adult	-11.09%	-13.30%	-15.12%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-7.91%	-9.36%	-10.20%
MNWH - Juvenile	-6.62%	-7.93%	-8.70%
BNTR - Adult	-5.31%	-6.25%	-6.79%
MNWH - Spawning	-5.45%	-5.60%	-5.60%
WALL - Adult	-12.04%	-14.16%	-15.55%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-9.19%	-11.65%	-13.67%
MNWH - Juvenile	-6.83%	-8.83%	-11.16%
BNTR - Adult	-10.17%	-12.26%	-14.33%
MNWH - Spawning	-8.87%	-11.31%	-13.37%
WALL - Adult	-12.57%	-15.92%	-19.33%

BOW RIVER

No Data for BW1 - use Tessmann

Bow River (BW2) IFN = 25% reduction from Natural with EBF

Stripped Weeks (14-15, 37-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	7.90%	9.89%	11.73%
MNWH - Juvenile	5.93%	7.27%	8.44%
BNTR - Adult	4.33%	5.85%	7.40%
BNTR - Juvenile	8.72%	11.13%	13.38%
RNTR - Adult	4.97%	6.55%	8.10%
BNTR - Fry	-5.29%	-6.20%	-6.81%
MNWH - Fry	4.73%	6.69%	8.81%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	10.77%	14.10%	17.67%
MNWH - Juvenile	8.43%	10.81%	13.15%
BNTR - Adult	5.94%	8.36%	11.21%
BNTR - Juvenile	10.69%	14.61%	19.00%
RNTR - Adult	6.82%	9.38%	12.32%
BNTR - Fry	-4.68%	-4.46%	-3.58%
MNWH - Fry	5.27%	8.16%	11.89%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	7.90%	9.30%	10.07%
MNWH - Juvenile	5.52%	6.27%	6.55%
BNTR - Adult	6.09%	7.82%	9.16%
BNTR - Juvenile	10.35%	12.44%	13.68%
RNTR - Adult	6.45%	8.03%	9.13%
BNTR - Fry	-7.39%	-9.21%	-10.82%
MNWH - Fry	6.94%	9.33%	11.46%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	9.19%	11.47%	13.53%
MNWH - Juvenile	6.88%	8.39%	9.63%
BNTR - Adult	5.98%	8.02%	10.04%
BNTR - Juvenile	10.47%	13.37%	16.02%
RNTR - Adult	6.59%	8.61%	10.55%
BNTR - Fry	-6.16%	-7.08%	-7.59%
MNWH - Fry	6.15%	8.75%	11.56%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	4.18%	5.20%	6.24%
MNWH - Juvenile	4.62%	5.74%	6.84%
BNTR - Adult	1.84%	2.28%	2.73%
BNTR - Juvenile	6.47%	8.10%	9.71%
RNTR - Adult	1.39%	1.69%	1.98%
RNTR - Spawning	18.66%	23.66%	28.74%
BNTR - Fry	5.35%	6.97%	8.55%
MNWH - Fry	4.77%	6.10%	7.45%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	5.29%	6.84%	8.56%
MNWH - Juvenile	6.92%	8.62%	10.29%
BNTR - Adult	1.45%	2.07%	2.93%
BNTR - Juvenile	8.52%	11.08%	13.84%
RNTR - Adult	1.33%	1.77%	2.49%
RNTR - Spawning	24.49%	32.91%	42.66%
BNTR - Fry	6.32%	8.76%	11.35%
MNWH - Fry	3.17%	4.58%	6.48%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	4.20%	5.01%	5.68%
MNWH - Juvenile	3.42%	4.18%	4.91%
BNTR - Adult	2.97%	3.43%	3.72%
BNTR - Juvenile	6.58%	7.87%	8.89%
RNTR - Adult	2.04%	2.32%	2.36%
RNTR - Spawning	20.89%	25.55%	29.50%
BNTR - Fry	5.88%	7.36%	8.59%
MNWH - Fry	7.37%	9.13%	10.57%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	4.70%	5.85%	7.01%
MNWH - Juvenile	5.06%	6.26%	7.43%
BNTR - Adult	2.26%	2.79%	3.33%
BNTR - Juvenile	7.43%	9.28%	11.07%
RNTR - Adult	1.70%	2.05%	2.39%
RNTR - Spawning	22.20%	28.24%	34.35%
BNTR - Fry	6.05%	7.92%	9.72%
MNWH - Fry	5.47%	7.06%	8.69%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	0.01%	0.11%	0.13%
MNWH - Juvenile	4.32%	5.45%	6.48%
BNTR - Adult	-5.17%	-6.45%	-7.71%
BNTR - Juvenile	0.43%	0.54%	0.57%
RNTR - Adult	-5.20%	-6.46%	-7.72%
BNTR - Fry	6.58%	7.98%	9.58%
MNWH - Fry	-3.80%	-4.80%	-5.72%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-0.58%	-0.14%	0.48%
MNWH - Juvenile	4.47%	5.99%	7.65%
BNTR - Adult	-6.04%	-7.09%	-7.80%
BNTR - Juvenile	0.95%	1.41%	2.05%
RNTR - Adult	-6.02%	-7.06%	-7.82%
BNTR - Fry	7.96%	10.57%	13.82%
MNWH - Fry	-4.80%	-5.60%	-5.98%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	0.49%	0.25%	-0.31%
MNWH - Juvenile	4.76%	5.71%	6.27%
BNTR - Adult	-6.04%	-7.82%	-9.82%
BNTR - Juvenile	-0.51%	-0.89%	-1.57%
RNTR - Adult	-6.01%	-7.72%	-9.66%
BNTR - Fry	5.64%	6.00%	6.24%
MNWH - Fry	-4.51%	-6.10%	-7.85%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	-0.03%	0.05%	0.06%
MNWH - Juvenile	4.61%	5.83%	6.91%
BNTR - Adult	-6.04%	-7.48%	-8.87%
BNTR - Juvenile	0.18%	0.19%	0.14%
RNTR - Adult	-6.02%	-7.42%	-8.81%
BNTR - Fry	6.68%	8.03%	9.58%
MNWH - Fry	-4.64%	-5.84%	-6.94%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	8.75%	10.91%	12.95%
MNWH - Juvenile	6.59%	8.04%	9.32%
BNTR - Adult	5.33%	7.16%	9.00%
BNTR - Juvenile	10.39%	13.19%	15.82%
RNTR - Adult	6.24%	8.14%	10.00%
BNTR - Spawning	21.41%	27.40%	33.18%
MNWH - Spawning	7.56%	9.10%	10.43%
BNTR - Fry	-6.34%	-7.34%	-8.10%
MNWH - Fry	5.58%	7.92%	10.40%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	11.61%	15.11%	18.81%
MNWH - Juvenile	9.77%	12.43%	14.99%
BNTR - Adult	6.04%	8.61%	11.83%
BNTR - Juvenile	11.54%	15.93%	20.90%
RNTR - Adult	7.16%	10.06%	13.37%
BNTR - Spawning	21.86%	31.00%	42.00%
MNWH - Spawning	12.00%	14.83%	17.39%
BNTR - Fry	-3.57%	-3.18%	-2.38%
MNWH - Fry	6.18%	9.32%	13.36%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	8.94%	10.48%	11.44%
MNWH - Juvenile	5.90%	6.59%	6.89%
BNTR - Adult	8.41%	10.63%	12.19%
BNTR - Juvenile	13.22%	15.77%	17.35%
RNTR - Adult	8.86%	10.78%	12.11%
BNTR - Spawning	29.33%	35.63%	39.98%
MNWH - Spawning	5.07%	5.56%	5.72%
BNTR - Fry	-10.19%	-11.97%	-13.45%
MNWH - Fry	8.66%	11.74%	14.39%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%	30%
MNWH - Adult	10.15%	12.58%	14.80%
MNWH - Juvenile	7.69%	9.30%	10.66%
BNTR - Adult	7.26%	9.64%	11.96%
BNTR - Juvenile	12.42%	15.79%	18.90%
RNTR - Adult	8.04%	10.40%	12.65%
BNTR - Spawning	26.05%	33.52%	40.67%
MNWH - Spawning	8.26%	9.83%	11.09%
BNTR - Fry	-7.22%	-8.06%	-8.54%
MNWH - Fry	7.47%	10.56%	13.82%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	20%	25%	30%
MNWH - Adult	-6.37%	-8.00%	-9.49%
MNWH - Juvenile	1.14%	1.29%	1.40%
BNTR - Adult	-12.52%	-15.58%	-18.31%
BNTR - Juvenile	-5.74%	-7.30%	-8.72%
RNTR - Adult	-11.93%	-14.68%	-17.13%
BNTR - Spawning	12.77%	16.06%	19.13%
MNWH - Spawning	3.51%	3.95%	4.15%
RNTR - Spawning	1.71%	1.94%	2.47%
BNTR - Fry	-11.19%	-13.75%	-15.77%
MNWH - Fry	-10.28%	-12.50%	-14.80%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-14.48%	-17.30%	-20.02%
MNWH - Juvenile	-4.04%	-4.28%	-4.44%
BNTR - Adult	-19.38%	-23.92%	-28.52%
BNTR - Juvenile	-11.57%	-13.98%	-16.60%
RNTR - Adult	-19.11%	-23.48%	-27.69%
BNTR - Spawning	-9.22%	-9.57%	-9.10%
MNWH - Spawning	-3.60%	-3.77%	-4.06%
RNTR - Spawning	-14.21%	-17.60%	-21.04%
BNTR - Fry	-20.94%	-26.30%	-31.91%
MNWH - Fry	-17.55%	-21.87%	-25.31%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	0.00%	-0.14%	-0.24%
MNWH - Juvenile	1.26%	1.43%	1.80%
BNTR - Adult	-6.33%	-7.60%	-8.42%
BNTR - Juvenile	0.53%	1.12%	1.71%
RNTR - Adult	-5.81%	-6.90%	-7.48%
BNTR - Spawning	4.14%	5.63%	7.33%
MNWH - Spawning	2.65%	2.96%	3.14%
RNTR - Spawning	4.38%	6.04%	8.18%
BNTR - Fry	-2.72%	-2.52%	-2.46%
MNWH - Fry	-6.13%	-7.57%	-8.55%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-10.22%	-11.81%	-12.68%
MNWH - Juvenile	0.36%	0.61%	1.23%
BNTR - Adult	-17.11%	-19.91%	-21.76%
BNTR - Juvenile	-8.82%	-9.92%	-10.79%
RNTR - Adult	-16.21%	-18.53%	-20.36%
BNTR - Spawning	8.41%	13.31%	19.98%
MNWH - Spawning	5.57%	6.18%	6.42%
RNTR - Spawning	-1.85%	-1.96%	-1.21%
BNTR - Fry	-14.83%	-16.85%	-17.50%
MNWH - Fry	-14.86%	-17.83%	-19.66%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%	30%
MNWH - Adult	-8.16%	-10.61%	-12.78%
MNWH - Juvenile	-0.63%	-0.80%	-1.02%
BNTR - Adult	-17.10%	-21.51%	-25.29%
BNTR - Juvenile	-7.97%	-10.07%	-12.15%
RNTR - Adult	-16.67%	-20.49%	-24.55%
BNTR - Spawning	21.73%	25.18%	26.76%
MNWH - Spawning	0.81%	0.69%	0.39%
RNTR - Spawning	0.76%	0.16%	-0.72%
BNTR - Fry	-16.18%	-20.03%	-23.26%
MNWH - Fry	-14.11%	-17.57%	-20.60%

Bow River (BW3) IFN = Ecosystem Base Flow (EBF)

Stripped Weeks (14-19, 37-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-0.52%	-0.81%	-1.30%
MNWH - Juvenile	-2.99%	-3.45%	-4.02%
BNTR - Adult	7.45%	8.00%	8.30%
BNTR - Juvenile	2.81%	2.93%	2.88%
RNTR - Adult	5.70%	6.07%	6.20%
BNTR & RNTR - Fry	12.10%	13.23%	14.28%
MNWH - Fry	12.70%	13.78%	14.56%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	2.83%	2.89%	2.89%
MNWH - Juvenile	-0.71%	-0.71%	-0.71%
BNTR - Adult	11.47%	12.19%	12.39%
BNTR - Juvenile	4.68%	4.87%	4.89%
RNTR - Adult	9.05%	9.55%	9.67%
BNTR & RNTR - Fry	18.83%	20.45%	21.49%
MNWH - Fry	19.70%	21.07%	21.63%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-6.12%	-6.61%	-6.87%
MNWH - Juvenile	-7.09%	-7.65%	-7.96%
BNTR - Adult	0.83%	0.74%	0.72%
BNTR - Juvenile	-1.17%	-1.30%	-1.35%
RNTR - Adult	-0.30%	-0.42%	-0.47%
BNTR & RNTR - Fry	6.40%	6.41%	6.41%
MNWH - Fry	3.94%	3.90%	3.90%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-1.85%	-2.08%	-2.22%
MNWH - Juvenile	-4.01%	-4.31%	-4.47%
BNTR - Adult	5.88%	6.18%	6.26%
BNTR - Juvenile	1.68%	1.70%	1.69%
RNTR - Adult	4.17%	4.35%	4.38%
BNTR & RNTR - Fry	12.19%	12.97%	13.46%
MNWH - Fry	11.23%	11.85%	12.11%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	13.02%	15.17%	17.19%
MNWH - Juvenile	9.80%	11.12%	12.12%
BNTR - Adult	17.29%	20.37%	23.58%
BNTR - Juvenile	13.13%	15.25%	17.31%
RNTR - Adult	16.58%	19.51%	22.51%
BNTR & RNTR - Fry	21.47%	24.49%	27.81%
MNWH - Fry	19.80%	23.39%	27.28%
RNTR - Spawning	14.86%	17.94%	21.09%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	23.17%	28.63%	32.39%
MNWH - Juvenile	18.83%	22.66%	24.48%
BNTR - Adult	24.45%	30.60%	35.16%
BNTR - Juvenile	19.29%	23.56%	26.40%
RNTR - Adult	23.99%	30.02%	34.35%
BNTR & RNTR - Fry	33.30%	39.37%	43.57%
MNWH - Fry	27.18%	34.21%	39.71%
RNTR - Spawning	26.48%	34.85%	41.19%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	6.10%	5.62%	5.20%
MNWH - Juvenile	3.03%	2.26%	1.78%
BNTR - Adult	11.94%	12.26%	12.22%
BNTR - Juvenile	8.49%	8.52%	8.44%
RNTR - Adult	11.30%	11.50%	11.42%
BNTR & RNTR - Fry	14.29%	14.47%	14.47%
MNWH - Fry	13.96%	14.42%	14.41%
RNTR - Spawning	7.53%	7.07%	6.72%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	13.62%	15.78%	17.23%
MNWH - Juvenile	10.11%	11.42%	11.99%
BNTR - Adult	17.59%	20.56%	22.63%
BNTR - Juvenile	13.45%	15.45%	16.73%
RNTR - Adult	17.02%	19.87%	21.82%
BNTR & RNTR - Fry	22.68%	25.49%	27.38%
MNWH - Fry	19.89%	23.31%	25.82%
RNTR - Spawning	15.65%	18.98%	21.54%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	28.71%	31.94%	34.52%
MNWH - Juvenile	19.50%	21.66%	23.39%
BNTR - Adult	33.72%	37.14%	39.97%
BNTR - Juvenile	23.95%	26.55%	28.67%
RNTR - Adult	32.91%	36.44%	39.36%
BNTR & RNTR - Fry	24.41%	26.93%	28.88%
MNWH - Fry	38.22%	41.94%	45.09%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	45.51%	51.14%	53.13%
MNWH - Juvenile	29.84%	33.59%	34.85%
BNTR - Adult	55.00%	60.57%	62.35%
BNTR - Juvenile	36.56%	40.89%	42.43%
RNTR - Adult	52.89%	58.90%	61.02%
BNTR & RNTR - Fry	37.12%	41.03%	42.21%
MNWH - Fry	63.06%	69.04%	70.88%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	18.04%	18.05%	18.05%
MNWH - Juvenile	11.06%	11.04%	11.04%
BNTR - Adult	22.62%	22.65%	22.65%
BNTR - Juvenile	15.59%	15.60%	15.60%
RNTR - Adult	22.05%	22.08%	22.08%
BNTR & RNTR - Fry	15.32%	15.35%	15.35%
MNWH - Fry	26.93%	26.95%	26.95%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	29.97%	32.46%	33.34%
MNWH - Juvenile	19.53%	21.23%	21.81%
BNTR - Adult	36.53%	38.97%	39.74%
BNTR - Juvenile	24.96%	26.94%	27.63%
RNTR - Adult	35.32%	37.96%	38.88%
BNTR & RNTR - Fry	25.08%	26.86%	27.40%
MNWH - Fry	42.29%	44.88%	45.68%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-2.14%	-2.37%	-2.47%
MNWH - Juvenile	-3.72%	-3.95%	-4.05%
BNTR - Adult	4.29%	4.34%	4.32%
BNTR - Juvenile	0.76%	0.71%	0.67%
RNTR - Adult	2.79%	2.78%	2.75%
BNTR & RNTR - Fry	9.39%	9.83%	10.04%
MNWH - Fry	9.13%	9.41%	9.46%
BNTR - Spawning	6.41%	6.59%	6.62%
MNWH - Spawning	-5.88%	-6.24%	-6.39%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-0.29%	-0.29%	-0.29%
MNWH - Juvenile	-1.57%	-1.57%	-1.57%
BNTR - Adult	5.80%	5.83%	5.84%
BNTR - Juvenile	1.29%	1.30%	1.30%
RNTR - Adult	3.82%	3.86%	3.86%
BNTR & RNTR - Fry	14.61%	14.69%	14.69%
MNWH - Fry	13.61%	13.66%	13.67%
BNTR - Spawning	9.30%	9.34%	9.34%
MNWH - Spawning	-2.62%	-2.62%	-2.62%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-5.42%	-5.42%	-5.42%
MNWH - Juvenile	-6.28%	-6.29%	-6.29%
BNTR - Adult	-0.76%	-0.76%	-0.76%
BNTR - Juvenile	-1.53%	-1.53%	-1.53%
RNTR - Adult	-1.31%	-1.31%	-1.31%
BNTR & RNTR - Fry	4.40%	4.40%	4.40%
MNWH - Fry	0.98%	0.98%	0.98%
BNTR - Spawning	0.61%	0.61%	0.61%
MNWH - Spawning	-9.55%	-9.55%	-9.55%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	60%	EBF
MNWH - Adult	-2.92%	-2.92%	-2.92%
MNWH - Juvenile	-3.99%	-3.99%	-3.99%
BNTR - Adult	2.44%	2.46%	2.46%
BNTR - Juvenile	-0.13%	-0.13%	-0.13%
RNTR - Adult	1.21%	1.23%	1.23%
BNTR & RNTR - Fry	9.26%	9.30%	9.30%
MNWH - Fry	6.96%	6.99%	6.99%
BNTR - Spawning	4.80%	4.82%	4.83%
MNWH - Spawning	-6.22%	-6.22%	-6.22%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	50%	60%	EBF
MNWH - Adult	-7.60%	-8.47%	-9.95%
MNWH - Juvenile	-7.55%	-8.46%	-9.81%
BNTR - Adult	-0.34%	-0.44%	-0.48%
BNTR - Juvenile	-1.38%	-1.56%	-1.93%
RNTR - Adult	-1.20%	-1.32%	-1.37%
BNTR & RNTR - Fry	8.00%	8.22%	8.44%
MNWH - Fry	1.96%	1.92%	1.88%
BNTR - Spawning	0.99%	0.95%	0.91%
MNWH - Spawning	-8.82%	-9.22%	-9.37%
RNTR - Spawning	-11.05%	-12.33%	-14.45%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	50%	60%	EBF
MNWH - Adult	-18.32%	-21.11%	-21.11%
MNWH - Juvenile	-16.85%	-20.01%	-20.69%
BNTR - Adult	-6.08%	-6.08%	-6.08%
BNTR - Juvenile	-6.47%	-7.50%	-7.50%
RNTR - Adult	-7.23%	-7.34%	-7.34%
BNTR & RNTR - Fry	-2.01%	-2.01%	-2.01%
MNWH - Fry	-4.39%	-4.39%	-4.39%
BNTR - Spawning	-1.90%	-1.90%	-1.90%
MNWH - Spawning	-19.67%	-20.63%	-20.63%
RNTR - Spawning	-27.58%	-27.76%	-27.76%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	50%	60%	EBF
MNWH - Adult	0.17%	0.17%	0.17%
MNWH - Juvenile	-0.81%	-0.81%	-0.81%
BNTR - Adult	3.34%	3.34%	3.34%
BNTR - Juvenile	1.39%	1.39%	1.39%
RNTR - Adult	2.67%	2.67%	2.67%
BNTR & RNTR - Fry	4.19%	4.19%	4.19%
MNWH - Fry	4.72%	4.89%	4.89%
BNTR - Spawning	-0.48%	-0.48%	-0.48%
MNWH - Spawning	-12.82%	-12.99%	-12.99%
RNTR - Spawning	-1.77%	-3.02%	-3.02%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	50%	60%	EBF
MNWH - Adult	-3.76%	-3.76%	-3.76%
MNWH - Juvenile	-4.08%	-4.08%	-4.08%
BNTR - Adult	-0.03%	-0.03%	-0.03%
BNTR - Juvenile	-0.97%	-0.94%	-0.94%
RNTR - Adult	-0.40%	-0.40%	-0.40%
BNTR & RNTR - Fry	10.65%	10.65%	10.65%
MNWH - Fry	2.07%	2.07%	2.07%
BNTR - Spawning	2.64%	2.64%	2.64%
MNWH - Spawning	-3.80%	-3.80%	-3.80%
RNTR - Spawning	-4.90%	-4.78%	-4.78%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	50%	60%	EBF
MNWH - Adult	-14.24%	-15.43%	-15.62%
MNWH - Juvenile	-13.16%	-14.38%	-14.54%
BNTR - Adult	-3.88%	-4.15%	-4.16%
BNTR - Juvenile	-4.48%	-4.93%	-4.97%
RNTR - Adult	-4.82%	-5.14%	-5.16%
BNTR & RNTR - Fry	1.74%	1.74%	1.74%
MNWH - Fry	-2.49%	-2.65%	-2.65%
BNTR - Spawning	-1.53%	-1.53%	-1.53%
MNWH - Spawning	-13.06%	-13.06%	-13.06%
RNTR - Spawning	-20.88%	-22.78%	-23.01%

Bow River (BW4)

IFN = 55% reduction from Natural with EBF

Stripped Weeks (14-18, 43-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	-7.24%	-7.73%	-8.12%
MNWH - Juvenile	-6.91%	-7.29%	-7.59%
BNTR - Adult	0.48%	0.23%	-0.01%
BNTR - Juvenile	1.25%	1.13%	1.02%
RNTR - Adult	-4.00%	-4.41%	-4.75%
BNTR & RNTR - Fry	34.59%	36.51%	37.96%
MNWH - Fry	15.84%	16.28%	16.56%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	-7.04%	-7.04%	-7.04%
MNWH - Juvenile	-6.09%	-6.09%	-6.09%
BNTR - Adult	2.69%	2.69%	2.69%
BNTR - Juvenile	2.25%	2.25%	2.25%
RNTR - Adult	-2.86%	-2.86%	-2.86%
BNTR & RNTR - Fry	56.32%	59.48%	61.06%
MNWH - Fry	24.82%	25.13%	25.25%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	-10.79%	-11.49%	-11.85%
MNWH - Juvenile	-9.63%	-10.14%	-10.39%
BNTR - Adult	-5.01%	-5.50%	-5.76%
BNTR - Juvenile	-2.67%	-2.93%	-3.07%
RNTR - Adult	-8.57%	-9.19%	-9.47%
BNTR & RNTR - Fry	27.75%	27.75%	27.75%
MNWH - Fry	6.68%	6.66%	6.64%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	-8.95%	-9.31%	-9.50%
MNWH - Juvenile	-7.89%	-8.15%	-8.29%
BNTR - Adult	-1.29%	-1.55%	-1.69%
BNTR - Juvenile	-0.25%	-0.38%	-0.45%
RNTR - Adult	-5.79%	-6.11%	-6.26%
BNTR & RNTR - Fry	40.29%	41.71%	42.42%
MNWH - Fry	15.06%	15.20%	15.24%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	6.31%	7.01%	7.62%
MNWH - Juvenile	7.26%	7.97%	8.56%
BNTR - Adult	7.71%	8.34%	8.92%
BNTR - Juvenile	11.24%	12.19%	13.02%
RNTR - Adult	6.22%	6.88%	7.50%
BNTR & RNTR - Fry	29.47%	31.09%	32.44%
MNWH - Fry	16.33%	17.28%	18.09%
RNTR - Spawning	8.21%	8.88%	9.55%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	10.96%	13.11%	14.94%
MNWH - Juvenile	12.96%	14.93%	16.37%
BNTR - Adult	11.92%	13.64%	15.16%
BNTR - Juvenile	16.10%	18.28%	20.06%
RNTR - Adult	10.08%	12.12%	13.91%
BNTR & RNTR - Fry	52.05%	55.44%	57.65%
MNWH - Fry	24.12%	25.88%	27.31%
RNTR - Spawning	12.73%	14.68%	16.52%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	2.21%	1.75%	1.45%
MNWH - Juvenile	3.07%	2.73%	2.49%
BNTR - Adult	3.87%	3.56%	3.36%
BNTR - Juvenile	7.47%	7.34%	7.24%
RNTR - Adult	2.91%	2.53%	2.29%
BNTR & RNTR - Fry	19.01%	18.64%	18.32%
MNWH - Fry	9.87%	9.90%	9.88%
RNTR - Spawning	3.74%	3.35%	3.07%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	6.25%	7.00%	7.69%
MNWH - Juvenile	7.63%	8.37%	8.92%
BNTR - Adult	7.63%	8.27%	8.88%
BNTR - Juvenile	11.48%	12.43%	13.22%
RNTR - Adult	6.25%	7.00%	7.72%
BNTR & RNTR - Fry	32.99%	34.22%	34.98%
MNWH - Fry	16.42%	17.25%	17.91%
RNTR - Spawning	7.91%	8.60%	9.31%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	26.99%	28.11%	28.87%
MNWH - Juvenile	24.22%	25.37%	26.21%
BNTR - Adult	17.26%	17.87%	18.30%
BNTR - Juvenile	25.46%	26.54%	27.31%
RNTR - Adult	22.50%	23.42%	24.08%
BNTR & RNTR - Fry	12.82%	13.36%	13.79%
MNWH - Fry	11.97%	12.38%	12.70%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	42.03%	43.44%	44.13%
MNWH - Juvenile	36.89%	38.68%	39.67%
BNTR - Adult	25.82%	26.36%	26.54%
BNTR - Juvenile	38.66%	40.08%	40.82%
RNTR - Adult	33.87%	34.99%	35.55%
BNTR & RNTR - Fry	25.18%	25.97%	26.28%
MNWH - Fry	17.34%	17.80%	18.01%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	18.66%	18.66%	18.66%
MNWH - Juvenile	16.01%	16.01%	16.01%
BNTR - Adult	12.92%	12.92%	12.92%
BNTR - Juvenile	18.23%	18.23%	18.23%
RNTR - Adult	17.15%	17.15%	17.15%
BNTR & RNTR - Fry	1.89%	1.87%	1.87%
MNWH - Fry	7.99%	7.99%	7.99%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	29.19%	29.83%	30.14%
MNWH - Juvenile	25.44%	26.26%	26.72%
BNTR - Adult	18.99%	19.25%	19.33%
BNTR - Juvenile	27.52%	28.18%	28.52%
RNTR - Adult	24.87%	25.40%	25.67%
BNTR & RNTR - Fry	12.28%	12.63%	12.77%
MNWH - Fry	12.46%	12.68%	12.78%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	4.11%	4.06%	4.01%
MNWH - Juvenile	-0.17%	-0.27%	-0.33%
BNTR - Adult	16.47%	16.76%	16.92%
BNTR - Juvenile	12.20%	12.38%	12.48%
RNTR - Adult	10.96%	11.08%	11.14%
BNTR & RNTR - Fry	7.40%	8.00%	8.40%
MNWH - Fry	27.66%	28.38%	28.83%
BNTR - Spawning	13.64%	13.89%	14.04%
MNWH - Spawning	-4.86%	-5.08%	-5.22%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	6.68%	6.68%	6.68%
MNWH - Juvenile	0.81%	0.81%	0.81%
BNTR - Adult	25.54%	25.60%	25.60%
BNTR - Juvenile	18.49%	18.51%	18.51%
RNTR - Adult	16.92%	16.94%	16.94%
BNTR & RNTR - Fry	21.33%	21.78%	21.82%
MNWH - Fry	43.26%	43.53%	43.53%
BNTR - Spawning	20.94%	20.99%	20.99%
MNWH - Spawning	-3.81%	-3.81%	-3.81%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	-1.47%	-1.50%	-1.51%
MNWH - Juvenile	-2.70%	-2.74%	-2.74%
BNTR - Adult	7.46%	7.45%	7.45%
BNTR - Juvenile	4.79%	4.79%	4.79%
RNTR - Adult	3.41%	3.38%	3.38%
BNTR & RNTR - Fry	1.31%	1.31%	1.31%
MNWH - Fry	18.27%	18.27%	18.27%
BNTR - Spawning	6.80%	6.80%	6.80%
MNWH - Spawning	-7.73%	-7.79%	-7.79%

South Saskatchewan River Basin Instream Flow Needs Determination

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	50%	55%	60%
MNWH - Adult	2.48%	2.46%	2.46%
MNWH - Juvenile	-0.96%	-0.98%	-0.98%
BNTR - Adult	15.83%	15.85%	15.85%
BNTR - Juvenile	11.26%	11.26%	11.26%
RNTR - Adult	9.79%	9.78%	9.78%
BNTR & RNTR - Fry	10.34%	10.54%	10.56%
MNWH - Fry	29.57%	29.69%	29.69%
BNTR - Spawning	13.45%	13.48%	13.48%
MNWH - Spawning	-5.80%	-5.83%	-5.83%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	50%	55%	60%
MNWH - Adult	-13.69%	-14.63%	-15.38%
MNWH - Juvenile	-10.05%	-10.70%	-11.21%
BNTR - Adult	-7.94%	-8.66%	-9.25%
BNTR - Juvenile	-3.88%	-4.26%	-4.58%
RNTR - Adult	-11.26%	-12.10%	-12.77%
BNTR & RNTR - F	-23.26%	-23.83%	-24.04%
MNWH - Fry	3.55%	3.58%	3.62%
BNTR - Spawning	5.36%	5.34%	5.31%
MNWH - Spawning	-10.64%	-11.00%	-11.22%
RNTR - Spawning	-10.76%	-11.72%	-12.50%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	50%	55%	60%
MNWH - Adult	-21.49%	-22.47%	-23.30%
MNWH - Juvenile	-15.99%	-17.37%	-18.85%
BNTR - Adult	-15.54%	-15.54%	-15.54%
BNTR - Juvenile	-7.96%	-8.00%	-8.00%
RNTR - Adult	-19.65%	-20.25%	-20.25%
BNTR & RNTR - F	-35.13%	-35.13%	-35.13%
MNWH - Fry	-2.07%	-2.07%	-2.07%
BNTR - Spawning	-1.91%	-1.91%	-1.91%
MNWH - Spawning	-16.06%	-16.51%	-16.51%
RNTR - Spawning	-19.10%	-19.10%	-19.10%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	50%	55%	60%
MNWH - Adult	2.46%	2.46%	2.46%
MNWH - Juvenile	0.58%	0.58%	0.58%
BNTR - Adult	2.28%	2.28%	2.28%
BNTR - Juvenile	4.08%	4.38%	4.64%
RNTR - Adult	2.91%	3.04%	3.04%
BNTR & RNTR - F	3.74%	3.99%	4.14%
MNWH - Fry	3.29%	3.52%	3.86%
BNTR - Spawning	-0.14%	-0.14%	-0.14%
MNWH - Spawning	-8.49%	-8.49%	-8.49%
RNTR - Spawning	-3.95%	-3.95%	-3.95%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	50%	55%	60%
MNWH - Adult	-13.29%	-13.29%	-13.29%
MNWH - Juvenile	-9.15%	-9.15%	-9.15%
BNTR - Adult	-7.20%	-7.20%	-7.20%
BNTR - Juvenile	-3.62%	-3.62%	-3.62%
RNTR - Adult	-10.76%	-10.76%	-10.76%
BNTR & RNTR - F	-20.84%	-20.84%	-20.84%
MNWH - Fry	5.53%	5.56%	5.56%
BNTR - Spawning	7.94%	7.94%	7.94%
MNWH - Spawning	-9.20%	-9.20%	-9.20%
RNTR - Spawning	-10.30%	-10.30%	-10.30%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	50%	55%	60%
MNWH - Adult	-18.22%	-19.67%	-20.42%
MNWH - Juvenile	-13.79%	-14.75%	-15.28%
BNTR - Adult	-11.94%	-13.10%	-13.71%
BNTR - Juvenile	-6.40%	-7.01%	-7.35%
RNTR - Adult	-15.52%	-16.79%	-17.43%
BNTR & RNTR - F	-31.81%	-31.96%	-31.99%
MNWH - Fry	-0.69%	-0.76%	-0.87%
BNTR - Spawning	0.23%	0.19%	0.19%
MNWH - Spawning	-14.01%	-14.20%	-14.22%
RNTR - Spawning	-15.36%	-16.91%	-17.75%

OLDMAN RIVER

No Data for OM1 - use Tessmann

Oldman River (OM2) IFN = 40% reduction from natural with EBF

Stripped Weeks (14-15, 33-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-4.21%	-4.98%	-5.81%
MNWH - Juvenile	-3.08%	-3.65%	-4.28%
BNTR - Adult	4.12%	4.48%	4.77%
BNTR - Juvenile	5.91%	6.58%	7.17%
WALL - Adult	15.55%	17.58%	19.48%
WALL - Juvenile	16.11%	18.19%	20.13%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-5.44%	-5.62%	-5.74%
MNWH - Juvenile	-4.63%	-4.79%	-4.88%
BNTR - Adult	6.12%	6.46%	6.68%
BNTR - Juvenile	9.12%	9.94%	10.64%
WALL - Adult	31.52%	35.63%	39.29%
WALL - Juvenile	33.70%	38.00%	41.81%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-6.30%	-7.92%	-9.63%
MNWH - Juvenile	-4.46%	-5.73%	-7.08%
BNTR - Adult	-1.19%	-1.41%	-1.63%
BNTR - Juvenile	0.68%	0.70%	0.68%
WALL - Adult	5.08%	5.33%	5.45%
WALL - Juvenile	5.00%	5.20%	5.29%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-5.82%	-6.77%	-7.74%
MNWH - Juvenile	-4.48%	-5.21%	-5.97%
BNTR - Adult	2.33%	2.38%	2.37%
BNTR - Juvenile	4.70%	5.10%	5.42%
WALL - Adult	16.04%	17.90%	19.50%
WALL - Juvenile	16.78%	18.66%	20.30%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	16.67%	19.34%	22.12%
MNWH - Juvenile	16.15%	18.79%	21.52%
BNTR - Adult	19.95%	23.29%	26.74%
BNTR - Juvenile	19.36%	22.68%	26.17%
WALL - Adult	27.44%	32.42%	37.69%
WALL - Juvenile	26.89%	31.76%	36.92%
WALL - Spawning	21.66%	24.63%	27.58%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	20.70%	24.74%	29.63%
MNWH - Juvenile	20.25%	24.22%	28.75%
BNTR - Adult	29.51%	34.92%	40.85%
BNTR - Juvenile	27.85%	33.29%	39.34%
WALL - Adult	45.60%	55.59%	66.67%
WALL - Juvenile	44.88%	54.86%	66.03%
WALL - Spawning	29.33%	34.77%	41.44%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	16.32%	18.51%	20.26%
MNWH - Juvenile	15.38%	17.50%	19.35%
BNTR - Adult	16.79%	19.17%	21.36%
BNTR - Juvenile	16.86%	19.21%	21.41%
WALL - Adult	25.04%	28.52%	31.81%
WALL - Juvenile	24.89%	28.25%	31.35%
WALL - Spawning	21.62%	23.98%	25.45%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	18.13%	21.09%	24.15%
MNWH - Juvenile	17.44%	20.35%	23.34%
BNTR - Adult	22.05%	25.68%	29.41%
BNTR - Juvenile	21.44%	25.08%	28.88%
WALL - Adult	32.43%	38.27%	44.37%
WALL - Juvenile	32.08%	37.83%	43.85%
WALL - Spawning	24.29%	27.71%	31.01%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	8.41%	9.77%	11.14%
MNWH - Juvenile	8.63%	10.02%	11.40%
BNTR - Adult	13.04%	15.11%	17.23%
BNTR - Juvenile	13.63%	15.82%	18.02%
WALL - Adult	21.93%	25.40%	28.91%
WALL - Juvenile	22.03%	25.52%	29.03%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	10.33%	12.77%	15.50%
MNWH - Juvenile	10.45%	12.85%	15.51%
BNTR - Adult	16.46%	19.33%	22.35%
BNTR - Juvenile	17.19%	20.19%	23.42%
WALL - Adult	34.80%	40.68%	46.77%
WALL - Juvenile	35.51%	41.47%	47.59%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	7.47%	8.13%	8.60%
MNWH - Juvenile	7.82%	8.53%	9.04%
BNTR - Adult	10.89%	12.45%	13.96%
BNTR - Juvenile	11.89%	13.60%	15.15%
WALL - Adult	17.39%	19.70%	21.79%
WALL - Juvenile	17.36%	19.65%	21.72%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	8.75%	10.19%	11.64%
MNWH - Juvenile	9.01%	10.47%	11.93%
BNTR - Adult	13.38%	15.52%	17.69%
BNTR - Juvenile	14.26%	16.54%	18.83%
WALL - Adult	24.41%	28.16%	31.86%
WALL - Juvenile	24.67%	28.43%	32.13%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-5.24%	-6.03%	-6.87%
MNWH - Juvenile	-4.06%	-4.65%	-5.28%
BNTR - Adult	2.97%	3.25%	3.48%
BNTR - Juvenile	4.67%	5.23%	5.71%
WALL - Adult	12.98%	14.70%	16.30%
WALL - Juvenile	13.32%	15.04%	16.64%
BNTR - Spawning	1.15%	1.28%	1.27%
MNWH - Spawning	-9.63%	-11.03%	-12.43%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-5.97%	-6.02%	-6.00%
MNWH - Juvenile	-5.10%	-5.14%	-5.11%
BNTR - Adult	4.03%	4.21%	4.37%
BNTR - Juvenile	6.97%	7.52%	7.97%
WALL - Adult	26.28%	29.58%	32.51%
WALL - Juvenile	27.88%	31.18%	34.09%
BNTR - Spawning	2.77%	2.88%	2.96%
MNWH - Spawning	-10.88%	-11.02%	-11.00%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-7.85%	-9.50%	-11.22%
MNWH - Juvenile	-6.00%	-7.33%	-8.75%
BNTR - Adult	-1.85%	-2.06%	-2.29%
BNTR - Juvenile	-0.19%	-0.20%	-0.23%
WALL - Adult	3.07%	3.20%	3.21%
WALL - Juvenile	2.79%	2.88%	2.88%
BNTR - Spawning	-5.56%	-6.08%	-6.70%
MNWH - Spawning	-12.65%	-15.39%	-18.13%

South Saskatchewan River Basin Instream Flow Needs Determination

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-6.87%	-7.78%	-8.71%
MNWH - Juvenile	-5.47%	-6.20%	-6.95%
BNTR - Adult	1.01%	0.98%	0.94%
BNTR - Juvenile	3.27%	3.53%	3.73%
WALL - Adult	12.99%	14.47%	15.73%
WALL - Juvenile	13.44%	14.89%	16.13%
BNTR - Spawning	-1.63%	-1.86%	-2.16%
MNWH - Spawning	-11.72%	-13.32%	-14.86%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	35%	40%	45%
MNWH - Adult	-5.81%	-6.70%	-7.94%
MNWH - Juvenile	-4.59%	-5.22%	-6.26%
BNTR - Adult	2.04%	2.18%	2.33%
BNTR - Juvenile	3.71%	4.16%	4.54%
WALL - Adult	5.88%	8.25%	11.41%
WALL - Juvenile	3.27%	4.78%	6.83%
BNTR - Spawning	0.45%	0.57%	0.51%
MNWH - Spawning	-10.09%	-11.45%	-13.05%
WALL - Spawning	-7.85%	-10.23%	-12.74%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-18.04%	-19.08%	-20.75%
MNWH - Juvenile	-15.00%	-15.87%	-17.04%
BNTR - Adult	-4.67%	-4.92%	-5.41%
BNTR - Juvenile	-3.29%	-3.29%	-3.29%
WALL - Adult	-20.20%	-22.60%	-24.97%
WALL - Juvenile	-15.90%	-17.54%	-19.14%
BNTR - Spawning	-13.20%	-13.20%	-13.20%
MNWH - Spawning	-24.10%	-26.89%	-28.84%
WALL - Spawning	-37.66%	-40.49%	-45.21%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-3.97%	-4.57%	-5.21%
MNWH - Juvenile	-2.91%	-3.39%	-3.91%
BNTR - Adult	1.08%	1.05%	0.90%
BNTR - Juvenile	2.98%	3.05%	3.05%
WALL - Adult	4.52%	4.61%	4.61%
WALL - Juvenile	4.40%	4.50%	4.51%
BNTR - Spawning	-12.73%	-12.76%	-12.76%
MNWH - Spawning	-22.49%	-24.09%	-26.19%
WALL - Spawning	-15.90%	-18.91%	-20.74%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-7.53%	-7.61%	-7.50%
MNWH - Juvenile	-6.38%	-6.38%	-6.38%
BNTR - Adult	2.37%	2.46%	2.56%
BNTR - Juvenile	5.51%	5.89%	6.20%
WALL - Adult	0.92%	2.21%	4.43%
WALL - Juvenile	-0.14%	0.56%	1.68%
BNTR - Spawning	1.50%	1.54%	1.54%
MNWH - Spawning	-12.39%	-12.77%	-12.77%
WALL - Spawning	-11.80%	-14.95%	-18.60%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-9.46%	-11.38%	-12.94%
MNWH - Juvenile	-7.40%	-8.81%	-10.25%
BNTR - Adult	-2.31%	-2.83%	-2.98%
BNTR - Juvenile	-0.56%	-0.56%	-0.59%
WALL - Adult	1.27%	1.22%	1.27%
WALL - Juvenile	1.66%	1.65%	1.67%
BNTR - Spawning	-6.09%	-6.48%	-7.34%
MNWH - Spawning	-14.88%	-16.74%	-18.68%
WALL - Spawning	-9.01%	-11.98%	-15.75%

Oldman River (OM3)

Stripped Weeks (14-16, 29-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-4.20%	-5.61%	-7.00%	-8.38%	-9.74%	-11.09%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-3.26%	-4.35%	-5.43%	-6.48%	-7.52%	-8.55%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-3.79%	-4.67%	-5.31%	-5.71%	-5.97%	-6.09%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-2.86%	-3.55%	-4.06%	-4.36%	-4.54%	-4.61%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-5.28%	-7.31%	-9.46%	-11.75%	-14.06%	-16.43%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-3.84%	-5.34%	-6.94%	-8.67%	-10.46%	-12.26%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-4.60%	-6.11%	-7.59%	-9.04%	-10.44%	-11.83%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-3.37%	-4.49%	-5.58%	-6.66%	-7.70%	-8.72%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-1.94%	-2.68%	-3.46%	-4.31%	-5.26%	-6.33%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-1.88%	-2.59%	-3.35%	-4.19%	-5.15%	-6.19%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-1.91%	-2.51%	-3.07%	-3.62%	-4.15%	-4.64%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-1.61%	-2.16%	-2.78%	-3.40%	-4.03%	-4.65%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-2.40%	-3.39%	-4.50%	-5.75%	-7.20%	-8.88%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-2.30%	-3.20%	-4.13%	-5.24%	-6.53%	-7.97%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-2.16%	-2.96%	-3.81%	-4.73%	-5.75%	-6.87%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-1.97%	-2.70%	-3.49%	-4.37%	-5.33%	-6.39%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-2.74%	-3.70%	-4.68%	-5.67%	-6.65%	-7.63%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-2.20%	-3.01%	-3.85%	-4.69%	-5.54%	-6.40%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-2.35%	-2.90%	-3.37%	-3.71%	-3.98%	-4.17%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-2.04%	-2.62%	-3.21%	-3.67%	-4.07%	-4.40%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-3.69%	-5.17%	-6.75%	-8.42%	-10.10%	-11.84%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-2.63%	-3.74%	-4.90%	-6.18%	-7.52%	-8.94%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-3.06%	-4.11%	-5.18%	-6.24%	-7.28%	-8.32%
MNWH - Spawning	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BNTR - Adult	-2.34%	-3.20%	-4.08%	-4.98%	-5.88%	-6.79%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-5.20%	-6.91%	-8.50%	-10.03%	-11.50%	-12.92%
MNWH - Spawning	-5.61%	-7.46%	-9.18%	-10.83%	-12.43%	-13.97%
BNTR - Adult	-3.38%	-4.50%	-5.52%	-6.48%	-7.40%	-8.28%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-3.75%	-4.65%	-5.10%	-5.22%	-5.22%	-5.22%
MNWH - Spawning	-4.01%	-5.00%	-5.50%	-5.63%	-5.63%	-5.63%
BNTR - Adult	-3.07%	-3.82%	-4.20%	-4.30%	-4.31%	-4.31%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-6.93%	-9.43%	-11.99%	-14.64%	-17.23%	-19.66%
MNWH - Spawning	-7.54%	-10.22%	-12.96%	-15.79%	-18.54%	-21.13%
BNTR - Adult	-3.50%	-4.91%	-6.47%	-8.17%	-9.89%	-11.54%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-5.57%	-7.38%	-9.03%	-10.60%	-12.10%	-13.52%
MNWH - Spawning	-6.05%	-8.02%	-9.81%	-11.50%	-13.12%	-14.64%
BNTR - Adult	-3.28%	-4.38%	-5.39%	-6.35%	-7.30%	-8.20%

ALL WEEKS ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-2.78%	-3.75%	-4.75%	-5.75%	-6.78%	-7.85%
MNWH - Spawning	-2.89%	-3.90%	-4.92%	-5.97%	-7.02%	-8.11%
BNTR - Adult	-2.25%	-3.07%	-3.91%	-4.76%	-5.65%	-6.58%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-2.36%	-2.96%	-3.46%	-3.85%	-4.17%	-4.44%
MNWH - Spawning	-2.45%	-3.06%	-3.55%	-3.92%	-4.23%	-4.48%
BNTR - Adult	-2.03%	-2.62%	-3.20%	-3.66%	-4.09%	-4.47%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-3.67%	-5.12%	-6.67%	-8.32%	-10.04%	-11.85%
MNWH - Spawning	-3.86%	-5.36%	-6.98%	-8.71%	-10.50%	-12.36%
BNTR - Adult	-2.64%	-3.72%	-4.86%	-6.14%	-7.51%	-8.96%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-3.06%	-4.12%	-5.18%	-6.26%	-7.34%	-8.46%
MNWH - Spawning	-3.20%	-4.30%	-5.40%	-6.51%	-7.63%	-8.77%
BNTR - Adult	-2.34%	-3.19%	-4.06%	-4.96%	-5.88%	-6.84%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-5.57%	-7.40%	-9.02%	-10.81%	-12.51%	-14.44%
MNWH - Spawning	-6.05%	-8.05%	-9.83%	-11.55%	-13.25%	-14.80%
BNTR - Adult	-4.40%	-6.07%	-7.67%	-9.16%	-10.46%	-12.12%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-11.60%	-15.46%	-19.33%	-21.70%	-23.93%	-26.16%
MNWH - Spawning	-12.60%	-16.81%	-21.03%	-23.51%	-25.78%	-28.06%
BNTR - Adult	-12.09%	-15.51%	-18.61%	-21.47%	-23.78%	-26.55%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-5.11%	-6.78%	-8.51%	-10.49%	-12.60%	-14.68%
MNWH - Spawning	-5.29%	-7.09%	-8.85%	-10.78%	-12.85%	-14.97%
BNTR - Adult	-4.81%	-6.35%	-7.68%	-9.20%	-11.32%	-13.15%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-5.90%	-7.21%	-8.24%	-8.99%	-9.79%	-11.55%
MNWH - Spawning	-4.50%	-5.92%	-7.00%	-7.36%	-7.37%	-7.37%
BNTR - Adult	-5.28%	-6.88%	-8.51%	-9.77%	-10.50%	-10.50%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	85%	80%	75%	70%	65%	60%
MNWH - Adult	-8.00%	-10.84%	-13.81%	-16.75%	-19.34%	-22.30%
MNWH - Spawning	-8.21%	-11.03%	-13.85%	-16.72%	-19.35%	-22.00%
BNTR - Adult	-8.36%	-11.45%	-14.39%	-17.13%	-19.52%	-21.54%

Oldman River (OM4) IFN = 15% reduction from natural with EBF

Stripped Weeks (14-16, 29-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-2.99%	-4.53%	-6.10%
MNWH - Juvenile	-2.47%	-3.74%	-5.03%
BNTR - Adult	-0.77%	-1.19%	-1.63%
BNTR - Juvenile	-0.34%	-0.54%	-0.76%
WALL - Adult	1.59%	2.36%	3.10%
WALL - Juvenile	1.44%	2.12%	2.78%

50-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-3.64%	-5.18%	-6.49%
MNWH - Juvenile	-3.07%	-4.38%	-5.49%
BNTR - Adult	-0.71%	-1.07%	-1.39%
BNTR - Juvenile	-0.26%	-0.35%	-0.42%
WALL - Adult	2.76%	4.17%	5.60%
WALL - Juvenile	2.46%	3.65%	4.84%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-3.64%	-5.75%	-8.03%
MNWH - Juvenile	-2.93%	-4.66%	-6.56%
BNTR - Adult	-1.39%	-2.15%	-2.98%
BNTR - Juvenile	-0.87%	-1.38%	-1.96%
WALL - Adult	0.37%	0.43%	0.39%
WALL - Juvenile	0.17%	0.17%	0.07%

10-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-3.62%	-5.47%	-7.33%
MNWH - Juvenile	-2.98%	-4.50%	-6.04%
BNTR - Adult	-1.06%	-1.63%	-2.21%
BNTR - Juvenile	-0.57%	-0.88%	-1.20%
WALL - Adult	1.45%	2.12%	2.75%
WALL - Juvenile	1.23%	1.78%	2.28%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	2.22%	3.35%	4.45%
MNWH - Juvenile	1.99%	2.97%	3.92%
BNTR - Adult	2.38%	3.68%	5.04%
BNTR - Juvenile	2.58%	3.95%	5.37%
WALL - Adult	3.70%	5.84%	8.17%
WALL - Juvenile	3.59%	5.64%	7.83%
WALL - Spawning	3.31%	5.07%	6.86%

50-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	3.04%	4.77%	6.50%
MNWH - Juvenile	2.82%	4.35%	5.88%
BNTR - Adult	2.55%	4.05%	5.67%
BNTR - Juvenile	2.96%	4.55%	6.20%
WALL - Adult	5.40%	8.50%	11.94%
WALL - Juvenile	5.42%	8.49%	11.81%
WALL - Spawning	3.81%	6.41%	9.42%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	2.09%	3.01%	3.85%
MNWH - Juvenile	1.65%	2.35%	2.96%
BNTR - Adult	2.70%	4.12%	5.56%
BNTR - Juvenile	2.64%	4.05%	5.51%
WALL - Adult	3.35%	5.30%	7.48%
WALL - Juvenile	2.93%	4.64%	6.52%
WALL - Spawning	3.77%	5.54%	7.13%

10-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	2.49%	3.76%	4.97%
MNWH - Juvenile	2.16%	3.22%	4.23%
BNTR - Adult	2.62%	4.08%	5.59%
BNTR - Juvenile	2.78%	4.27%	5.82%
WALL - Adult	4.17%	6.59%	9.28%
WALL - Juvenile	3.95%	6.22%	8.69%
WALL - Spawning	3.83%	5.88%	7.96%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-0.47%	-0.69%	-0.89%
MNWH - Juvenile	-0.28%	-0.42%	-0.56%
BNTR - Adult	0.61%	0.96%	1.36%
BNTR - Juvenile	0.88%	1.35%	1.86%
WALL - Adult	2.02%	3.10%	4.25%
WALL - Juvenile	1.85%	2.83%	3.89%

50-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-0.12%	0.15%	0.71%
MNWH - Juvenile	0.06%	0.34%	0.86%
BNTR - Adult	0.77%	1.31%	2.02%
BNTR - Juvenile	1.05%	1.72%	2.52%
WALL - Adult	2.83%	4.36%	5.98%
WALL - Juvenile	2.42%	3.71%	5.15%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-0.98%	-1.69%	-2.54%
MNWH - Juvenile	-0.80%	-1.40%	-2.13%
BNTR - Adult	0.48%	0.70%	0.87%
BNTR - Juvenile	0.69%	1.00%	1.28%
WALL - Adult	1.45%	2.21%	3.02%
WALL - Juvenile	1.29%	1.99%	2.72%

10-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-0.63%	-0.92%	-1.17%
MNWH - Juvenile	-0.43%	-0.64%	-0.83%
BNTR - Adult	0.62%	0.98%	1.40%
BNTR - Juvenile	0.86%	1.34%	1.87%
WALL - Adult	2.05%	3.15%	4.32%
WALL - Juvenile	1.79%	2.76%	3.81%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-4.06%	-6.08%	-8.11%
MNWH - Juvenile	-3.37%	-5.05%	-6.72%
BNTR - Adult	-1.35%	-2.03%	-2.73%
BNTR - Juvenile	-0.95%	-1.44%	-1.94%
WALL - Adult	0.24%	0.30%	0.33%
WALL - Juvenile	0.26%	0.33%	0.37%
BNTR - Spawning	-0.99%	-1.52%	-2.09%
MNWH - Spawning	-6.97%	-10.45%	-13.91%

50-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-4.56%	-6.32%	-7.73%
MNWH - Juvenile	-3.94%	-5.47%	-6.69%
BNTR - Adult	-1.41%	-2.05%	-2.61%
BNTR - Juvenile	-1.06%	-1.48%	-1.83%
WALL - Adult	0.70%	1.04%	1.34%
WALL - Juvenile	0.32%	0.40%	0.37%
BNTR - Spawning	-1.35%	-1.96%	-2.47%
MNWH - Spawning	-9.65%	-13.34%	-16.25%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-5.24%	-8.18%	-11.37%
MNWH - Juvenile	-4.20%	-6.61%	-9.24%
BNTR - Adult	-1.89%	-2.91%	-4.00%
BNTR - Juvenile	-1.40%	-2.12%	-2.93%
WALL - Adult	-1.06%	-1.73%	-2.43%
WALL - Juvenile	-0.79%	-1.25%	-1.75%
BNTR - Spawning	-1.39%	-2.13%	-3.00%
MNWH - Spawning	-8.14%	-12.72%	-17.59%

10-10% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	10%	15%	20%
MNWH - Adult	-4.94%	-7.39%	-9.84%
MNWH - Juvenile	-4.06%	-6.08%	-8.10%
BNTR - Adult	-1.66%	-2.49%	-3.32%
BNTR - Juvenile	-1.23%	-1.80%	-2.38%
WALL - Adult	-0.22%	-0.40%	-0.62%
WALL - Juvenile	-0.25%	-0.44%	-0.70%
BNTR - Spawning	-1.36%	-2.02%	-2.71%
MNWH - Spawning	-8.59%	-12.84%	-17.02%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	10%	15%	20%
MNWH - Adult	-4.54%	-6.60%	-8.70%
MNWH - Juvenile	-3.68%	-5.41%	-7.16%
BNTR - Adult	-1.72%	-2.45%	-3.23%
BNTR - Juvenile	-1.21%	-1.78%	-2.37%
WALL - Adult	-0.78%	-0.74%	-0.41%
WALL - Juvenile	-0.90%	-0.85%	-0.57%
BNTR - Spawning	-1.15%	-1.61%	-2.32%
MNWH - Spawning	-7.22%	-10.59%	-14.27%
WALL - Spawning	-6.57%	-9.90%	-13.39%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	10%	15%	20%
MNWH - Adult	-9.57%	-11.74%	-14.19%
MNWH - Juvenile	-6.40%	-9.33%	-12.45%
BNTR - Adult	-5.53%	-6.33%	-7.14%
BNTR - Juvenile	-3.09%	-3.87%	-5.12%
WALL - Adult	-8.89%	-13.10%	-17.46%
WALL - Juvenile	-7.68%	-11.16%	-14.68%
BNTR - Spawning	-5.01%	-6.91%	-8.76%
MNWH - Spawning	-14.97%	-21.74%	-28.23%
WALL - Spawning	-22.66%	-29.63%	-37.68%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	10%	15%	20%
MNWH - Adult	-3.31%	-4.78%	-6.03%
MNWH - Juvenile	-2.39%	-3.56%	-4.63%
BNTR - Adult	-1.26%	-1.80%	-2.23%
BNTR - Juvenile	-0.75%	-1.16%	-1.58%
WALL - Adult	-0.68%	-1.17%	-1.70%
WALL - Juvenile	-0.59%	-0.93%	-1.22%
BNTR - Spawning	-3.48%	-5.38%	-7.41%
MNWH - Spawning	-13.76%	-20.21%	-26.87%
WALL - Spawning	-8.21%	-10.84%	-13.44%

South Saskatchewan River Basin Instream Flow Needs Determination

50-10% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	10%	15%	20%
MNWH - Adult	-4.88%	-7.07%	-9.07%
MNWH - Juvenile	-4.23%	-6.11%	-7.84%
BNTR - Adult	-1.87%	-2.67%	-3.33%
BNTR - Juvenile	-1.41%	-2.08%	-2.65%
WALL - Adult	-1.06%	-1.56%	-1.62%
WALL - Juvenile	-1.95%	-2.11%	-2.15%
BNTR - Spawning	-1.74%	-2.47%	-3.08%
MNWH - Spawning	-10.26%	-15.20%	-19.36%
WALL - Spawning	-12.98%	-19.43%	-25.64%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	10%	15%	20%
MNWH - Adult	-6.12%	-8.99%	-12.18%
MNWH - Juvenile	-4.76%	-7.14%	-9.61%
BNTR - Adult	-2.29%	-3.46%	-4.66%
BNTR - Juvenile	-1.71%	-2.60%	-3.63%
WALL - Adult	-1.63%	-2.47%	-3.44%
WALL - Juvenile	-1.97%	-2.28%	-2.64%
BNTR - Spawning	-1.67%	-2.56%	-3.49%
MNWH - Spawning	-8.56%	-13.28%	-18.11%
WALL - Spawning	-5.94%	-9.12%	-12.66%

Oldman River (OM5) IFN = 30% reduction from natural with EBF

Stripped Weeks (14-16, 29-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-6.00%	-7.24%	-8.51%
MNWH - Juvenile	-6.07%	-7.33%	-8.61%
BNTR - Adult	-3.72%	-4.44%	-5.15%
BNTR - Juvenile	-3.55%	-4.29%	-5.05%
RNTR - Adult	-4.50%	-5.40%	-6.30%
BNTR & RNTR - Fry	1.44%	1.77%	2.07%
MNWH - Fry	-1.26%	-1.51%	-1.75%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-5.37%	-5.65%	-5.86%
MNWH - Juvenile	-5.33%	-5.65%	-5.91%
BNTR - Adult	-3.68%	-3.90%	-4.04%
BNTR - Juvenile	-3.15%	-3.28%	-3.35%
RNTR - Adult	-4.41%	-4.69%	-4.90%
BNTR & RNTR - Fry	3.51%	4.33%	5.10%
MNWH - Fry	-0.75%	-0.59%	-0.43%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-8.55%	-10.85%	-13.17%
MNWH - Juvenile	-8.81%	-11.12%	-13.44%
BNTR - Adult	-4.92%	-6.28%	-7.64%
BNTR - Juvenile	-5.21%	-6.71%	-8.25%
RNTR - Adult	-6.12%	-7.80%	-9.48%
BNTR & RNTR - Fry	0.14%	0.17%	0.18%
MNWH - Fry	-2.22%	-2.88%	-3.54%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-7.08%	-8.50%	-9.91%
MNWH - Juvenile	-7.22%	-8.66%	-10.08%
BNTR - Adult	-4.30%	-5.12%	-5.92%
BNTR - Juvenile	-4.21%	-5.08%	-5.95%
RNTR - Adult	-5.29%	-6.32%	-7.33%
BNTR & RNTR - Fry	1.73%	2.13%	2.50%
MNWH - Fry	-1.49%	-1.76%	-2.03%

ESP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	3.63%	4.41%	5.20%
MNWH - Juvenile	4.52%	5.47%	6.44%
BNTR - Adult	-3.49%	-4.17%	-4.84%
BNTR - Juvenile	0.91%	1.08%	1.24%
RNTR - Adult	-2.57%	-3.05%	-3.51%
BNTR & RNTR - Fry	0.78%	0.75%	0.63%
MNWH - Fry	-1.38%	-1.70%	-2.05%
RNTR - Spawning	13.23%	16.20%	19.21%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	4.35%	5.56%	6.83%
MNWH - Juvenile	6.01%	7.57%	9.21%
BNTR - Adult	-2.78%	-3.14%	-3.44%
BNTR - Juvenile	0.45%	0.64%	0.86%
RNTR - Adult	-2.06%	-2.36%	-2.60%
BNTR & RNTR - Fry	2.44%	2.62%	2.65%
MNWH - Fry	-1.83%	-2.23%	-2.58%
RNTR - Spawning	19.48%	24.08%	29.06%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	3.58%	4.18%	4.77%
MNWH - Juvenile	4.06%	4.70%	5.31%
BNTR - Adult	-4.76%	-5.80%	-6.82%
BNTR - Juvenile	1.29%	1.43%	1.55%
RNTR - Adult	-3.43%	-4.11%	-4.77%
BNTR & RNTR - Fry	-0.41%	-0.80%	-1.30%
MNWH - Fry	-1.34%	-1.67%	-2.12%
RNTR - Spawning	11.52%	13.95%	16.25%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	3.95%	4.82%	5.72%
MNWH - Juvenile	4.93%	5.98%	7.04%
BNTR - Adult	-3.83%	-4.55%	-5.23%
BNTR - Juvenile	0.90%	1.07%	1.24%
RNTR - Adult	-2.78%	-3.28%	-3.74%
BNTR & RNTR - Fry	0.89%	0.75%	0.50%
MNWH - Fry	-1.57%	-1.94%	-2.33%
RNTR - Spawning	14.65%	17.95%	21.31%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-1.17%	-1.34%	-1.47%
MNWH - Juvenile	-0.76%	-0.85%	-0.89%
BNTR - Adult	-3.62%	-4.33%	-5.01%
BNTR - Juvenile	-1.41%	-1.69%	-1.92%
RNTR - Adult	-3.51%	-4.18%	-4.81%
BNTR & RNTR - Fry	1.33%	1.47%	1.54%
MNWH - Fry	-1.39%	-1.70%	-2.01%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	0.05%	0.67%	1.45%
MNWH - Juvenile	0.94%	1.74%	2.72%
BNTR - Adult	-2.82%	-3.04%	-3.19%
BNTR - Juvenile	-1.08%	-0.97%	-0.75%
RNTR - Adult	-2.84%	-3.02%	-3.13%
BNTR & RNTR - Fry	3.55%	4.09%	4.50%
MNWH - Fry	-1.47%	-1.56%	-1.55%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-2.75%	-3.58%	-4.39%
MNWH - Juvenile	-2.66%	-3.48%	-4.29%
BNTR - Adult	-5.26%	-6.51%	-7.72%
BNTR - Juvenile	-2.41%	-3.13%	-3.82%
RNTR - Adult	-5.06%	-6.27%	-7.38%
BNTR & RNTR - Fry	-0.44%	-0.69%	-0.98%
MNWH - Fry	-1.76%	-2.36%	-3.04%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-1.47%	-1.66%	-1.77%
MNWH - Juvenile	-1.05%	-1.15%	-1.19%
BNTR - Adult	-4.10%	-4.86%	-5.57%
BNTR - Juvenile	-1.76%	-2.09%	-2.35%
RNTR - Adult	-4.00%	-4.72%	-5.37%
BNTR & RNTR - Fry	1.42%	1.54%	1.57%
MNWH - Fry	-1.61%	-1.96%	-2.31%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-7.95%	-9.39%	-10.85%
MNWH - Juvenile	-7.86%	-9.31%	-10.77%
BNTR - Adult	-4.64%	-5.44%	-6.24%
BNTR - Juvenile	-4.99%	-5.91%	-6.83%
RNTR - Adult	-5.62%	-6.63%	-7.63%
BNTR & RNTR - Fry	0.30%	0.44%	0.51%
MNWH - Fry	-2.51%	-2.94%	-3.38%
BNTR - Spawning	-3.84%	-4.57%	-5.34%
MNWH - Spawning	-10.27%	-12.16%	-14.05%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-6.80%	-6.83%	-6.83%
MNWH - Juvenile	-6.43%	-6.45%	-6.45%
BNTR - Adult	-4.20%	-4.22%	-4.22%
BNTR - Juvenile	-4.40%	-4.42%	-4.42%
RNTR - Adult	-4.84%	-4.86%	-4.86%
BNTR & RNTR - Fry	2.67%	3.26%	3.79%
MNWH - Fry	-2.32%	-2.33%	-2.33%
BNTR - Spawning	-3.05%	-2.76%	-2.61%
MNWH - Spawning	-8.17%	-8.21%	-8.21%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-11.65%	-14.53%	-17.34%
MNWH - Juvenile	-11.84%	-14.72%	-17.53%
BNTR - Adult	-6.63%	-8.34%	-10.01%
BNTR - Juvenile	-7.27%	-9.23%	-11.19%
RNTR - Adult	-8.33%	-10.41%	-12.44%
BNTR & RNTR - Fry	-1.97%	-2.23%	-2.50%
MNWH - Fry	-3.76%	-4.71%	-5.62%
BNTR - Spawning	-6.94%	-8.70%	-10.37%
MNWH - Spawning	-15.34%	-18.90%	-22.32%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-9.49%	-11.17%	-12.81%
MNWH - Juvenile	-9.45%	-11.12%	-12.76%
BNTR - Adult	-5.45%	-6.39%	-7.30%
BNTR - Juvenile	-5.90%	-6.99%	-8.07%
RNTR - Adult	-6.69%	-7.86%	-8.99%
BNTR & RNTR - Fry	0.25%	0.40%	0.51%
MNWH - Fry	-3.04%	-3.54%	-4.02%
BNTR - Spawning	-5.08%	-5.93%	-6.80%
MNWH - Spawning	-12.35%	-14.50%	-16.56%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	25%	30%	35%
MNWH - Adult	-9.19%	-11.02%	-12.82%
MNWH - Juvenile	-9.09%	-10.86%	-12.58%
BNTR - Adult	-6.06%	-7.32%	-8.53%
BNTR - Juvenile	-5.91%	-7.12%	-8.35%
RNTR - Adult	-6.32%	-7.58%	-8.83%
BNTR & RNTR - Fry	-4.17%	-5.13%	-6.10%
MNWH - Fry	-3.84%	-4.71%	-5.60%
BNTR - Spawning	-4.73%	-5.51%	-6.38%
MNWH - Spawning	-10.78%	-12.65%	-14.56%
RNTR - Spawning	-1.85%	-2.57%	-3.45%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-17.02%	-19.98%	-23.13%
MNWH - Juvenile	-16.17%	-18.99%	-21.97%
BNTR - Adult	-11.64%	-13.99%	-16.16%
BNTR - Juvenile	-11.45%	-13.69%	-15.96%
RNTR - Adult	-12.44%	-14.46%	-16.60%
BNTR & RNTR - Fry	-11.77%	-13.76%	-15.73%
MNWH - Fry	-10.02%	-11.28%	-12.55%
BNTR - Spawning	-18.24%	-19.68%	-21.38%
MNWH - Spawning	-20.02%	-23.39%	-26.94%
RNTR - Spawning	-40.37%	-46.17%	-50.82%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-5.33%	-6.30%	-7.07%
MNWH - Juvenile	-5.16%	-6.09%	-7.34%
BNTR - Adult	-6.25%	-7.32%	-8.76%
BNTR - Juvenile	-4.27%	-4.73%	-4.90%
RNTR - Adult	-6.23%	-7.52%	-8.76%
BNTR & RNTR - Fry	-2.66%	-3.19%	-3.76%
MNWH - Fry	-4.08%	-4.57%	-5.26%
BNTR - Spawning	-14.86%	-16.50%	-18.30%
MNWH - Spawning	-17.89%	-22.14%	-25.26%
RNTR - Spawning	-3.60%	-4.70%	-5.19%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-8.68%	-8.75%	-8.98%
MNWH - Juvenile	-8.21%	-8.27%	-8.48%
BNTR - Adult	-5.38%	-5.45%	-6.00%
BNTR - Juvenile	-5.65%	-5.69%	-5.81%
RNTR - Adult	-6.20%	-6.25%	-6.42%
BNTR & RNTR - Fry	-4.13%	-4.97%	-5.88%
MNWH - Fry	-6.74%	-7.72%	-9.02%
BNTR - Spawning	-5.29%	-4.91%	-4.51%
MNWH - Spawning	-9.62%	-9.64%	-9.64%
RNTR - Spawning	-1.70%	-2.45%	-2.94%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-12.69%	-15.84%	-19.03%
MNWH - Juvenile	-13.06%	-16.09%	-19.09%
BNTR - Adult	-9.50%	-11.66%	-13.67%
BNTR - Juvenile	-8.60%	-10.91%	-13.24%
RNTR - Adult	-8.83%	-11.06%	-13.19%
BNTR & RNTR - Fry	-6.33%	-8.09%	-9.86%
MNWH - Fry	-5.61%	-6.55%	-7.50%
BNTR - Spawning	-7.45%	-9.44%	-11.57%
MNWH - Spawning	-16.19%	-19.67%	-23.13%
RNTR - Spawning	-2.87%	-3.89%	-5.36%

Oldman River (OM6) IFN = 20% reduction from natural with EBF

Stripped Weeks (14-16, 29-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-3.17%	-4.24%	-5.32%
MNWH - Juvenile	-2.95%	-3.96%	-4.97%
BNTR - Adult	-0.16%	-0.24%	-0.33%
BNTR - Juvenile	-0.29%	-0.42%	-0.58%
RNTR - Adult	-0.96%	-1.30%	-1.65%
BNTR & RNTR - Fry	5.59%	7.40%	9.21%
MNWH - Fry	2.04%	2.69%	3.32%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-4.13%	-4.86%	-5.33%
MNWH - Juvenile	-3.65%	-4.29%	-4.73%
BNTR - Adult	0.42%	0.68%	0.99%
BNTR - Juvenile	0.16%	0.31%	0.48%
RNTR - Adult	-0.74%	-0.78%	-0.75%
BNTR & RNTR - Fry	9.41%	12.71%	16.19%
MNWH - Fry	3.34%	4.39%	5.43%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-3.60%	-5.33%	-7.27%
MNWH - Juvenile	-3.57%	-5.22%	-7.04%
BNTR - Adult	-1.22%	-1.79%	-2.40%
BNTR - Juvenile	-1.54%	-2.21%	-2.93%
RNTR - Adult	-1.74%	-2.54%	-3.43%
BNTR & RNTR - Fry	3.43%	4.27%	4.93%
MNWH - Fry	0.32%	0.34%	0.29%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-3.79%	-5.05%	-6.31%
MNWH - Juvenile	-3.57%	-4.74%	-5.91%
BNTR - Adult	-0.43%	-0.59%	-0.77%
BNTR - Juvenile	-0.71%	-0.99%	-1.28%
RNTR - Adult	-1.25%	-1.68%	-2.13%
BNTR & RNTR - Fry	5.99%	7.89%	9.76%
MNWH - Fry	1.75%	2.26%	2.72%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	1.97%	2.65%	3.31%
MNWH - Juvenile	3.47%	4.71%	5.96%
BNTR - Adult	3.06%	4.22%	5.41%
BNTR - Juvenile	6.46%	8.82%	11.23%
RNTR - Adult	2.49%	3.41%	4.36%
BNTR & RNTR - Fry	10.32%	14.18%	18.24%
MNWH - Fry	5.40%	7.48%	9.68%
RNTR - Spawning	5.65%	7.80%	9.91%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	2.11%	2.96%	3.89%
MNWH - Juvenile	4.55%	6.42%	8.42%
BNTR - Adult	3.85%	5.33%	6.89%
BNTR - Juvenile	8.81%	12.17%	15.72%
RNTR - Adult	2.92%	4.04%	5.23%
BNTR & RNTR - Fry	14.46%	20.52%	27.12%
MNWH - Fry	6.60%	9.32%	12.33%
RNTR - Spawning	7.84%	10.68%	13.72%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	2.01%	2.65%	3.16%
MNWH - Juvenile	3.33%	4.37%	5.29%
BNTR - Adult	2.94%	4.02%	5.14%
BNTR - Juvenile	5.75%	7.76%	9.71%
RNTR - Adult	2.53%	3.46%	4.35%
BNTR & RNTR - Fry	10.25%	13.74%	17.30%
MNWH - Fry	5.55%	7.53%	9.54%
RNTR - Spawning	5.34%	7.38%	9.32%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	2.06%	2.79%	3.50%
MNWH - Juvenile	3.85%	5.26%	6.65%
BNTR - Adult	3.36%	4.62%	5.94%
BNTR - Juvenile	7.03%	9.60%	12.23%
RNTR - Adult	2.71%	3.73%	4.77%
BNTR & RNTR - Fry	11.78%	16.22%	20.90%
MNWH - Fry	5.99%	8.29%	10.73%
RNTR - Spawning	6.32%	8.70%	11.08%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-0.58%	-0.78%	-0.95%
MNWH - Juvenile	0.27%	0.37%	0.50%
BNTR - Adult	1.38%	1.86%	2.34%
BNTR - Juvenile	2.65%	3.58%	4.54%
RNTR - Adult	0.73%	0.99%	1.25%
BNTR & RNTR - Fry	7.28%	9.78%	12.37%
MNWH - Fry	3.48%	4.70%	5.94%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-0.83%	-0.67%	-0.28%
MNWH - Juvenile	0.62%	1.29%	2.16%
BNTR - Adult	1.84%	2.62%	3.52%
BNTR - Juvenile	3.72%	5.28%	6.99%
RNTR - Adult	1.02%	1.61%	2.30%
BNTR & RNTR - Fry	11.04%	15.09%	19.48%
MNWH - Fry	4.26%	5.79%	7.40%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-0.84%	-1.46%	-2.22%
MNWH - Juvenile	-0.23%	-0.61%	-1.08%
BNTR - Adult	1.00%	1.25%	1.40%
BNTR - Juvenile	1.87%	2.34%	2.77%
RNTR - Adult	0.38%	0.33%	0.22%
BNTR & RNTR - Fry	5.95%	7.78%	9.53%
MNWH - Fry	2.91%	3.92%	4.88%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-0.82%	-1.07%	-1.29%
MNWH - Juvenile	0.16%	0.26%	0.40%
BNTR - Adult	1.39%	1.90%	2.40%
BNTR - Juvenile	2.70%	3.67%	4.67%
RNTR - Adult	0.69%	0.94%	1.21%
BNTR & RNTR - Fry	8.05%	10.80%	13.64%
MNWH - Fry	3.54%	4.78%	6.04%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-4.68%	-6.03%	-7.31%
MNWH - Juvenile	-4.06%	-5.26%	-6.42%
BNTR - Adult	-1.12%	-1.46%	-1.78%
BNTR - Juvenile	-1.26%	-1.64%	-2.00%
RNTR - Adult	-1.86%	-2.42%	-2.94%
BNTR & RNTR - Fry	4.51%	5.92%	7.27%
MNWH - Fry	0.62%	0.82%	1.02%
BNTR - Spawning	-1.73%	-2.18%	-2.58%
MNWH - Spawning	-7.85%	-10.14%	-12.31%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-6.27%	-6.84%	-6.99%
MNWH - Juvenile	-5.12%	-5.57%	-5.69%
BNTR - Adult	-1.03%	-1.01%	-0.93%
BNTR - Juvenile	-1.09%	-1.17%	-1.18%
RNTR - Adult	-1.80%	-2.00%	-2.05%
BNTR & RNTR - Fry	8.20%	10.90%	13.69%
MNWH - Fry	1.01%	1.23%	1.39%
BNTR - Spawning	-2.23%	-2.16%	-2.00%
MNWH - Spawning	-11.52%	-12.52%	-12.79%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-5.07%	-7.52%	-10.12%
MNWH - Juvenile	-4.88%	-7.14%	-9.47%
BNTR - Adult	-2.14%	-3.06%	-3.91%
BNTR - Juvenile	-2.53%	-3.37%	-4.19%
RNTR - Adult	-2.75%	-3.83%	-4.93%
BNTR & RNTR - Fry	1.86%	2.25%	2.42%
MNWH - Fry	-0.98%	-1.27%	-1.53%
BNTR - Spawning	-3.00%	-4.34%	-5.52%
MNWH - Spawning	-8.44%	-12.28%	-16.26%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-5.48%	-7.09%	-8.62%
MNWH - Juvenile	-4.90%	-6.34%	-7.69%
BNTR - Adult	-1.59%	-2.05%	-2.47%
BNTR - Juvenile	-1.81%	-2.28%	-2.72%
RNTR - Adult	-2.27%	-2.93%	-3.53%
BNTR & RNTR - Fry	4.69%	6.10%	7.42%
MNWH - Fry	0.01%	-0.04%	-0.09%
BNTR - Spawning	-2.56%	-3.24%	-3.81%
MNWH - Spawning	-9.47%	-12.15%	-14.67%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	15%	20%	25%
MNWH - Adult	-5.31%	-7.23%	-8.88%
MNWH - Juvenile	-4.83%	-6.54%	-7.99%
BNTR - Adult	-1.48%	-1.96%	-2.45%
BNTR - Juvenile	-1.69%	-2.18%	-2.70%
RNTR - Adult	-2.25%	-3.02%	-3.74%
BNTR & RNTR - Fry	4.25%	5.58%	6.75%
MNWH - Fry	0.21%	0.22%	0.19%
BNTR - Spawning	-2.28%	-2.81%	-3.34%
MNWH - Spawning	-8.32%	-10.63%	-12.89%
RNTR - Spawning	-3.97%	-5.60%	-7.74%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-14.99%	-17.68%	-20.05%
MNWH - Juvenile	-12.96%	-15.08%	-17.00%
BNTR - Adult	-3.73%	-4.95%	-6.16%
BNTR - Juvenile	-5.07%	-6.02%	-6.99%
RNTR - Adult	-5.51%	-6.86%	-8.26%
BNTR & RNTR - Fry	-15.26%	-16.21%	-16.16%
MNWH - Fry	-3.18%	-3.75%	-4.35%
BNTR - Spawning	-12.73%	-14.00%	-15.20%
MNWH - Spawning	-25.26%	-29.12%	-32.72%
RNTR - Spawning	-27.24%	-31.60%	-34.00%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-3.39%	-4.46%	-5.24%
MNWH - Juvenile	-2.51%	-3.39%	-4.34%
BNTR - Adult	-0.78%	-0.96%	-1.17%
BNTR - Juvenile	-0.61%	-0.90%	-1.22%
RNTR - Adult	-1.16%	-1.53%	-1.91%
BNTR & RNTR - Fry	1.05%	1.35%	1.67%
MNWH - Fry	0.26%	0.28%	0.26%
BNTR - Spawning	-11.80%	-13.39%	-14.24%
MNWH - Spawning	-23.76%	-28.19%	-30.20%
RNTR - Spawning	-2.72%	-3.72%	-5.56%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-8.64%	-10.11%	-10.85%
MNWH - Juvenile	-7.24%	-8.40%	-8.98%
BNTR - Adult	-1.54%	-1.67%	-1.89%
BNTR - Juvenile	-2.20%	-2.37%	-2.47%
RNTR - Adult	-2.61%	-3.20%	-3.55%
BNTR & RNTR - Fry	7.99%	10.33%	12.92%
MNWH - Fry	-0.05%	0.02%	0.03%
BNTR - Spawning	-3.14%	-3.20%	-2.78%
MNWH - Spawning	-12.35%	-13.60%	-14.01%
RNTR - Spawning	-8.36%	-11.59%	-14.95%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-5.69%	-8.79%	-11.81%
MNWH - Juvenile	-5.45%	-8.13%	-10.69%
BNTR - Adult	-2.67%	-3.71%	-4.73%
BNTR - Juvenile	-3.03%	-3.91%	-4.97%
RNTR - Adult	-3.21%	-4.53%	-5.95%
BNTR & RNTR - Fry	1.14%	1.25%	1.29%
MNWH - Fry	-1.70%	-2.31%	-2.88%
BNTR - Spawning	-3.50%	-5.02%	-6.38%
MNWH - Spawning	-9.12%	-12.99%	-17.30%
RNTR - Spawning	-2.36%	-3.51%	-6.00%

Oldman River (OM7) IFN = 20% reduction from natural with EBF

Stripped Weeks (14-17, 31-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-1.46%	-1.92%
MNWH - Juvenile	-2.93%	-3.71%
BNTR - Adult	2.79%	3.45%
BNTR - Juvenile	0.88%	1.07%
RNTR - Adult	2.30%	2.82%
BNTR & RNTR - Fry	-4.44%	-5.50%
MNWH - Fry	1.40%	1.76%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-1.23%	-1.18%
MNWH - Juvenile	-3.46%	-3.85%
BNTR - Adult	5.14%	6.35%
BNTR - Juvenile	1.55%	1.88%
RNTR - Adult	4.21%	5.08%
BNTR & RNTR - Fry	-3.34%	-3.82%
MNWH - Fry	2.11%	2.69%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-3.49%	-4.78%
MNWH - Juvenile	-4.25%	-5.77%
BNTR - Adult	0.00%	-0.06%
BNTR - Juvenile	-0.84%	-1.12%
RNTR - Adult	-0.53%	-0.69%
BNTR & RNTR - Fry	-6.27%	-8.04%
MNWH - Fry	0.25%	0.28%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-2.40%	-3.06%
MNWH - Juvenile	-3.82%	-4.81%
BNTR - Adult	2.42%	2.95%
BNTR - Juvenile	0.33%	0.35%
RNTR - Adult	1.72%	2.05%
BNTR & RNTR - Fry	-4.92%	-6.10%
MNWH - Fry	1.16%	1.46%

ESP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	4.84%	6.36%
MNWH - Juvenile	4.32%	5.55%
BNTR - Adult	-0.75%	-0.54%
BNTR - Juvenile	-2.04%	-2.34%
RNTR - Adult	1.24%	1.95%
RNTR - Spawning	7.21%	9.39%
BNTR & RNTR - Fry	-7.29%	-9.16%
MNWH - Fry	-4.54%	-5.47%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	6.12%	8.10%
MNWH - Juvenile	4.44%	5.74%
BNTR - Adult	3.46%	4.95%
BNTR - Juvenile	0.15%	0.60%
RNTR - Adult	5.41%	7.27%
RNTR - Spawning	8.41%	11.63%
BNTR & RNTR - Fry	-7.57%	-9.56%
MNWH - Fry	-2.92%	-3.19%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	4.80%	6.26%
MNWH - Juvenile	4.87%	6.29%
BNTR - Adult	-2.27%	-2.44%
BNTR - Juvenile	-3.13%	-3.81%
RNTR - Adult	0.09%	0.54%
RNTR - Spawning	7.82%	9.80%
BNTR & RNTR - Fry	-7.55%	-9.45%
MNWH - Fry	-5.65%	-6.97%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	5.38%	7.07%
MNWH - Juvenile	4.66%	6.04%
BNTR - Adult	0.15%	0.68%
BNTR - Juvenile	-1.68%	-1.85%
RNTR - Adult	2.35%	3.41%
RNTR - Spawning	8.04%	10.52%
BNTR & RNTR - Fry	-7.56%	-9.50%
MNWH - Fry	-4.43%	-5.29%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	2.25%	2.82%
MNWH - Juvenile	0.93%	1.25%
BNTR - Adult	1.67%	2.24%
BNTR - Juvenile	-0.26%	-0.29%
RNTR - Adult	2.40%	3.14%
BNTR & RNTR - Fry	-6.13%	-7.77%
MNWH - Fry	-1.57%	-1.93%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	2.87%	3.94%
MNWH - Juvenile	1.12%	1.84%
BNTR - Adult	4.51%	5.84%
BNTR - Juvenile	1.11%	1.49%
RNTR - Adult	4.87%	6.22%
BNTR & RNTR - Fry	-5.61%	-6.97%
MNWH - Fry	-0.09%	-0.17%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	1.51%	1.67%
MNWH - Juvenile	0.41%	0.35%
BNTR - Adult	0.28%	0.41%
BNTR - Juvenile	-1.30%	-1.66%
RNTR - Adult	0.97%	1.35%
BNTR & RNTR - Fry	-7.20%	-9.28%
MNWH - Fry	-2.72%	-3.32%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	2.14%	2.72%
MNWH - Juvenile	0.76%	1.05%
BNTR - Adult	2.17%	2.84%
BNTR - Juvenile	-0.18%	-0.20%
RNTR - Adult	2.73%	3.54%
BNTR & RNTR - Fry	-6.48%	-8.23%
MNWH - Fry	-1.52%	-1.88%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-2.85%	-3.44%
MNWH - Juvenile	-3.76%	-4.54%
BNTR - Adult	1.31%	1.64%
BNTR - Juvenile	0.09%	0.16%
RNTR - Adult	0.90%	1.15%
MNWH - Spawning	-7.24%	-8.80%
BNTR - Spawning	-3.54%	-4.32%
BNTR & RNTR - Fry	-4.15%	-5.18%
MNWH - Fry	0.61%	0.73%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-3.16%	-3.15%
MNWH - Juvenile	-3.92%	-4.14%
BNTR - Adult	3.02%	3.61%
BNTR - Juvenile	0.22%	0.26%
RNTR - Adult	2.06%	2.40%
MNWH - Spawning	-9.02%	-9.61%
BNTR - Spawning	-3.10%	-3.02%
BNTR & RNTR - Fry	-2.34%	-2.64%
MNWH - Fry	1.26%	1.49%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-5.22%	-6.75%
MNWH - Juvenile	-5.80%	-7.41%
BNTR - Adult	-1.63%	-1.87%
BNTR - Juvenile	-1.38%	-1.69%
RNTR - Adult	-1.88%	-2.18%
MNWH - Spawning	-8.91%	-11.70%
BNTR - Spawning	-6.68%	-8.77%
BNTR & RNTR - Fry	-6.62%	-8.50%
MNWH - Fry	-0.66%	-0.77%

South Saskatchewan River Basin Instream Flow Needs Determination

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	20%	25%
MNWH - Adult	-4.21%	-5.03%
MNWH - Juvenile	-4.85%	-5.83%
BNTR - Adult	0.60%	0.76%
BNTR - Juvenile	-0.59%	-0.73%
RNTR - Adult	0.02%	0.03%
MNWH - Spawning	-8.80%	-10.65%
BNTR - Spawning	-5.01%	-6.14%
BNTR & RNTR - Fry	-4.67%	-5.83%
MNWH - Fry	0.29%	0.34%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	20%	25%
MNWH - Adult	-4.16%	-5.06%
MNWH - Juvenile	-4.57%	-5.73%
BNTR - Adult	-12.65%	-15.47%
BNTR - Juvenile	-10.07%	-12.52%
RNTR - Adult	-10.78%	-12.95%
MNWH - Spawning	-7.92%	-9.73%
BNTR - Spawning	-4.43%	-5.44%
RNTR - Spawning	-1.98%	-3.40%
BNTR & RNTR - Fry	-9.96%	-12.65%
MNWH - Fry	-10.74%	-13.50%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	20%	25%
MNWH - Adult	-17.06%	-21.32%
MNWH - Juvenile	-16.52%	-20.65%
BNTR - Adult	-18.61%	-23.09%
BNTR - Juvenile	-14.00%	-17.42%
RNTR - Adult	-20.21%	-25.00%
MNWH - Spawning	-23.46%	-26.71%
BNTR - Spawning	-16.71%	-18.32%
RNTR - Spawning	-27.27%	-30.41%
BNTR & RNTR - Fry	-14.34%	-17.71%
MNWH - Fry	-13.27%	-16.63%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	20%	25%
MNWH - Adult	-4.47%	-6.08%
MNWH - Juvenile	-3.70%	-5.02%
BNTR - Adult	-4.49%	-5.34%
BNTR - Juvenile	-4.75%	-5.63%
RNTR - Adult	-3.82%	-4.83%
MNWH - Spawning	-22.68%	-25.99%
BNTR - Spawning	-15.66%	-17.91%
RNTR - Spawning	-7.82%	-9.27%
BNTR & RNTR - Fry	-9.62%	-11.81%
MNWH - Fry	-5.77%	-7.62%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%
MNWH - Adult	-4.49%	-4.54%
MNWH - Juvenile	-5.48%	-5.91%
BNTR - Adult	-7.26%	-8.55%
BNTR - Juvenile	-8.06%	-9.94%
RNTR - Adult	-4.26%	-5.14%
MNWH - Spawning	-9.98%	-10.78%
BNTR - Spawning	-4.33%	-4.05%
RNTR - Spawning	-0.78%	-1.84%
BNTR & RNTR - Fry	-11.63%	-14.85%
MNWH - Fry	-9.83%	-12.39%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	20%	25%
MNWH - Adult	-7.86%	-9.78%
MNWH - Juvenile	-6.59%	-8.89%
BNTR - Adult	-16.58%	-20.41%
BNTR - Juvenile	-11.68%	-14.58%
RNTR - Adult	-14.70%	-17.68%
MNWH - Spawning	-9.78%	-13.33%
BNTR - Spawning	-7.74%	-10.43%
RNTR - Spawning	-4.16%	-6.63%
BNTR & RNTR - Fry	-11.31%	-14.23%
MNWH - Fry	-12.35%	-15.53%

**SOUTHERN TRIBUTARIES
OF THE
OLDMAN RIVER**

Waterton River (W1)

IFN = 25% reduction from Natural with EBF

Stripped Weeks (14-17, 31-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-6.35%	-8.09%	-9.87%
MNWH - Juvenile	-5.26%	-6.67%	-8.11%
BNTR - Adult	-4.07%	-5.23%	-6.45%
BNTR - Juvenile	-2.68%	-3.46%	-4.29%
RNTR - Adult	-5.32%	-6.78%	-8.30%
MNWH-Fry	1.55%	1.87%	2.14%
RNTR - Fry	6.53%	8.17%	9.79%
RNTR - Juvenile	-3.33%	-4.27%	-5.26%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-6.44%	-7.56%	-8.44%
MNWH - Juvenile	-5.45%	-6.36%	-7.01%
BNTR - Adult	-3.53%	-3.99%	-4.26%
BNTR - Juvenile	-2.45%	-2.81%	-3.05%
RNTR - Adult	-5.04%	-5.92%	-6.53%
MNWH-Fry	2.59%	3.28%	3.97%
RNTR - Fry	11.97%	15.30%	18.71%
RNTR - Juvenile	-3.12%	-3.61%	-3.95%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-8.35%	-11.01%	-13.88%
MNWH - Juvenile	-6.81%	-8.98%	-11.36%
BNTR - Adult	-5.93%	-8.01%	-10.29%
BNTR - Juvenile	-4.09%	-5.53%	-7.12%
RNTR - Adult	-7.31%	-9.62%	-12.15%
MNWH-Fry	-0.04%	-0.25%	-0.55%
RNTR - Fry	3.48%	4.08%	4.54%
RNTR - Juvenile	-4.88%	-6.53%	-8.34%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-7.51%	-9.52%	-11.55%
MNWH - Juvenile	-6.18%	-7.79%	-9.41%
BNTR - Adult	-4.86%	-6.23%	-7.64%
BNTR - Juvenile	-3.32%	-4.26%	-5.22%
RNTR - Adult	-6.31%	-7.99%	-9.70%
MNWH-Fry	1.21%	1.42%	1.59%
RNTR - Fry	7.11%	8.87%	10.61%
RNTR - Juvenile	-4.05%	-5.17%	-6.32%

South Saskatchewan River Basin Instream Flow Needs Determination

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	2.60%	3.26%	3.90%
MNWH - Juvenile	2.46%	3.03%	3.56%
BNTR - Adult	2.86%	3.62%	4.38%
BNTR - Juvenile	4.38%	5.53%	6.67%
RNTR - Adult	2.29%	2.90%	3.51%
MNWH-Fry	6.68%	8.49%	10.33%
RNTR - Fry	10.90%	13.86%	16.90%
RNTR - Juvenile	3.86%	4.88%	5.89%
RNTR - Spawning	6.10%	7.86%	9.61%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	3.78%	4.94%	6.34%
MNWH - Juvenile	3.95%	5.16%	6.46%
BNTR - Adult	3.89%	5.13%	6.50%
BNTR - Juvenile	6.18%	7.92%	9.78%
RNTR - Adult	3.10%	4.08%	5.28%
MNWH-Fry	9.02%	11.43%	13.97%
RNTR - Fry	17.18%	22.40%	28.00%
RNTR - Juvenile	5.25%	6.80%	8.44%
RNTR - Spawning	8.51%	11.10%	14.00%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	1.64%	1.91%	1.98%
MNWH - Juvenile	1.16%	1.18%	1.01%
BNTR - Adult	2.15%	2.62%	2.97%
BNTR - Juvenile	3.24%	3.98%	4.63%
RNTR - Adult	1.64%	1.99%	2.16%
MNWH-Fry	5.31%	6.78%	8.21%
RNTR - Fry	8.92%	10.95%	12.84%
RNTR - Juvenile	2.98%	3.65%	4.22%
RNTR - Spawning	4.97%	6.43%	7.62%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	2.57%	3.24%	3.89%
MNWH - Juvenile	2.40%	2.95%	3.43%
BNTR - Adult	2.94%	3.76%	4.57%
BNTR - Juvenile	4.56%	5.76%	6.95%
RNTR - Adult	2.30%	2.93%	3.55%
MNWH-Fry	6.97%	8.87%	10.80%
RNTR - Fry	12.18%	15.49%	18.86%
RNTR - Juvenile	4.01%	5.07%	6.13%
RNTR - Spawning	6.48%	8.41%	10.33%

South Saskatchewan River Basin Instream Flow Needs Determination

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-0.52%	-0.66%	-0.81%
MNWH - Juvenile	0.00%	-0.02%	-0.05%
BNTR - Adult	0.19%	0.21%	0.23%
BNTR - Juvenile	1.72%	2.16%	2.57%
RNTR - Adult	-0.41%	-0.52%	-0.64%
MNWH-Fry	4.27%	5.35%	6.42%
RNTR - Fry	8.89%	11.20%	13.50%
RNTR - Juvenile	1.16%	1.46%	1.76%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	0.97%	1.78%	2.80%
MNWH - Juvenile	1.74%	2.65%	3.77%
BNTR - Adult	1.47%	2.29%	3.26%
BNTR - Juvenile	3.30%	4.50%	5.81%
RNTR - Adult	0.74%	1.37%	2.24%
MNWH-Fry	5.79%	7.45%	9.12%
RNTR - Fry	14.83%	19.13%	23.58%
RNTR - Juvenile	2.55%	3.57%	4.77%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-2.10%	-3.03%	-4.11%
MNWH - Juvenile	-1.66%	-2.49%	-3.46%
BNTR - Adult	-1.27%	-1.94%	-2.70%
BNTR - Juvenile	0.31%	0.11%	-0.21%
RNTR - Adult	-1.81%	-2.55%	-3.44%
MNWH-Fry	3.10%	3.75%	4.33%
RNTR - Fry	6.25%	7.53%	8.62%
RNTR - Juvenile	-0.22%	-0.53%	-0.98%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-0.76%	-0.94%	-1.12%
MNWH - Juvenile	-0.15%	-0.21%	-0.27%
BNTR - Adult	-0.04%	-0.05%	-0.05%
BNTR - Juvenile	1.67%	2.09%	2.50%
RNTR - Adult	-0.67%	-0.80%	-0.92%
MNWH-Fry	4.34%	5.45%	6.53%
RNTR - Fry	9.84%	12.38%	14.88%
RNTR - Juvenile	1.04%	1.32%	1.61%

South Saskatchewan River Basin Instream Flow Needs Determination

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-8.98%	-11.37%	-13.81%
MNWH - Juvenile	-7.03%	-8.87%	-10.75%
BNTR - Adult	-6.54%	-8.35%	-10.21%
BNTR - Juvenile	-4.59%	-5.86%	-7.18%
RNTR - Adult	-7.62%	-9.67%	-11.76%
MNWH-Fry	-0.34%	-0.51%	-0.75%
MNWH - Spawning	-10.35%	-13.05%	-15.78%
RNTR - Fry	4.96%	6.13%	7.28%
RNTR - Juvenile	-5.40%	-6.87%	-8.37%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-9.90%	-11.71%	-13.01%
MNWH - Juvenile	-7.21%	-8.53%	-9.49%
BNTR - Adult	-7.52%	-8.95%	-9.98%
BNTR - Juvenile	-5.62%	-6.69%	-7.45%
RNTR - Adult	-8.23%	-9.75%	-10.85%
MNWH-Fry	-0.55%	-0.64%	-0.69%
MNWH - Spawning	-11.87%	-14.04%	-15.59%
RNTR - Fry	11.16%	13.80%	16.40%
RNTR - Juvenile	-6.24%	-7.37%	-8.18%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-11.29%	-14.72%	-18.45%
MNWH - Juvenile	-9.01%	-11.68%	-14.62%
BNTR - Adult	-8.07%	-10.77%	-13.78%
BNTR - Juvenile	-5.50%	-7.37%	-9.53%
RNTR - Adult	-9.80%	-12.76%	-16.03%
MNWH-Fry	-1.38%	-1.93%	-2.60%
MNWH - Spawning	-12.43%	-16.09%	-20.07%
RNTR - Fry	0.66%	0.72%	0.76%
RNTR - Juvenile	-6.74%	-8.96%	-11.42%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%	70%
MNWH - Adult	-10.72%	-13.52%	-16.32%
MNWH - Juvenile	-8.24%	-10.35%	-12.47%
BNTR - Adult	-7.81%	-9.97%	-12.16%
BNTR - Juvenile	-5.52%	-7.03%	-8.56%
RNTR - Adult	-9.14%	-11.52%	-13.91%
MNWH-Fry	-0.96%	-1.29%	-1.66%
MNWH - Spawning	-12.17%	-15.27%	-18.34%
RNTR - Fry	5.25%	6.44%	7.60%
RNTR - Juvenile	-6.48%	-8.22%	-9.97%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	80%	75%	70%
MNWH - Adult	-9.77%	-12.51%	-15.33%
MNWH - Juvenile	-7.67%	-9.77%	-11.91%
BNTR - Adult	-7.37%	-9.41%	-11.54%
BNTR - Juvenile	-5.08%	-6.57%	-8.14%
RNTR - Adult	-8.30%	-10.57%	-12.92%
MNWH-Fry	-0.95%	-1.32%	-1.75%
MNWH - Spawning	-11.26%	-14.34%	-17.47%
RNTR - Fry	4.31%	5.30%	6.21%
RNTR - Juvenile	-5.94%	-7.63%	-9.39%
RNTR - Spawning	-5.30%	-6.44%	-7.59%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	80%	75%	70%
MNWH - Adult	-18.25%	-21.67%	-25.61%
MNWH - Juvenile	-14.63%	-16.72%	-19.46%
BNTR - Adult	-15.82%	-18.47%	-20.92%
BNTR - Juvenile	-11.20%	-13.93%	-16.46%
RNTR - Adult	-15.77%	-18.58%	-21.94%
MNWH-Fry	-7.69%	-8.20%	-8.72%
MNWH - Spawning	-21.10%	-25.97%	-30.20%
RNTR - Fry	-1.81%	-2.14%	-2.15%
RNTR - Juvenile	-11.14%	-14.02%	-16.97%
RNTR - Spawning	-19.93%	-21.08%	-21.92%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	80%	75%	70%
MNWH - Adult	-5.08%	-6.70%	-8.38%
MNWH - Juvenile	-4.34%	-5.44%	-6.63%
BNTR - Adult	-4.03%	-4.96%	-5.75%
BNTR - Juvenile	-2.07%	-2.69%	-3.38%
RNTR - Adult	-4.47%	-5.44%	-7.00%
MNWH-Fry	0.38%	0.31%	0.15%
MNWH - Spawning	-18.32%	-23.16%	-27.20%
RNTR - Fry	2.26%	2.66%	3.04%
RNTR - Juvenile	-2.68%	-3.48%	-4.45%
RNTR - Spawning	-1.30%	-1.64%	-2.68%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	80%	75%	70%
MNWH - Adult	-10.88%	-13.29%	-15.19%
MNWH - Juvenile	-8.05%	-9.82%	-11.22%
BNTR - Adult	-8.48%	-10.37%	-11.87%
BNTR - Juvenile	-6.45%	-7.93%	-9.09%
RNTR - Adult	-9.07%	-11.09%	-12.69%
MNWH-Fry	-1.61%	-1.87%	-1.98%
MNWH - Spawning	-13.19%	-16.10%	-18.40%
RNTR - Fry	9.23%	11.29%	13.29%
RNTR - Juvenile	-7.02%	-8.55%	-9.76%
RNTR - Spawning	-3.52%	-4.64%	-5.64%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	80%	75%	70%
MNWH - Adult	-13.02%	-16.62%	-20.44%
MNWH - Juvenile	-9.96%	-12.89%	-15.84%
BNTR - Adult	-11.12%	-14.16%	-17.24%
BNTR - Juvenile	-7.18%	-9.36%	-11.63%
RNTR - Adult	-11.62%	-14.76%	-18.12%
MNWH-Fry	-2.37%	-3.21%	-3.90%
MNWH - Spawning	-13.41%	-17.33%	-21.58%
RNTR - Fry	0.37%	0.43%	0.50%
RNTR - Juvenile	-8.46%	-11.03%	-13.58%
RNTR - Spawning	-8.31%	-9.72%	-11.19%

Waterton River (W2)

Stripped Weeks (14-17, 30-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-4.98%	-6.40%
MNWH - Juvenile	-4.76%	-6.09%
BNTR - Adult	-2.25%	-2.94%
BNTR - Juvenile	-1.78%	-2.35%
RNTR - Adult	-3.18%	-4.11%
MNWH-Fry	1.74%	2.08%
RNTR - Fry	6.98%	8.77%
RNTR - Juvenile	-2.15%	-2.82%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-6.31%	-7.21%
MNWH - Juvenile	-6.30%	-7.26%
BNTR - Adult	-2.24%	-2.53%
BNTR - Juvenile	-1.99%	-2.25%
RNTR - Adult	-3.72%	-4.24%
MNWH-Fry	3.20%	4.05%
RNTR - Fry	12.69%	16.07%
RNTR - Juvenile	-2.44%	-2.75%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-6.00%	-8.33%
MNWH - Juvenile	-5.49%	-7.58%
BNTR - Adult	-3.45%	-4.80%
BNTR - Juvenile	-2.88%	-4.08%
RNTR - Adult	-4.20%	-5.85%
MNWH-Fry	-0.47%	-0.85%
RNTR - Fry	3.77%	4.51%
RNTR - Juvenile	-3.24%	-4.58%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-6.06%	-7.74%
MNWH - Juvenile	-5.77%	-7.34%
BNTR - Adult	-2.86%	-3.71%
BNTR - Juvenile	-2.42%	-3.17%
RNTR - Adult	-3.92%	-5.05%
MNWH-Fry	1.25%	1.44%
RNTR - Fry	7.64%	9.53%
RNTR - Juvenile	-2.83%	-3.68%

South Saskatchewan River Basin Instream Flow Needs Determination

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	4.20%	5.42%
MNWH - Juvenile	4.54%	5.83%
BNTR - Adult	3.12%	4.03%
BNTR - Juvenile	4.86%	6.26%
RNTR - Adult	2.92%	3.78%
MNWH-Fry	5.57%	7.15%
RNTR - Fry	9.50%	12.15%
RNTR - Juvenile	4.24%	5.48%
RNTR - Spawning	6.78%	8.75%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	4.65%	6.54%
MNWH - Juvenile	5.25%	7.19%
BNTR - Adult	3.19%	4.40%
BNTR - Juvenile	5.48%	7.30%
RNTR - Adult	2.85%	4.02%
MNWH-Fry	6.96%	9.09%
RNTR - Fry	14.02%	18.08%
RNTR - Juvenile	4.58%	6.23%
RNTR - Spawning	8.85%	11.81%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	4.58%	5.52%
MNWH - Juvenile	4.74%	5.75%
BNTR - Adult	3.60%	4.45%
BNTR - Juvenile	5.05%	6.36%
RNTR - Adult	3.38%	4.16%
MNWH-Fry	5.02%	6.39%
RNTR - Fry	8.41%	10.66%
RNTR - Juvenile	4.65%	5.81%
RNTR - Spawning	6.55%	8.29%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	4.63%	5.98%
MNWH - Juvenile	4.97%	6.39%
BNTR - Adult	3.41%	4.43%
BNTR - Juvenile	5.25%	6.80%
RNTR - Adult	3.16%	4.12%
MNWH-Fry	5.90%	7.62%
RNTR - Fry	10.75%	13.76%
RNTR - Juvenile	4.63%	6.02%
RNTR - Spawning	7.51%	9.77%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	0.35%	0.50%
MNWH - Juvenile	0.80%	1.10%
BNTR - Adult	0.83%	1.07%
BNTR - Juvenile	1.93%	2.47%
RNTR - Adult	0.35%	0.47%
MNWH-Fry	3.60%	4.54%
RNTR - Fry	8.11%	10.26%
RNTR - Juvenile	1.43%	1.85%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-0.05%	0.84%
MNWH - Juvenile	0.62%	1.60%
BNTR - Adult	0.79%	1.43%
BNTR - Juvenile	2.06%	3.07%
RNTR - Adult	0.20%	0.76%
MNWH-Fry	4.44%	5.79%
RNTR - Fry	12.59%	16.06%
RNTR - Juvenile	1.44%	2.32%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	0.28%	-0.13%
MNWH - Juvenile	0.68%	0.44%
BNTR - Adult	0.64%	0.51%
BNTR - Juvenile	1.75%	1.93%
RNTR - Adult	0.15%	-0.11%
MNWH-Fry	2.81%	3.45%
RNTR - Fry	6.22%	7.68%
RNTR - Juvenile	1.33%	1.39%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	0.18%	0.35%
MNWH - Juvenile	0.69%	1.00%
BNTR - Adult	0.74%	0.97%
BNTR - Juvenile	1.92%	2.48%
RNTR - Adult	0.21%	0.32%
MNWH-Fry	3.58%	4.55%
RNTR - Fry	9.00%	11.33%
RNTR - Juvenile	1.41%	1.85%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-7.44%	-9.60%
MNWH - Juvenile	-6.79%	-8.75%
BNTR - Adult	-4.19%	-5.43%
BNTR - Juvenile	-3.46%	-4.52%
RNTR - Adult	-5.14%	-6.64%
MNWH-Fry	-0.23%	-0.47%
MNWH - Spawning	-9.84%	-12.63%
RNTR - Fry	5.03%	6.33%
RNTR - Juvenile	-3.85%	-5.00%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-10.78%	-12.54%
MNWH - Juvenile	-9.82%	-11.37%
BNTR - Adult	-5.36%	-6.41%
BNTR - Juvenile	-4.62%	-5.49%
RNTR - Adult	-6.95%	-8.20%
MNWH-Fry	-0.15%	-0.30%
MNWH - Spawning	-14.80%	-17.22%
RNTR - Fry	10.60%	13.26%
RNTR - Juvenile	-5.03%	-5.97%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-7.87%	-11.04%
MNWH - Juvenile	-7.19%	-10.13%
BNTR - Adult	-4.95%	-6.79%
BNTR - Juvenile	-4.09%	-5.71%
RNTR - Adult	-5.67%	-7.89%
MNWH-Fry	-1.88%	-2.67%
MNWH - Spawning	-10.19%	-14.08%
RNTR - Fry	1.04%	1.21%
RNTR - Juvenile	-4.52%	-6.28%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	80%	75%
MNWH - Adult	-8.90%	-11.46%
MNWH - Juvenile	-8.13%	-10.46%
BNTR - Adult	-5.05%	-6.52%
BNTR - Juvenile	-4.24%	-5.51%
RNTR - Adult	-6.13%	-7.91%
MNWH-Fry	-1.05%	-1.54%
MNWH - Spawning	-11.73%	-15.02%
RNTR - Fry	5.33%	6.62%
RNTR - Juvenile	-4.67%	-6.04%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	80%	75%
MNWH - Adult	-8.85%	-10.94%
MNWH - Juvenile	-7.88%	-9.68%
BNTR - Adult	-5.06%	-6.34%
BNTR - Juvenile	-4.44%	-5.48%
RNTR - Adult	-6.08%	-7.65%
MNWH-Fry	-1.12%	-1.46%
MNWH - Spawning	-10.66%	-13.34%
RNTR - Fry	4.10%	5.02%
RNTR - Juvenile	-4.83%	-6.00%
RNTR - Spawning	-6.44%	-8.32%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	80%	75%
MNWH - Adult	-23.13%	-26.60%
MNWH - Juvenile	-21.59%	-24.70%
BNTR - Adult	-13.23%	-15.82%
BNTR - Juvenile	-12.57%	-14.74%
RNTR - Adult	-15.22%	-18.10%
MNWH-Fry	-9.02%	-10.41%
MNWH - Spawning	-28.55%	-32.83%
RNTR - Fry	0.00%	0.00%
RNTR - Juvenile	-12.83%	-15.11%
RNTR - Spawning	-32.47%	-36.97%

South Saskatchewan River Basin Instream Flow Needs Determination

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	80%	75%
MNWH - Adult	-4.33%	-5.55%
MNWH - Juvenile	-4.11%	-5.32%
BNTR - Adult	-2.70%	-3.40%
BNTR - Juvenile	-1.52%	-2.04%
RNTR - Adult	-3.03%	-3.89%
MNWH-Fry	0.26%	0.43%
MNWH - Spawning	-26.77%	-31.70%
RNTR - Fry	2.20%	2.58%
RNTR - Juvenile	-2.00%	-2.64%
RNTR - Spawning	-5.42%	-5.36%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	80%	75%
MNWH - Adult	-13.27%	-15.65%
MNWH - Juvenile	-11.91%	-14.06%
BNTR - Adult	-7.66%	-9.07%
BNTR - Juvenile	-7.02%	-8.36%
RNTR - Adult	-8.94%	-10.57%
MNWH-Fry	-1.84%	-2.43%
MNWH - Spawning	-16.31%	-19.18%
RNTR - Fry	8.22%	10.00%
RNTR - Juvenile	-7.32%	-8.68%
RNTR - Spawning	-10.41%	-12.33%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	80%	75%
MNWH - Adult	-11.37%	-14.67%
MNWH - Juvenile	-9.86%	-12.72%
BNTR - Adult	-6.81%	-9.14%
BNTR - Juvenile	-5.97%	-7.97%
RNTR - Adult	-8.25%	-10.78%
MNWH-Fry	-3.59%	-4.43%
MNWH - Spawning	-12.19%	-16.33%
RNTR - Fry	0.71%	0.75%
RNTR - Juvenile	-6.60%	-8.73%
RNTR - Spawning	-6.27%	-8.78%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-5.91%	-6.53%	-6.86%
MNWH - Juvenile	-3.98%	-4.38%	-4.59%
BNTR - Adult	-1.68%	-1.75%	-1.72%
BNTR - Juvenile	0.73%	0.91%	1.14%
WALL - Adult	1.35%	1.76%	2.23%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-7.85%	-10.09%	-12.46%
MNWH - Juvenile	-4.68%	-6.15%	-7.71%
BNTR - Adult	-4.76%	-6.19%	-7.69%
BNTR - Juvenile	-1.16%	-1.67%	-2.25%
WALL - Adult	-0.78%	-1.29%	-1.88%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-6.92%	-8.43%	-9.89%
MNWH - Juvenile	-4.30%	-5.26%	-6.19%
BNTR - Adult	-3.30%	-4.09%	-4.88%
BNTR - Juvenile	-0.22%	-0.40%	-0.58%
WALL - Adult	0.26%	0.19%	0.11%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	4.09%	4.77%	5.35%
MNWH - Juvenile	3.97%	4.66%	5.29%
BNTR - Adult	3.86%	4.69%	5.51%
BNTR - Juvenile	6.62%	8.05%	9.49%
WALL - Adult	4.31%	5.23%	6.17%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	5.32%	6.36%	7.61%
MNWH - Juvenile	5.99%	7.40%	8.88%
BNTR - Adult	4.84%	6.12%	7.52%
BNTR - Juvenile	8.32%	10.31%	12.46%
WALL - Adult	5.23%	6.45%	7.76%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	1.87%	1.85%	1.50%
MNWH - Juvenile	2.33%	2.36%	2.16%
BNTR - Adult	3.24%	3.80%	4.22%
BNTR - Juvenile	5.89%	7.06%	8.09%
WALL - Adult	3.77%	4.61%	5.35%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	3.45%	3.91%	4.28%
MNWH - Juvenile	4.01%	4.68%	5.25%
BNTR - Adult	4.00%	4.89%	5.77%
BNTR - Juvenile	7.02%	8.57%	10.12%
WALL - Adult	4.48%	5.50%	6.51%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	1.34%	1.53%	1.74%
MNWH - Juvenile	1.51%	1.81%	2.14%
BNTR - Adult	1.50%	1.81%	2.17%
BNTR - Juvenile	4.07%	4.92%	5.82%
WALL - Adult	2.75%	3.29%	3.86%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	3.91%	4.95%	6.09%
MNWH - Juvenile	3.22%	4.37%	5.69%
BNTR - Adult	2.47%	3.38%	4.45%
BNTR - Juvenile	5.18%	6.54%	8.07%
WALL - Adult	3.53%	4.43%	5.38%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-1.81%	-2.64%	-3.50%
MNWH - Juvenile	-0.13%	-0.60%	-1.12%
BNTR - Adult	0.23%	-0.01%	-0.24%
BNTR - Juvenile	3.39%	3.87%	4.31%
WALL - Adult	2.06%	2.30%	2.53%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	0.77%	0.77%	0.80%
MNWH - Juvenile	1.42%	1.70%	2.02%
BNTR - Adult	1.29%	1.58%	1.94%
BNTR - Juvenile	4.23%	5.12%	6.07%
WALL - Adult	2.78%	3.33%	3.90%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-9.63%	-11.67%	-13.68%
MNWH - Juvenile	-6.31%	-7.68%	-9.06%
BNTR - Adult	-5.53%	-6.76%	-7.97%
BNTR - Juvenile	-2.09%	-2.62%	-3.16%
WALL - Adult	-2.48%	-3.13%	-3.77%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-10.72%	-11.80%	-12.25%
MNWH - Juvenile	-7.89%	-8.67%	-9.00%
BNTR - Adult	-5.92%	-6.59%	-6.86%
BNTR - Juvenile	-2.97%	-3.37%	-3.53%
WALL - Adult	-3.26%	-3.69%	-3.87%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-12.06%	-15.36%	-18.92%
MNWH - Juvenile	-7.33%	-9.62%	-12.21%
BNTR - Adult	-7.30%	-9.39%	-11.70%
BNTR - Juvenile	-2.43%	-3.34%	-4.45%
WALL - Adult	-3.04%	-4.18%	-5.53%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	25%	30%	35%
MNWH - Adult	-11.41%	-13.78%	-16.06%
MNWH - Juvenile	-7.48%	-9.08%	-10.66%
BNTR - Adult	-6.63%	-8.07%	-9.46%
BNTR - Juvenile	-2.64%	-3.30%	-3.95%
WALL - Adult	-3.07%	-3.86%	-4.65%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	25%	30%	35%
MNWH - Adult	-10.50%	-12.78%	-15.15%
MNWH - Juvenile	-6.76%	-8.33%	-10.00%
BNTR - Adult	-6.10%	-7.46%	-8.91%
BNTR - Juvenile	-2.49%	-3.14%	-3.88%
WALL - Adult	-3.04%	-3.75%	-4.55%

South Saskatchewan River Basin Instream Flow Needs Determination

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-19.84%	-24.06%	-26.91%
MNWH - Juvenile	-15.73%	-18.86%	-20.45%
BNTR - Adult	-12.23%	-14.53%	-16.78%
BNTR - Juvenile	-8.46%	-10.10%	-10.10%
WALL - Adult	-11.21%	-13.30%	-14.09%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-6.24%	-7.08%	-8.21%
MNWH - Juvenile	-3.19%	-4.12%	-5.09%
BNTR - Adult	-3.25%	-3.87%	-3.99%
BNTR - Juvenile	-0.51%	-0.75%	-0.99%
WALL - Adult	-0.58%	-0.69%	-0.74%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-11.40%	-13.00%	-13.95%
MNWH - Juvenile	-8.58%	-9.59%	-10.29%
BNTR - Adult	-6.42%	-7.21%	-7.84%
BNTR - Juvenile	-3.42%	-3.75%	-4.04%
WALL - Adult	-4.69%	-4.95%	-5.02%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	25%	30%	35%
MNWH - Adult	-13.68%	-17.28%	-21.16%
MNWH - Juvenile	-8.31%	-10.92%	-13.82%
BNTR - Adult	-8.91%	-10.96%	-13.13%
BNTR - Juvenile	-2.91%	-3.94%	-5.25%
WALL - Adult	-3.80%	-5.19%	-6.83%

Belly River (BL2) IFN = 20% reduction from Natural with EBF

Stripped Weeks (14-19, 30-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-4.35%	-6.00%	-7.68%
MNWH - Juvenile	-4.66%	-6.36%	-8.06%
BNTR - Adult	-0.80%	-1.27%	-1.77%
BNTR - Juvenile	-1.53%	-2.22%	-2.96%
WALL - Adult	4.03%	5.31%	6.54%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-3.87%	-5.03%	-5.75%
MNWH - Juvenile	-4.45%	-5.68%	-6.53%
BNTR - Adult	0.11%	0.25%	0.61%
BNTR - Juvenile	-0.69%	-0.86%	-0.89%
WALL - Adult	6.78%	8.98%	11.12%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-6.39%	-8.98%	-11.87%
MNWH - Juvenile	-6.37%	-8.90%	-11.69%
BNTR - Adult	-2.24%	-3.49%	-4.96%
BNTR - Juvenile	-3.34%	-4.87%	-6.59%
WALL - Adult	1.87%	2.31%	2.68%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-5.30%	-7.26%	-9.21%
MNWH - Juvenile	-5.52%	-7.47%	-9.40%
BNTR - Adult	-1.18%	-1.80%	-2.43%
BNTR - Juvenile	-2.13%	-3.03%	-3.97%
WALL - Adult	4.13%	5.38%	6.56%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	2.43%	3.10%	3.79%
MNWH - Juvenile	2.57%	3.26%	3.91%
BNTR - Adult	3.47%	4.47%	5.52%
BNTR - Juvenile	4.32%	5.74%	7.21%
WALL - Adult	5.61%	7.61%	9.68%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	4.14%	5.51%	7.29%
MNWH - Juvenile	4.96%	6.71%	8.67%
BNTR - Adult	4.43%	6.16%	8.04%
BNTR - Juvenile	6.24%	8.62%	11.25%
WALL - Adult	7.29%	10.04%	13.02%

South Saskatchewan River Basin Instream Flow Needs Determination

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	1.12%	1.20%	1.04%
MNWH - Juvenile	0.93%	0.80%	0.40%
BNTR - Adult	2.87%	3.37%	3.87%
BNTR - Juvenile	3.35%	4.20%	4.99%
WALL - Adult	5.35%	7.19%	8.97%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	2.38%	3.01%	3.67%
MNWH - Juvenile	2.63%	3.28%	3.87%
BNTR - Adult	3.54%	4.58%	5.68%
BNTR - Juvenile	4.58%	6.08%	7.65%
WALL - Adult	6.21%	8.45%	10.75%

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	1.03%	1.36%	1.70%
MNWH - Juvenile	0.93%	1.19%	1.45%
BNTR - Adult	2.56%	3.43%	4.31%
BNTR - Juvenile	2.94%	3.95%	4.97%
WALL - Adult	5.06%	6.81%	8.60%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	2.68%	4.03%	5.79%
MNWH - Juvenile	3.23%	4.78%	6.70%
BNTR - Adult	3.51%	4.91%	6.60%
BNTR - Juvenile	4.36%	6.24%	8.40%
WALL - Adult	6.86%	9.25%	11.73%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-0.52%	-1.01%	-1.76%
MNWH - Juvenile	-0.86%	-1.57%	-2.56%
BNTR - Adult	1.76%	2.28%	2.64%
BNTR - Juvenile	2.03%	2.48%	2.74%
WALL - Adult	4.38%	5.87%	7.32%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	0.85%	1.15%	1.48%
MNWH - Juvenile	0.88%	1.14%	1.38%
BNTR - Adult	2.54%	3.46%	4.42%
BNTR - Juvenile	3.05%	4.12%	5.22%
WALL - Adult	5.51%	7.41%	9.33%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-6.35%	-8.56%	-10.72%
MNWH - Juvenile	-6.07%	-8.12%	-10.09%
BNTR - Adult	-2.88%	-3.95%	-5.04%
BNTR - Juvenile	-3.40%	-4.62%	-5.83%
WALL - Adult	2.04%	2.66%	3.25%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-5.83%	-7.25%	-8.05%
MNWH - Juvenile	-4.80%	-5.92%	-6.54%
BNTR - Adult	-3.42%	-4.31%	-4.78%
BNTR - Juvenile	-3.56%	-4.40%	-4.85%
WALL - Adult	3.67%	4.70%	5.62%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-8.95%	-12.33%	-15.92%
MNWH - Juvenile	-8.63%	-11.73%	-15.01%
BNTR - Adult	-3.46%	-5.13%	-7.06%
BNTR - Juvenile	-4.67%	-6.68%	-8.90%
WALL - Adult	-0.13%	-0.17%	-0.20%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	15%	20%	25%
MNWH - Adult	-7.69%	-10.26%	-12.70%
MNWH - Juvenile	-7.04%	-9.31%	-11.48%
BNTR - Adult	-3.42%	-4.73%	-5.98%
BNTR - Juvenile	-4.16%	-5.65%	-7.06%
WALL - Adult	1.71%	2.19%	2.61%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	15%	20%	25%
MNWH - Adult	-7.48%	-9.88%	-12.41%
MNWH - Juvenile	-6.68%	-9.06%	-11.68%
BNTR - Adult	-3.60%	-4.97%	-6.46%
BNTR - Juvenile	-4.02%	-5.39%	-6.77%
WALL - Adult	1.62%	2.11%	2.54%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-19.75%	-25.86%	-28.05%
MNWH - Juvenile	-15.28%	-20.35%	-22.87%
BNTR - Adult	-15.99%	-21.24%	-22.18%
BNTR - Juvenile	-12.35%	-16.47%	-18.00%
WALL - Adult	-20.07%	-25.92%	-31.29%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-4.55%	-5.91%	-7.19%
MNWH - Juvenile	-4.67%	-6.30%	-7.92%
BNTR - Adult	-2.28%	-2.73%	-2.95%
BNTR - Juvenile	-1.60%	-2.15%	-2.92%
WALL - Adult	1.65%	2.17%	2.77%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-9.93%	-12.75%	-14.22%
MNWH - Juvenile	-8.34%	-10.48%	-11.61%
BNTR - Adult	-4.19%	-5.11%	-5.72%
BNTR - Juvenile	-4.52%	-5.52%	-6.63%
WALL - Adult	1.20%	1.43%	2.28%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	15%	20%	25%
MNWH - Adult	-12.39%	-16.47%	-19.90%
MNWH - Juvenile	-10.74%	-14.56%	-17.95%
BNTR - Adult	-7.38%	-9.83%	-12.32%
BNTR - Juvenile	-7.06%	-9.54%	-12.04%
WALL - Adult	-0.22%	-0.26%	-0.37%

St. Mary River (SM1) IFN = 40% reduction from natural with EBF

Stripped Weeks (14-17, 31-44)

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-3.82%	-4.56%	-5.31%
MNWH - Juvenile	-5.03%	-5.83%	-6.62%
BNTR - Adult	1.35%	1.30%	1.18%
BNTR - Juvenile	-1.10%	-1.42%	-1.76%
RNTR - Adult	-0.33%	-0.63%	-1.00%
MNWH - Fry	4.78%	5.23%	5.61%
WALL - Adult	13.18%	14.86%	16.36%
WALL - Juvenile	15.17%	17.15%	18.96%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-2.59%	-2.71%	-2.79%
MNWH - Juvenile	-3.56%	-3.72%	-3.79%
BNTR - Adult	3.14%	3.37%	3.56%
BNTR - Juvenile	-0.37%	-0.37%	-0.38%
RNTR - Adult	1.05%	1.16%	1.26%
MNWH - Fry	7.23%	7.86%	8.36%
WALL - Adult	24.78%	28.00%	30.76%
WALL - Juvenile	29.33%	33.39%	36.92%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-6.50%	-7.90%	-9.33%
MNWH - Juvenile	-7.75%	-9.18%	-10.59%
BNTR - Adult	-1.52%	-2.01%	-2.57%
BNTR - Juvenile	-3.11%	-3.81%	-4.53%
RNTR - Adult	-3.07%	-3.95%	-4.91%
MNWH - Fry	0.84%	0.83%	0.81%
WALL - Adult	4.96%	5.15%	5.26%
WALL - Juvenile	6.28%	6.50%	6.61%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-4.63%	-5.43%	-6.24%
MNWH - Juvenile	-5.76%	-6.60%	-7.39%
BNTR - Adult	0.74%	0.59%	0.38%
BNTR - Juvenile	-1.76%	-2.13%	-2.51%
RNTR - Adult	-1.08%	-1.49%	-1.95%
MNWH - Fry	3.92%	4.21%	4.45%
WALL - Adult	13.54%	15.05%	16.32%
WALL - Juvenile	15.99%	17.84%	19.41%

BSP1 - WEEKS (14-22) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	10.44%	11.83%	13.08%
MNWH - Juvenile	8.78%	9.81%	10.67%
BNTR - Adult	10.18%	11.70%	13.17%
BNTR - Juvenile	9.58%	10.98%	12.28%
RNTR - Adult	10.54%	12.13%	13.66%
MNWH - Fry	13.64%	15.88%	18.11%
WALL - Adult	14.76%	17.36%	20.02%
WALL - Juvenile	15.57%	18.33%	21.15%
WALL - Spawning	19.05%	21.73%	24.24%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	15.48%	18.17%	21.07%
MNWH - Juvenile	13.80%	16.11%	18.57%
BNTR - Adult	13.87%	16.44%	19.24%
BNTR - Juvenile	12.94%	15.38%	18.00%
RNTR - Adult	14.07%	16.86%	19.95%
MNWH - Fry	18.03%	21.53%	25.35%
WALL - Adult	23.56%	28.31%	33.44%
WALL - Juvenile	25.61%	30.96%	36.66%
WALL - Spawning	31.04%	37.19%	44.28%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	7.91%	8.34%	8.28%
MNWH - Juvenile	5.75%	5.69%	5.17%
BNTR - Adult	9.27%	10.17%	10.75%
BNTR - Juvenile	8.48%	9.18%	9.48%
RNTR - Adult	9.90%	10.79%	11.29%
MNWH - Fry	12.47%	14.03%	15.23%
WALL - Adult	11.99%	13.51%	14.79%
WALL - Juvenile	12.65%	14.14%	15.39%
WALL - Spawning	15.92%	17.01%	17.21%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	11.26%	12.69%	13.93%
MNWH - Juvenile	9.32%	10.32%	11.12%
BNTR - Adult	11.36%	13.02%	14.61%
BNTR - Juvenile	10.51%	12.01%	13.38%
RNTR - Adult	11.78%	13.54%	15.20%
MNWH - Fry	14.97%	17.40%	19.77%
WALL - Adult	16.84%	19.71%	22.60%
WALL - Juvenile	17.97%	21.04%	24.11%
WALL - Spawning	21.63%	24.66%	27.45%

South Saskatchewan River Basin Instream Flow Needs Determination

BSP2 - WEEKS (23-39) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	7.24%	8.28%	9.29%
MNWH - Juvenile	5.99%	6.84%	7.64%
BNTR - Adult	7.48%	8.64%	9.77%
BNTR - Juvenile	6.73%	7.77%	8.78%
RNTR - Adult	7.42%	8.57%	9.70%
MNWH - Fry	10.47%	12.09%	13.69%
WALL - Adult	13.00%	14.99%	16.91%
WALL - Juvenile	14.12%	16.28%	18.37%

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	11.81%	14.26%	16.81%
MNWH - Juvenile	10.80%	12.95%	15.25%
BNTR - Adult	9.60%	11.64%	13.82%
BNTR - Juvenile	9.28%	11.29%	13.45%
RNTR - Adult	9.77%	11.93%	14.30%
MNWH - Fry	12.90%	15.34%	18.02%
WALL - Adult	20.18%	23.57%	26.89%
WALL - Juvenile	22.65%	26.53%	30.30%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	4.54%	4.65%	4.59%
MNWH - Juvenile	3.14%	3.10%	2.85%
BNTR - Adult	6.65%	7.25%	7.63%
BNTR - Juvenile	5.64%	6.06%	6.30%
RNTR - Adult	6.46%	6.95%	7.23%
MNWH - Fry	9.61%	10.71%	11.56%
WALL - Adult	9.28%	10.24%	11.04%
WALL - Juvenile	9.98%	10.94%	11.71%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	7.81%	8.96%	10.07%
MNWH - Juvenile	6.58%	7.52%	8.41%
BNTR - Adult	8.02%	9.28%	10.49%
BNTR - Juvenile	7.33%	8.47%	9.60%
RNTR - Adult	7.99%	9.24%	10.47%
MNWH - Fry	11.13%	12.84%	14.53%
WALL - Adult	14.10%	16.13%	18.04%
WALL - Juvenile	15.49%	17.72%	19.79%

BSP3 - WEEKS (40-44) ANALYSIS

TOTAL MEAN HABITAT CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-6.15%	-7.14%	-8.15%
MNWH - Juvenile	-6.14%	-7.07%	-7.97%
BNTR - Adult	-1.45%	-1.81%	-2.22%
BNTR - Juvenile	-2.55%	-3.00%	-3.45%
RNTR - Adult	-3.49%	-4.16%	-4.87%
MNWH - Fry	2.35%	2.53%	2.67%
WALL - Adult	8.86%	9.93%	10.88%
WALL - Juvenile	10.34%	11.59%	12.73%
MNWH - Spawning	-9.49%	-10.94%	-12.36%

South Saskatchewan River Basin Instream Flow Needs Determination

50-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-5.35%	-5.48%	-5.50%
MNWH - Juvenile	-4.71%	-4.81%	-4.83%
BNTR - Adult	-0.89%	-0.87%	-0.81%
BNTR - Juvenile	-1.98%	-2.03%	-2.03%
RNTR - Adult	-3.18%	-3.25%	-3.27%
MNWH - Fry	2.93%	3.17%	3.34%
WALL - Adult	15.26%	16.89%	18.26%
WALL - Juvenile	18.78%	20.81%	22.57%
MNWH - Spawning	-8.72%	-8.92%	-8.96%

10-50% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-8.54%	-10.39%	-12.32%
MNWH - Juvenile	-8.81%	-10.47%	-12.10%
BNTR - Adult	-3.18%	-4.03%	-4.96%
BNTR - Juvenile	-4.20%	-5.11%	-6.03%
RNTR - Adult	-5.42%	-6.82%	-8.30%
MNWH - Fry	-0.29%	-0.39%	-0.48%
WALL - Adult	2.19%	2.34%	2.42%
WALL - Juvenile	2.75%	2.86%	2.91%
MNWH - Spawning	-12.21%	-14.75%	-17.28%

10-90% HABITAT EXCEEDENCE CHANGE FROM NATURAL FOR ALL WEEKS

	35%	40%	45%
MNWH - Adult	-7.03%	-8.09%	-9.16%
MNWH - Juvenile	-6.88%	-7.83%	-8.72%
BNTR - Adult	-2.04%	-2.47%	-2.93%
BNTR - Juvenile	-3.11%	-3.61%	-4.09%
RNTR - Adult	-4.31%	-5.09%	-5.89%
MNWH - Fry	1.30%	1.36%	1.40%
WALL - Adult	8.15%	8.98%	9.65%
WALL - Juvenile	9.91%	10.87%	11.69%
MNWH - Spawning	-10.59%	-12.10%	-13.54%

MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL FOR ALL HABITAT EXCEEDENCES

	35%	40%	45%
MNWH - Adult	-7.09%	-8.32%	-9.58%
MNWH - Juvenile	-6.72%	-7.83%	-8.96%
BNTR - Adult	-2.37%	-2.76%	-3.38%
BNTR - Juvenile	-2.98%	-3.38%	-3.84%
RNTR - Adult	-4.43%	-5.31%	-6.26%
MNWH - Fry	1.46%	1.57%	1.67%
WALL - Adult	-4.67%	-5.45%	-6.40%
WALL - Juvenile	-5.71%	-6.57%	-7.68%
WALL - Spawning	-12.77%	-15.54%	-18.63%
MNWH - Spawning	-11.17%	-13.05%	-14.96%

MAXIMUM INSTANTANEOUS PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-15.19%	-17.33%	-19.04%
MNWH - Juvenile	-12.33%	-13.87%	-15.16%
BNTR - Adult	-9.99%	-11.13%	-11.83%
BNTR - Juvenile	-6.92%	-7.96%	-8.74%
RNTR - Adult	-13.55%	-15.45%	-16.73%
MNWH - Fry	-3.03%	-3.13%	-3.14%
WALL - Adult	-11.48%	-11.76%	-11.85%
WALL - Juvenile	-13.72%	-13.92%	-13.99%
WALL - Spawning	-37.60%	-41.42%	-43.38%
MNWH - Spawning	-21.88%	-24.48%	-26.51%

MAXIMUM YEARLY PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-3.22%	-3.57%	-3.85%
MNWH - Juvenile	-3.71%	-4.04%	-4.29%
BNTR - Adult	-0.54%	-0.54%	-0.58%
BNTR - Juvenile	-1.38%	-1.58%	-1.73%
RNTR - Adult	-1.43%	-1.66%	-1.86%
MNWH - Fry	1.56%	1.57%	1.57%
WALL - Adult	3.04%	3.04%	3.04%
WALL - Juvenile	3.24%	3.24%	3.24%
WALL - Spawning	-5.14%	-5.04%	-4.83%
MNWH - Spawning	-16.81%	-18.41%	-19.98%

50-90% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-7.40%	-7.82%	-8.08%
MNWH - Juvenile	-6.47%	-6.78%	-7.19%
BNTR - Adult	-2.20%	-2.10%	-2.10%
BNTR - Juvenile	-2.59%	-2.75%	-2.95%
RNTR - Adult	-4.51%	-4.76%	-4.97%
MNWH - Fry	2.00%	2.03%	2.03%
WALL - Adult	-6.87%	-7.19%	-7.34%
WALL - Juvenile	-8.70%	-8.98%	-9.09%
WALL - Spawning	-16.30%	-19.55%	-21.90%
MNWH - Spawning	-12.64%	-13.28%	-13.40%

10-50% HABITAT EXCEEDENCE MAXIMUM WEEKLY PERCENT CHANGE FROM NATURAL

	35%	40%	45%
MNWH - Adult	-9.91%	-11.39%	-13.69%
MNWH - Juvenile	-9.05%	-10.60%	-12.70%
BNTR - Adult	-4.20%	-5.00%	-6.48%
BNTR - Juvenile	-5.35%	-6.17%	-6.84%
RNTR - Adult	-7.16%	-8.40%	-10.01%
MNWH - Fry	-0.71%	-0.98%	-1.30%
WALL - Adult	-5.15%	-6.15%	-8.27%
WALL - Juvenile	-6.60%	-7.90%	-9.65%
WALL - Spawning	-13.90%	-16.89%	-21.09%
MNWH - Spawning	-12.79%	-15.89%	-19.35%