

LIBBY PROJECT INFLOW FORECAST, KAF 09 APR 2001

| FORECAST DATE | 1 Jan | 1 Feb | 1 Mar | 1 Apr |
|---------------------------------|-------|-------|-------|-------|
| FORECAST'S KAF | | | | |
| Apr-Aug runoff, Fort Steele | 1841 | 1048 | 1902 | 1907 |
| Apr-Aug runoff, Libby Local | 2415 | 2435 | 1464 | 1415 |
| ----- | | | | |
| Apr-Aug runoff, Libby inflow | 4764 | 3936 | 3366 | 3322 |
| Apr-Aug norm, 6376.8, 1961-1990 | 74.7% | 61.7% | 52.8% | 52.1% |
| Apr-Jul runoff | 4317 | 3567 | 3050 | 3011 |
| May-Jul runoff | 3960 | 3272 | 2798 | 2762 |
| Jan-Jul runoff | 4936 | 4138 | 3576 | 3484 |
| Date-Jul runoff | 4936 | 3984 | 3275 | 3017 |
| Date-Jul standard error | 1069 | 731 | 666 | 643 |
| Date-Jul confidence limit, 1. | 1759 | 1202 | 1096 | 1058 |
| Date-Jul 95% confidence | 3178 | 2781 | 2180 | 1960 |
| Date-Jul 5% confidence | 6695 | 5186 | 4371 | 4075 |

| | | | | |
|--------------------------|--------|--------|--------|--------|
| FLOOD CONTROL, DRAFT BY: | 31 Jan | 28 Feb | 15 Mar | 31 Mar |
| required draft, KAF | 1840.5 | 1048.3 | 500.0 | 500.0 |
| required elevation, FT | 2415.3 | 2435.3 | 2448.0 | 2448.0 |

| FORECAST COMPONENT SUMMARY | FRO | WP | WP+NS | SWE | SWE+NS | NSSPW | INT | TOTAL |
|--|-------|-------|-------|------|--------|-------|--------|-------|
| FORT STEELE, B.C., (FS) | 0.995 | 38.04 | 38.04 | 66.5 | 66.5 | 29.20 | | |
| inches=(fro(1.309)+wp(0.068)+swe(0.067)+sp(0.167))-5.114 | | | | | | | | |
| inches | 1.302 | | 2.587 | | 4.456 | 4.876 | -5.114 | 8.107 |
| inches*235.2=kaf | | | | | | | | 1907 |
| LIBBY LOCAL, (LL) | 0.898 | 37.88 | 37.88 | 43.6 | 43.6 | 25.62 | | |
| inches=(fro(0.921)+wp(0.086)+swe(0.046)+sp(0.152))-4.183 | | | | | | | | |
| inches | 0.827 | | 3.258 | | 2.006 | 3.894 | -4.183 | 5.801 |
| inches*244.0=kaf | | | | | | | | 1415 |

TERM DEFINITION
 fall runoff is FRO
 winter precip is WP
 normal subsequent is NS
 snow water equivalent is SWE
 normal subsequent spring precip(weighted) is NSSPW
 equation constant, or, y-INTERCEPT is INT

| OBSERVED DATA, usage, FS=Fort Steele, LL=Libby Local | | | | | | | |
|--|------------|------|------|------|------|------|------|
| WINTER PRECIP(WP), inches | | Oct | Nov | Dec | Jan | Feb | Mar |
| Banff | FS | 0.30 | 0.37 | 0.45 | 0.17 | 0.77 | 0.52 |
| Brisco | FS | 0.50 | 0.60 | 1.29 | 0.26 | 0.41 | 0.42 |
| Fernie | LL | 2.79 | 3.32 | 4.43 | 1.29 | 2.25 | 2.69 |
| Kaslo | FS | 1.69 | 0.70 | 2.66 | 0.50 | 0.15 | 0.98 |
| Rogers Pass | FS | 3.00 | 3.10 | 5.60 | 4.40 | 4.40 | 4.80 |
| Fortine | LL | 0.72 | 0.65 | 0.84 | 0.31 | 0.33 | 0.47 |
| Libby RS | LL | 0.33 | 1.28 | 1.33 | 0.88 | 0.89 | 0.83 |
| Bonnars Ferry | LL | 1.65 | 1.04 | 1.59 | 0.67 | 0.26 | 0.34 |
| Polebridge | LL | 1.10 | 0.80 | 2.40 | 0.80 | 0.70 | 0.90 |
| NOW WATER EQUIVALENT(SWE), inches | | Oct | Nov | Dec | Jan | Feb | Mar |
| Glacier | FS | | | 7.5 | 12.2 | 14.9 | 19.1 |
| Kicking Horse | FS | | | 3.0 | 4.0 | 5.5 | 7.0 |
| Kimberly | LL | | | 1.6 | 0.1 | 0.0 | 3.0 |
| Marble Canyon | FS | | | 2.9 | 4.2 | 6.0 | 7.6 |
| Mirror Lake | FS | | | 2.5 | 3.1 | 4.8 | 6.2 |
| Morrissey Ridge | FS & LL*.5 | | | 4.8 | 6.8 | 9.1 | 14.2 |
| New Fernie | FS & LL | | | 3.1 | 3.5 | 4.6 | 6.1 |
| Sullivan Mine | FS & LL | | | 2.8 | 4.0 | 4.8 | 6.3 |
| Red Mtn. | LL | | | 3.5 | 2.5 | 5.6 | 8.8 |
| Weisel Divide | LL | | | 6.4 | 9.2 | 11.4 | 12.3 |

| FALL RUNOFF(FRO), kaf | | Oct | Nov | SUM |
|-----------------------|---------|-----|-----|-----|
| Fort Steele | f=235.2 | 148 | 86 | 234 |
| Libby local | f=244.0 | 118 | 101 | 219 |

f=, is to convert from basin inches to acre feet(x), or acre feet to basin inches(/).

| LIBBY INFLOW, kaf | | Oct | Nov | Dec | Jan | Feb | Mar |
|-------------------|--|-----|-----|-----|-----|-----|-----|
| | | 266 | 187 | 166 | 154 | 147 | 166 |