

I.4-DATATYPE-TS CALIBRATION SYSTEM HISTORICAL DATA AND OPERATIONAL FORECAST SYSTEM PROCESSED DATA BASE DATA TYPE CODES

The time series data type codes are used to describe the attributes of the time series data stored in the Calibration System historical data files and the Operational Forecast System Processed Data Base.

The following tables are included in this Chapter:

- o data types sorted by description
- o data types sorted by type code
- o data types and their attributes
- o Forecast Component data type codes

The following headings and abbreviations are used in the tables:

- o APPL Code (application code - system that can use data type):
 - CALB = Calibration system only
 - FCST = Forecast system only
 - BOTH = Calibration and Forecast systems
- o Description (description of data type)
- o DIMN Code (data dimensions code)
- o MISS ALLOW (missing allowed indicator)
- o NPER (number of values per time interval)
- o PROC Code (code for component that can write data type):
 - PP = Preprocessor Component
 - FC = Forecast Component
- o SPAC Code (spacial code):
 - A = areal
 - P = point
 - A/P = areal or point
- o FCST Unit (units in which Forecast Component does computations)
- o Time Code:
 - ACCM = accumulated
 - MEAN = mean average
 - INST = instantaneous
- o Type Code (data type code)

Table 1. Data types sorted by description

Type Code	Description	APPL Code
TIDE	ADJUSTED TIDE OBSERVED+PROJECTED INSTANTANEOUS	BOTH
MAT	AIR TEMPERATURE AREAL MEAN	BOTH
TAMX	AIR TEMPERATURE MAXIMUM	BOTH
TAMN	AIR TEMPERATURE MINIMUM	BOTH
TAIN	AIR TEMPERATURE POINT INSTANTANEOUS	CALB
TAVG	AIR TEMPERATURE POINT MEAN	BOTH
AEIS	ANTECEDENT EVAPORATION INDEX	BOTH
AFAI	ANTECEDENT FLOW INDEX FUNCTION GLACIER	BOTH
AIAI	ANTECEDENT INDEX	BOTH
APIS	ANTECEDENT PRECIPITATION INDEX	BOTH
ATI	ANTECEDENT TEMPERATURE INDEX	BOTH
MAPI	API AREAL MEAN	FCST
APIC	API-CONT MODEL CONTENTS API, AI, SMI, BFSC, BFI	FCST
KP	ASSIMILATOR PRECIPITATION MULTIPLIER	FCST
SKYI	CLOUD COVER INSTANTANEOUS	CALB
SKYM	CLOUD COVER MIDNIGHT-MIDNIGHT MEAN	CALB
SKYD	CLOUD COVER SUNRISE-SUNSET MEAN	CALB
CVX	COEFFICIENT OF VARIATION INSTANTANEOUS	BOTH
TDIN	DEW-POINT POINT INSTANTANEOUS	CALB
TDME	DEW-POINT POINT MEAN	CALB
DFAC	DIMENSIONLESS FACTOR SIMULATED INSTANTANEOUS	BOTH
DQIE	DIVERSION FLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
DQIN	DIVERSION FLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
DQMP	DIVERSION FLOW OBSERVED+PROJECTED MEAN	BOTH
DQME	DIVERSION FLOW OBSERVED+PROJECTED MEAN	BOTH
SDQI	DIVERSION FLOW SIMULATED INSTANTANEOUS	BOTH
SDQM	DIVERSION FLOW SIMULATED MEAN	BOTH
PCFD	DIVERTED FLOW FROM CHANNEL PERCENT	BOTH
EPL	EVAPORATION LAKE	CALB
EPAN	EVAPORATION PAN	CALB
MAPE	EVAPOTRANSPIRATION POTENTIAL AREAL MEAN	BOTH
MOPE	EVAPOTRANSPIRATION POTENTIAL FROM MONTHLY MEAN	BOTH
PTPE	EVAPOTRANSPIRATION POTENTIAL POINT	BOTH
NFBD	FLASH BOARDS DOWN NUMBER OBSERVED+PROJECTED	BOTH
ZELV	FREEZING LEVEL OBSERVED+PROJECTED	BOTH
FGDP	FROST DEPTH OBSERVED	FCST
FEIX	FROST EFFICIENCY INDEX SIMULATED	BOTH
FGIX	FROST INDEX SIMULATED INSTANTANEOUS	BOTH
GCS	GATE CONTROL SWITCH	BOTH
GTCS	GATE CONTROL SWITCH	BOTH
GATE	GATE OPENINGS OBSERVED+PROJECTED	BOTH
GOUT	GLACIER OUTFLOW MELT	BOTH
MAPG	GRID PRECIPITATION AREAL MEAN	FCST
MAPX	GRIDDED PRECIPITATION AREAL MEAN	FCST
HDAT	HOURS TO DATE OF AN OBSERVATION	FCST
ICET	ICE THICKNESS OBSERVED	FCST
LELV	LAKE ELEVATION OBSERVED	BOTH
LAKH	LAKE HEIGHT OBSERVED	BOTH
TID	OBSERVED TIDE OBSERVED INSTANTANEOUS	BOTH
OPKS	PEAK WITHIN FIXED WINDOW OBSERVED	FCST

Table 1. Data types sorted by description

Type Code	Description	APPL Code
SPKS	PEAK WITHIN FIXED WINDOW SIMULATED	FCST
RQGM	POWER GENERATION OBSERVED MEAN	BOTH
MAP	PRECIPITATION AREAL MEAN	BOTH
PTPX	PRECIPITATION POINT MISSING ALLOWED	BOTH
PTPP	PRECIPITATION POINT MISSING NOT ALLOWED	BOTH
RAIM	PRECIPITATION RAIN+MELT	BOTH
PTPS	PRECIPITATION SNOWFALL (FRACTION)	BOTH
RADL	RADIATION ATMOSPHERIC LONGWAVE POINT	CALB
RADS	RADIATION INCOMING SOLAR POINT	CALB
RADN	RADIATION NET POINT	CALB
RADR	RADIATION REFLECTED SOLAR POINT	CALB
RADT	RADIATION TOTAL HEMISPHERIC	CALB
RSEL	RAIN-SNOW ELEVATION	BOTH
BFR	RECESSION COEFFICIENT BASEFLOW	FCST
FBEL	RESERVOIR FOREBAY ELEVATION OBSERVED	BOTH
RQIN	RESERVOIR INFLOW OBSERVED INSTANTANEOUS	BOTH
RQIM	RESERVOIR INFLOW OBSERVED MEAN	BOTH
RQIE	RESERVOIR OUTFLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
RQOT	RESERVOIR OUTFLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
RQMP	RESERVOIR OUTFLOW OBSERVED+PROJECTED MEAN	BOTH
RQME	RESERVOIR OUTFLOW OBSERVED+PROJECTED MEAN	BOTH
RQSW	RESERVOIR OUTFLOW SPILLWAY OBSERVED	BOTH
PELE	RESERVOIR POOL ELEVATION ADJUSTED	BOTH
PELV	RESERVOIR POOL ELEVATION OBSERVED	BOTH
SPEL	RESERVOIR POOL STAGE SIMULATED	BOTH
RSTE	RESERVOIR STORAGE ADJUSTED	BOTH
CSTO	RESERVOIR STORAGE CHANGE	BOTH
RSTO	RESERVOIR STORAGE OBSERVED	BOTH
SRSO	RESERVOIR STORAGE SIMULATED	BOTH
QINE	RIVER DISCHARGE ADJUSTED INSTANTANEOUS	BOTH
AQME	RIVER DISCHARGE ADJUSTED MEAN	BOTH
QINH	RIVER DISCHARGE COMPUTED FROM STAGE INSTANTANEOUS	BOTH
QIN	RIVER DISCHARGE OBSERVED INSTANTANEOUS	BOTH
QME	RIVER DISCHARGE OBSERVED MEAN	BOTH
SQIB	RIVER DISCHARGE SIM-INST BEGINNING OF PERIOD	BOTH
SQIE	RIVER DISCHARGE SIM-INST END OF PERIOD	BOTH
SQIN	RIVER DISCHARGE SIMULATED INSTANTANEOUS	BOTH
SQME	RIVER DISCHARGE SIMULATED MEAN	BOTH
STGE	RIVER STAGE ADJUSTED	BOTH
STG	RIVER STAGE OBSERVED	BOTH
SSTG	RIVER STAGE SIMULATED	BOTH
SVIN	RIVER VELOCITY SIMULATED MEAN	BOTH
MARO	RUNOFF AREAL MEAN	FCST
ROCL	RUNOFF COMPONENTS (SAC)	FCST
GWRO	RUNOFF GROUNDWATER (BASEFLOW)	FCST
INFW	RUNOFF INFLOW TO CHANNEL	BOTH
SURO	RUNOFF STORM	FCST
PSRO	RUNOFF SURFACE PERCENT	BOTH
STID	SIMULATED TIDE NOS GENERATED INSTANTANEOUS	BOTH
PLDS	SIMULATED VALUE AT FIXED LEAD	FCST

Table 1. Data types sorted by description

Type Code	Description	APPL Code
AESC	SNOW COVER AREAL EXTENT OBSERVED	BOTH
SASC	SNOW COVER AREAL EXTENT SIMULATED	BOTH
SNOG	SNOW COVER DEPTH OBSERVED	BOTH
SNSG	SNOW COVER DEPTH SIMULATED	BOTH
SCOT	SNOW COVER OUTFLOW	CALB
TSIN	SNOW COVER TEMPERATURE POINT-INSTANTANEOUS	CALB
MAWE	SNOW COVER WATER EQUIVALENT AREAL MEAN	BOTH
SNWE	SNOW COVER WATER EQUIVALENT OBSERVED	BOTH
SWE	SNOW COVER WATER EQUIVALENT SIMULATED	BOTH
SNOF	SNOWFALL DEPTH OBSERVED	BOTH
SMZC	SOIL MOISTURE STORAGE (SAC)	FCST
VSQI	STANDARD ERROR DISCHARGE SIMULATED INSTANTANEOUS	BOTH
VSQM	STANDARD ERROR DISCHARGE SIMULATED MEAN	BOTH
SUNH	SUNSHINE DURATION-HOURS	CALB
SUNP	SUNSHINE PERCENT	CALB
TWEL	TAIL WATER STAGE OBSERVED	BOTH
STW	TAIL WATER STAGE SIMULATED	BOTH
TWSW	TAILWATER STAGE SPILLWAY OBSERVED	BOTH
VWE	VARIANCE WATER EQUIVALENT OBSERVED	BOTH
VWES	VARIANCE WATER EQUIVALENT SIMULATED	BOTH
TPMX	WATER TEMPERATURE PAN MAXIMUM	CALB
TPMN	WATER TEMPERATURE PAN MINIMUM	CALB
TWIN	WATER TEMPERATURE STREAM	CALB
UDIR	WIND DIRECTION	CALB
UVEL	WIND SPEED INSTANTANEOUS	CALB
UAVG	WIND SPEED MEAN	CALB
UDIS	WIND TRAVEL POINT	CALB
ZRX	ZERO RAIN FRACTION INSTANTANEOUS	BOTH

Table 2. Data types sorted by type code

Type Code	Description	APPL Code
AEIS	ANTECEDENT EVAPORATION INDEX	BOTH
AESC	SNOW COVER AREAL EXTENT OBSERVED	BOTH
AFAI	ANTECEDENT FLOW INDEX FUNCTION GLACIER	BOTH
AIAI	ANTECEDENT INDEX	BOTH
APIC	API-CONT MODEL CONTENTS API, AI, SMI, BFSC, BFI	FCST
APIS	ANTECEDENT PRECIPITATION INDEX	BOTH
AQME	RIVER DISCHARGE ADJUSTED MEAN	BOTH
ATI	ANTECEDENT TEMPERATURE INDEX	BOTH
BFR	RECESSION COEFFICIENT BASEFLOW	FCST
CSTO	RESERVOIR STORAGE CHANGE	BOTH
CVX	COEFFICIENT OF VARIATION INSTANTANEOUS	BOTH
DFAC	DIMENSIONLESS FACTOR SIMULATED INSTANTANEOUS	BOTH
DQIE	DIVERSION FLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
DQIN	DIVERSION FLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
DQME	DIVERSION FLOW OBSERVED+PROJECTED MEAN	BOTH
DQMP	DIVERSION FLOW OBSERVED+PROJECTED MEAN	BOTH
EPAN	EVAPORATION PAN	CALB
EPL	EVAPORATION LAKE	CALB
FBEL	RESERVOIR FOREBAY ELEVATION OBSERVED	BOTH
FEIX	FROST EFFICIENCY INDEX SIMULATED	BOTH
FGDP	FROST DEPTH OBSERVED	FCST
FGIX	FROST INDEX SIMULATED INSTANTANEOUS	BOTH
GATE	GATE OPENINGS OBSERVED+PROJECTED	BOTH
GCS	GATE CONTROL SWITCH	BOTH
GOUT	GLACIER OUTFLOW MELT	BOTH
GTCS	GATE CONTROL SWITCH	BOTH
GWRO	RUNOFF GROUNDWATER (BASEFLOW)	FCST
HDAT	HOURS TO DATE OF AN OBSERVATION	FCST
ICET	ICE THICKNESS OBSERVED	FCST
INFW	RUNOFF INFLOW TO CHANNEL	BOTH
KP	ASSIMILATOR PRECIPITATION MULTIPLIER	FCST
LAKH	LAKE HEIGHT OBSERVED	BOTH
LELV	LAKE ELEVATION OBSERVED	BOTH
MAP	PRECIPITATION AREAL MEAN	BOTH
MAPE	EVAPOTRANSPIRATION POTENTIAL AREAL MEAN	BOTH
MAPG	GRID PRECIPITATION AREAL MEAN	FCST
MAPI	API AREAL MEAN	FCST
MAPX	GRIDDED PRECIPITATION AREAL MEAN	FCST
MARO	RUNOFF AREAL MEAN	FCST
MAT	AIR TEMPERATURE AREAL MEAN	BOTH
MAWE	SNOW COVER WATER EQUIVALENT AREAL MEAN	BOTH
MOPE	EVAPOTRANSPIRATION POTENTIAL FROM MONTHLY MEAN	BOTH
NFBD	FLASH BOARDS DOWN NUMBER OBSERVED+PROJECTED	BOTH
OPKS	PEAK WITHIN FIXED WINDOW OBSERVED	FCST
PCFD	DIVERTED FLOW FROM CHANNEL PERCENT	BOTH
PELE	RESERVOIR POOL ELEVATION ADJUSTED	BOTH
PELV	RESERVOIR POOL ELEVATION OBSERVED	BOTH
PLDS	SIMULATED VALUE AT FIXED LEAD	FCST
PSRO	RUNOFF SURFACE PERCENT	BOTH
PTPE	EVAPOTRANSPIRATION POTENTIAL POINT	BOTH

Table 2. Data types sorted by type code

Type Code	Description	APPL Code
PTPP	PRECIPITATION POINT MISSING NOT ALLOWED	BOTH
PTPS	PRECIPITATION SNOWFALL (FRACTION)	BOTH
PTPX	PRECIPITATION POINT MISSING ALLOWED	BOTH
QIN	RIVER DISCHARGE OBSERVED INSTANTANEOUS	BOTH
QINE	RIVER DISCHARGE ADJUSTED INSTANTANEOUS	BOTH
QINH	RIVER DISCHARGE COMPUTED FROM STAGE INSTANTANEOUS	BOTH
QME	RIVER DISCHARGE OBSERVED MEAN	BOTH
RADL	RADIATION ATMOSPHERIC LONGWAVE POINT	CALB
RADN	RADIATION NET POINT	CALB
RADR	RADIATION REFLECTED SOLAR POINT	CALB
RADS	RADIATION INCOMING SOLAR POINT	CALB
RADT	RADIATION TOTAL HEMISPHERIC	CALB
RAIM	PRECIPITATION RAIN+MELT	BOTH
ROCL	RUNOFF COMPONENTS (SAC)	FCST
RQGM	POWER GENERATION OBSERVED MEAN	BOTH
RQIE	RESERVOIR OUTFLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
RQIM	RESERVOIR INFLOW OBSERVED MEAN	BOTH
RQIN	RESERVOIR INFLOW OBSERVED INSTANTANEOUS	BOTH
RQME	RESERVOIR OUTFLOW OBSERVED+PROJECTED MEAN	BOTH
RQMP	RESERVOIR OUTFLOW OBSERVED+PROJECTED MEAN	BOTH
RQOT	RESERVOIR OUTFLOW OBSERVED+PROJECTED INSTANTANEOUS	BOTH
RQSW	RESERVOIR OUTFLOW SPILLWAY OBSERVED	BOTH
RSEL	RAIN-SNOW ELEVATION	BOTH
RSTE	RESERVOIR STORAGE ADJUSTED	BOTH
RSTO	RESERVOIR STORAGE OBSERVED	BOTH
SASC	SNOW COVER AREAL EXTENT SIMULATED	BOTH
SCOT	SNOW COVER OUTFLOW	CALB
SDQI	DIVERSION FLOW SIMULATED INSTANTANEOUS	BOTH
SDQM	DIVERSION FLOW SIMULATED MEAN	BOTH
SKYD	CLOUD COVER SUNRISE-SUNSET MEAN	CALB
SKYI	CLOUD COVER INSTANTANEOUS	CALB
SKYM	CLOUD COVER MIDNIGHT-MIDNIGHT MEAN	CALB
SMZC	SOIL MOISTURE STORAGES (SAC)	FCST
SNOF	SNOWFALL DEPTH OBSERVED	BOTH
SNOG	SNOW COVER DEPTH OBSERVED	BOTH
SNSG	SNOW COVER DEPTH SIMULATED	BOTH
SNWE	SNOW COVER WATER EQUIVALENT OBSERVED	BOTH
SPEL	RESERVOIR POOL STAGE SIMULATED	BOTH
SPKS	PEAK WITHIN FIXED WINDOW SIMULATED	FCST
SQIB	RIVER DISCHARGE SIM-INST BEGINNING OF PERIOD	BOTH
SQIE	RIVER DISCHARGE SIM-INST END OF PERIOD	BOTH
SQIN	RIVER DISCHARGE SIMULATED INSTANTANEOUS	BOTH
SQME	RIVER DISCHARGE SIMULATED MEAN	BOTH
SRSO	RESERVOIR STORAGE SIMULATED	BOTH
SSTG	RIVER STAGE SIMULATED	BOTH
STG	RIVER STAGE OBSERVED	BOTH
STGE	RIVER STAGE ADJUSTED	BOTH
STID	SIMULATED TIDE NOS GENERATED INSTANTANEOUS	BOTH
STW	TAIL WATER STAGE SIMULATED	BOTH
SUNH	SUNSHINE DURATION-HOURS	CALB

Table 2. Data types sorted by type code

Type Code	Description	APPL Code
SUNP	SUNSHINE PERCENT	CALB
SURO	RUNOFF STORM	FCST
SVIN	RIVER VELOCITY SIMULATED MEAN	BOTH
SWE	SNOW COVER WATER EQUIVALENT SIMULATED	BOTH
TAIN	AIR TEMPERATURE POINT INSTANTANEOUS	CALB
TAMN	AIR TEMPERATURE MINIMUM	BOTH
TAMX	AIR TEMPERATURE MAXIMUM	BOTH
TAVG	AIR TEMPERATURE POINT MEAN	BOTH
TDIN	DEW-POINT POINT INSTANTANEOUS	CALB
TDME	DEW-POINT POINT MEAN	CALB
TID	OBSERVED TIDE OBSERVED INSTANTANEOUS	BOTH
TIDE	ADJUSTED TIDE OBSERVED+PROJECTED INSTANTANEOUS	BOTH
TPMN	WATER TEMPERATURE PAN MINIMUM	CALB
TPMX	WATER TEMPERATURE PAN MAXIMUM	CALB
TSIN	SNOW COVER TEMPERATURE POINT-INSTANTANEOUS	CALB
TWEL	TAIL WATER STAGE OBSERVED	BOTH
TWIN	WATER TEMPERATURE STREAM	CALB
TWSW	TAILWATER STAGE SPILLWAY OBSERVED	BOTH
UAVG	WIND SPEED MEAN	CALB
UDIR	WIND DIRECTION	CALB
UDIS	WIND TRAVEL POINT	CALB
UVEL	WIND SPEED INSTANTANEOUS	CALB
VSQI	STANDARD ERROR DISCHARGE SIMULATED INSTANTANEOUS	BOTH
VSQM	STANDARD ERROR DISCHARGE SIMULATED MEAN	BOTH
VWE	VARIANCE WATER EQUIVALENT OBSERVED	BOTH
VWES	VARIANCE WATER EQUIVALENT SIMULATED	BOTH
ZELV	FREEZING LEVEL OBSERVED+PROJECTED	BOTH
ZRX	ZERO RAIN FRACTION INSTANTANEOUS	BOTH

Table 3. Data types and attributes

<u>Type Code</u>	<u>DIMN Code</u>	<u>SPAC Code</u>	<u>Time Code</u>	<u>APPL Code</u>
AEIS	L	A/P	INST	BOTH
AESC	DLES	A	INST	BOTH
AFAI	L	A/P	ACCM	BOTH
AIAI	DLES	A/P	INST	BOTH
APIC	L	A/P	INST	FCST
APIS	L	A/P	INST	BOTH
AQME	L3	P	ACCM	BOTH
ATI	TEMP	A/P	INST	BOTH
BFR	DLES	P	INST	FCST
CSTO	L3	P	INST	BOTH
CVX	DLES	A	INST	BOTH
DFAC	DLES	A/P	INST	BOTH
DQIE	L3/T	P	INST	BOTH
DQIN	L3/T	P	INST	BOTH
DQME	L3	P	ACCM	BOTH
DQMP	L3	P	ACCM	BOTH
EPAN	L	P	ACCM	CALB
EPL	L	P	ACCM	CALB
FBEL	L	P	INST	BOTH
FEIX	DLES	A	INST	BOTH
FGDP	L	P	INST	FCST
FGIX	TEMP	A	INST	BOTH
GATE	L	P	INST	BOTH
GCS	DLES	P	INST	BOTH
GOUT	L	A/P	ACCM	BOTH
GTCS	DLES	P	INST	BOTH
GWRO	L	A	ACCM	FCST
HDAT	TIME	P	INST	FCST
ICET	L	P	INST	FCST
INFW	L	A	ACCM	BOTH
KP	DLES	A	MEAN	FCST
LAKH	L	P	INST	BOTH
LELV	L	P	INST	BOTH
MAP	L	A	ACCM	BOTH
MAPE	L	A	ACCM	BOTH
MAPG	L	A	ACCM	FCST
MAPI	L	A	INST	FCST
MAPX	L	A	ACCM	FCST
MARO	L	A	ACCM	FCST
MAT	TEMP	A	MEAN	BOTH
MAWE	L	A	INST	BOTH
MOPE	L	P	ACCM	BOTH
NFBD	DLES	P	INST	BOTH
OPKS	DLES	P	INST	FCST
PCFD	DLES	P	INST	BOTH
PELE	L	P	INST	BOTH
PELV	L	P	INST	BOTH
PLDS	DLES	P	INST	FCST
PSRO	DLES	A	MEAN	BOTH
PTPE	L	P	ACCM	BOTH

Table 3. Data types and attributes

<u>Type</u> <u>Code</u>	<u>DIMN</u> <u>Code</u>	<u>SPAC</u> <u>Code</u>	<u>Time</u> <u>Code</u>	<u>APPL</u> <u>Code</u>
PTPP	L	P	ACCM	BOTH
PTPS	DLES	A/P	MEAN	BOTH
PTPX	L	P	ACCM	BOTH
QIN	L3/T	P	INST	BOTH
QINE	L3/T	P	INST	BOTH
QINH	L3/T	P	INST	BOTH
QME	L3	P	ACCM	BOTH
RADL	E/L2	P	ACCM	CALB
RADN	E/L2	P	ACCM	CALB
RADR	E/L2	P	ACCM	CALB
RADS	E/L2	P	ACCM	CALB
RADT	E/L2	A/P	ACCM	CALB
RAIM	L	A/P	ACCM	BOTH
ROCL	L	A/P	ACCM	FCST
RQGM	L3	P	ACCM	BOTH
RQIE	L3/T	P	INST	BOTH
RQIM	L3	P	ACCM	BOTH
RQIN	L3/T	P	INST	BOTH
RQME	L3	P	ACCM	BOTH
RQMP	L3	P	ACCM	BOTH
RQOT	L3/T	P	INST	BOTH
RQSW	L3/T	P	INST	BOTH
RSEL	L	A	MEAN	BOTH
RSTE	L3	P	INST	BOTH
RSTO	L3	P	INST	BOTH
SASC	DLES	A	INST	BOTH
SCOT	L	P	ACCM	CALB
SDQI	L3/T	P	INST	BOTH
SDQM	L3	P	ACCM	BOTH
SKYD	DLES	P	MEAN	CALB
SKYI	DLES	P	INST	CALB
SKYM	DLES	P	MEAN	CALB
SMZC	L	A/P	INST	FCST
SNOF	L	P	ACCM	BOTH
SNOG	L	P	INST	BOTH
SNSG	L	P	INST	BOTH
SNWE	L	P	INST	BOTH
SPEL	L	P	INST	BOTH
SPKS	DLES	P	INST	FCST
SQIB	L3/T	P	INST	BOTH
SQIE	L3/T	P	INST	BOTH
SQIN	L3/T	P	INST	BOTH
SQME	L3	P	ACCM	BOTH
SRSO	L3	P	INST	BOTH
SSTG	L	P	INST	BOTH
STG	L	P	INST	BOTH
STGE	L	P	INST	BOTH
STID	L	P	INST	BOTH
STW	L	P	INST	BOTH
SUNH	TIME	P	ACCM	CALB

Table 3. Data types and attributes

<u>Type Code</u>	<u>DIMN Code</u>	<u>SPAC Code</u>	<u>Time Code</u>	<u>APPL Code</u>
SUNP	DLES	P	MEAN	CALB
SURO	L	A	ACCM	FCST
SVIN	L/T	P	INST	BOTH
SWE	L	A/P	INST	BOTH
TAIN	TEMP	P	INST	CALB
TAMN	TEMP	P	INST	BOTH
TAMX	TEMP	P	INST	BOTH
TAVG	TEMP	P	MEAN	BOTH
TDIN	TEMP	P	INST	CALB
TDME	TEMP	P	MEAN	CALB
TID	L	P	INST	BOTH
TIDE	L	P	INST	BOTH
TPMN	TEMP	P	INST	CALB
TPMX	TEMP	P	INST	CALB
TSIN	TEMP	P	INST	CALB
TWEL	L	P	INST	BOTH
TWIN	TEMP	P	INST	CALB
TWSW	L	P	INST	BOTH
UAVG	L/T	A/P	MEAN	CALB
UDIR	DIR	P	INST	CALB
UDIS	L	P	ACCM	CALB
UVEL	L/T	P	INST	CALB
VSQI	L3/T	P	INST	BOTH
VSQM	L3	P	ACCM	BOTH
VWE	L2	P	INST	BOTH
VWES	L2	A/P	INST	BOTH
ZELV	L	A	INST	BOTH
ZRX	DLES	A	INST	BOTH

Table 4. Forecast Component data type codes sorted by description

Type Code	Description	DIMN	FCST	MISS	Time	PROC
TIDE	ADJUSTED TIDE OBSERVED+PROJECTED	L	M	NO	INST	FC
MAST	TEMPERATURE AREAL MEAN	TEMP	DEGC	NO	MEAN	PP
TAMX	AIR TEMPERATURE MAXIMUM	TEMP	DEGC	YES	INST	PP
TAMN	AIR TEMPERATURE MINIMUM	TEMP	DEGC	YES	INST	PP
TAIN	AIR TEMPERATURE POINT INSTANTANEOUS	TEMP	MM	NO	INST	FC
TAVG	AIR TEMPERATURE POINT MEAN	TEMP	DEGC	NO	MEAN	PP
AEIS	ANTECEDENT EVAPORATION INDEX	L	MM	NO	INST	FC
AFAI	ANTECEDENT FLOW INDEX FUNCTION GLACIER	L	MM	NO	ACCM	FC
AIAI	ANTECEDENT INDEX	DLES	REAL	NO	INST	FC
APIS	ANTECEDENT PRECIPITATION INDEX	L	MM	NO	INST	FC
ATI	ANTECEDENT TEMPERATURE INDEX	TEMP	DEGC	NO	INST	FC
MAPI	API AREAL MEAN	L	MM	NO	INST	PP
APIC	API-CONT MODEL CONTENTS API,AI,SMI,BFSC,BFI	L	MM	NO	INST	FC
KP	ASSIMILATOR PRECIPITATION MULTIPLIER	DLES	REAL	YES	MEAN	FC
SKYI	CLOUD COVER INSTANTANEOUS	DLES	CMSD	NO	INST	FC
SKYM	CLOUD COVER MIDNIGHT-MIDNIGHT MEAN	DLES	PCTD	YES	MEAN	FC
SKYD	CLOUD COVER SUNRISE-SUNSET MEAN	DLES	CMSD	NO	MEAN	FC
CVX	COEFFICIENT OF VARIATION INSTANTANEOUS	DLES	PCTD	NO	INST	PP
TDIN	DEW-POINT POINT INSTANTANEOUS	TEMP	DEGC	NO	INST	PP
TDME	DEW-POINT POINT MEAN	TEMP	DEGC	NO	MEAN	PP
DFAC	DIMENSIONLESS FACTOR SIMULATED INSTANTANEOUS	DLES	REAL	NO	INST	FC
DQIE	DIVERSION FLOW OBSERVED+PROJECTED INSTANTANEOUS	L3/T	CMS	NO	INST	PP
DQIN	DIVERSION FLOW OBSERVED+PROJECTED INSTANTANEOUS	L3/T	CMS	YES	INST	PP
DQMP	DIVERSION FLOW OBSERVED+PROJECTED MEAN	L3	CMSD	NO	ACCM	PP
DQME	DIVERSION FLOW OBSERVED+PROJECTED MEAN	L3	CMSD	YES	ACCM	PP
SDQI	DIVERSION FLOW SIMULATED INSTANTANEOUS	L3/T	CMS	NO	INST	FC
SDQM	DIVERSION FLOW SIMULATED MEAN	L3	CMSD	NO	ACCM	FC
PCFD	DIVERTED FLOW FROM CHANNEL PERCENT	DLES	PCTD	NO	INST	PP
EPL	EVAPORATION LAKE	L	CMSD	NO	ACCM	PP
EPAN	EVAPORATION PAN	L	CMSD	NO	ACCM	PP
MAPE	EVAPOTRANSPIRATION POTENTIAL AREAL MEAN	L	MM	NO	ACCM	PP
MOPE	EVAPOTRANSPIRATION POTENTIAL FROM MONTHLY MEAN	L	MM	NO	ACCM	PP
PIPE	EVAPOTRANSPIRATION POTENTIAL POINT	L	MM	NO	ACCM	PP
NFBD	FLASH BOARDS DOWN NUMBER OBSERVED+PROJECTED	DLES	INT	YES	INST	PP
NPER						
ALLOW						
Code						

Table 4. Forecast Component data type codes sorted by description

Type Code	Description	DIMN	FCST	MISS	Time	PROC
ZELV	FREEZING LEVEL OBSERVED+PROJECTED	L	M	YES	INST	PP
DEPR	DEPTH OBSERVED	L	CM	YES	INST	PP
FEIX	FROST EFFICIENCY INDEX SIMULATED	DLES	PCTD	NO	INST	FC
FGIX	FROST INDEX SIMULATED INSTANTANEOUS	TEMP	DEGC	NO	INST	FC
GCS	GATE CONTROL SWITCH	DLES	INT	YES	INST	FC
GTCS	GATE CONTROL SWITCH	DLES	INT	YES	INST	PP
GATE	GATE OPENINGS OBSERVED+PROJECTED	L	M	YES	INST	PP
GOUT	GLACIER OUTFLOW MELT	L	MM	NO	ACCM	FC
MAPG	GRID PRECIPITATION AREAL MEAN	L	MM	NO	ACCM	PP
MAPX	GRIDDED PRECIPITATION AREAL MEAN	L	MM	NO	ACCM	PP
HDAT	HOURS TO DATE OF AN OBSERVATION	TIME	HR	YES	INST	FC
ICET	ICE THICKNESS OBSERVED	L	CM	YES	INST	PP
LELV	LAKE ELEVATION OBSERVED	L	M	YES	INST	PP
LAKH	LAKE HEIGHT OBSERVED	L	M	YES	INST	PP
TID	OBSERVED TIDE OBSERVED INSTANTANEOUS	L	M	YES	INST	PP
OPKS	PEAK WITHIN FIXED WINDOW OBSERVED	DLES	PCTD	YES	INST	FC
SPKS	PEAK WITHIN FIXED WINDOW SIMULATED	DLES	PCTD	YES	INST	FC
RQGM	POWER GENERATION OBSERVED MEAN	L3	CMSD	YES	ACCM	PP
MAP	PRECIPITATION AREAL MEAN	L	MM	NO	ACCM	PP
PTPX	PRECIPITATION POINT MISSING ALLOWED	L	MM	YES	ACCM	FC
PTPP	PRECIPITATION POINT MISSING NOT ALLOWED	L	MM	NO	ACCM	FC
RAIM	PRECIPITATION RAIN+MELT	L	MM	NO	ACCM	FC
PTPS	PRECIPITATION SNOWFALL (FRACTION)	DLES	PCTD	YES	MEAN	PP
RADL	RADIATION ATMOSPHERIC LONGWAVE POINT	E/L2	CMSD	YES	ACCM	PP
RADS	RADIATION INCOMING SOLAR POINT	E/L2	CMSD	YES	ACCM	PP
RADN	RADIATION NET POINT	E/L2	CMSD	YES	ACCM	PP
RADR	RADIATION REFLECTED SOLAR POINT	E/L2	CMSD	YES	ACCM	PP
RADT	RADIATION TOTAL HEMISPHERIC	E/L2	CMSD	YES	ACCM	PP
RSEL	RAIN-SNOW ELEVATION	L	M	NO	MEAN	FC
RFR	RECESSION COEFFICIENT BASEFLOW	DLES	PCTD	YES	INST	FC
FBEL	RESERVOIR FOREBAY ELEVATION OBSERVED	L	M	YES	INST	PP
RQIN	RESERVOIR INFLOW OBSERVED INSTANTANEOUS	L3/T	CMS	YES	INST	PP
RQIM	RESERVOIR INFLOW OBSERVED MEAN	L3	CMSD	YES	ACCM	PP
RQIE	RESERVOIR OUTFLOW OBSERVED+PROJECTED INSTANTANEOUS	L3/T	CMS	NO	INST	PP
NPER						
ALOW						
Code						

Table 4. Forecast Component data type codes sorted by description

Type Code	Description	DIMN	FCST	MISS	Time	PROC
RQOT	RESERVOIR OUTFLOW OBSERVED+PROJECTED	L3/T	CMS	1	INST	PP
RQOR	RESERVOIR OUTFLOW OBSERVED+PROJECTED MEAN	L3	CMSD	1	ACCM	PP
RQME	RESERVOIR OUTFLOW OBSERVED+PROJECTED MEAN	L3	CMSD	1	ACCM	PP
RQSW	RESERVOIR OUTFLOW SPILLWAY OBSERVED	L3/T	CMS	1	INST	PP
PELE	RESERVOIR POOL ELEVATION OBSERVED	L	M	1	INST	FC
PELV	RESERVOIR POOL ELEVATION ADJUSTED	L	M	1	INST	PP
PELV	RESERVOIR POOL ELEVATION OBSERVED	L	M	1	INST	FC
SPEL	RESERVOIR POOL STAGE SIMULATED	L	M	1	INST	FC
RSTE	RESERVOIR STORAGE ADJUSTED	L3	CMSD	1	INST	FC
RSTE	RESERVOIR STORAGE ADJUSTED MEAN	L3	CMSD	1	INST	FC
CSTO	RESERVOIR STORAGE CHANGE	L3	CMSD	1	INST	FC
RSTO	RESERVOIR STORAGE OBSERVED	L3	CMSD	1	INST	PP
RSTO	RESERVOIR STORAGE OBSERVED MEAN	L3	CMSD	1	INST	FC
SRSO	RESERVOIR STORAGE SIMULATED	L3	CMSD	1	INST	FC
QINE	RIVER DISCHARGE ADJUSTED INSTANTANEOUS	L3/T	CMS	1	INST	FC
QINE	RIVER DISCHARGE ADJUSTED MEAN	L3	CMSD	1	ACCM	FC
AQME	RIVER DISCHARGE ADJUSTED MEAN	L3	CMSD	1	ACCM	FC
QINH	RIVER DISCHARGE COMPUTED FROM STAGE INSTANTANEOUS	L3/T	CMS	1	INST	FC
QINH	RIVER DISCHARGE COMPUTED FROM STAGE INSTANTANEOUS MEAN	L3/T	CMS	1	INST	FC
QIN	RIVER DISCHARGE OBSERVED INSTANTANEOUS	L3/T	CMS	1	INST	PP
QME	RIVER DISCHARGE OBSERVED MEAN	L3	CMSD	1	ACCM	PP
SQIB	RIVER DISCHARGE SIM-INST BEGINNING OF PERIOD	L3/T	CMS	1	INST	FC
SQIE	RIVER DISCHARGE SIM-INST END OF PERIOD	L3/T	CMS	1	INST	FC
SQIN	RIVER DISCHARGE SIMULATED INSTANTANEOUS	L3/T	CMS	1	INST	FC
SQME	RIVER DISCHARGE SIMULATED MEAN	L3	CMSD	1	ACCM	FC
STGE	RIVER STAGE ADJUSTED	L	M	1	INST	FC
STG	RIVER STAGE OBSERVED	L	M	1	INST	PP
SSTG	RIVER STAGE SIMULATED	L	M	1	INST	FC
SVIN	RIVER VELOCITY SIMULATED MEAN	L/T	M/S	1	INST	FC
MARO	RUNOFF AREAL MEAN	L	MM	1	ACCM	PP
ROCL	RUNOFF COMPONENTS (SAC)	L	MM	7	ACCM	FC
GWRO	RUNOFF GROUNDWATER (BASEFLOW)	L	MM	1	ACCM	FC
INFW	RUNOFF INFLOW TO CHANNEL	L	MM	1	ACCM	FC
SURO	RUNOFF STORM	L	MM	1	ACCM	FC
PSRO	RUNOFF SURFACE PERCENT	L	MM	1	ACCM	FC
STID	SIMULATED TIDE NOS GENERATED INSTANTANEOUS	DLES	PCTD	1	MEAN	FC
PLDS	SIMULATED TIDE NOS GENERATED INSTANTANEOUS MEAN	L	M	1	INST	FC
PLDS	SIMULATED VALUE AT FIXED LEAD	DLES	PCTD	1	INST	FC
AESC	SNOW COVER AREAL EXTENT OBSERVED	DLES	PCTD	1	INST	PP
SASC	SNOW COVER AREAL EXTENT SIMULATED	DLES	PCTD	1	INST	FC
NPER						
ALOW						
Code						

Table 4. Forecast Component data type codes sorted by description

Type Code	Type	DIMN	FCST	MISS	Time	PROC
SNOW	SNOW COVER OBSERVED	L	CM	1	INST	PP
SNOW	SNOW COVER SIMULATED	L	CM	1	INST	FC
SCOT	SNOW COVER OUTFLOW	L	PCTD	1	ACCM	FC
TSIN	SNOW COVER TEMPERATURE POINT-INSTITANTANEOUS	TEMP	M	1	INST	FC
MAWE	SNOW COVER WATER EQUIVALENT AREAL MEAN	L	MM	1	INST	PP
SNWE	SNOW COVER WATER EQUIVALENT OBSERVED	L	MM	1	INST	PP
SWE	SNOW COVER WATER EQUIVALENT SIMULATED	L	MM	1	INST	FC
SNOF	SNOWFALL DEPTH OBSERVED	L	CM	1	ACCM	PP
SMZC	SOIL MOISTURE STORAGE (SAC)	L	MM	5	INST	FC
VSQI	STANDARD ERROR DISCHARGE SIMULATED INSTANTANEOUS	L3/T	CMS	1	INST	FC
VSQM	STANDARD ERROR DISCHARGE SIMULATED MEAN	L3	CMSD	1	ACCM	FC
SUNH	SUNSHINE DURATION-HOURS	TIME	M	1	ACCM	FC
SUNP	SUNSHINE PERCENT	DLES	M	1	MEAN	FC
TWEL	TAIL WATER STAGE OBSERVED	L	M	1	INST	PP
STW	TAIL WATER STAGE SIMULATED	L	M	1	INST	FC
TWSW	TAILWATER STAGE SPILLWAY OBSERVED	L	M	1	INST	PP
VWE	VARIANCE WATER EQUIVALENT OBSERVED	L2	MM2	1	INST	PP
VWES	VARIANCE WATER EQUIVALENT SIMULATED	L2	MM2	1	INST	FC
TPMX	WATER TEMPERATURE PAN MAXIMUM	TEMP	M	1	INST	FC
TPMN	WATER TEMPERATURE PAN MINIMUM	TEMP	M	1	INST	FC
TWIN	WATER TEMPERATURE STREAM	TEMP	M	1	INST	PP
UDIR	WIND DIRECTION	DIR	M	1	INST	PP
UVEL	WIND SPEED INSTANTANEOUS	L/T	M	1	INST	PP
UAVG	WIND SPEED MEAN	L/T	M	1	MEAN	PP
UDIS	WIND TRAVEL POINT	L	M	1	ACCM	PP
ZRX	ZERO RAIN FRACTION INSTANTANEOUS	DLES	PCTD	1	INST	PP
Code						
Unit						
NPER						
ALOW						
Code						