

Freshwater Creek TMDL HY 2003 Data Transfer Components:

- **Hard Copy (Arranged by Station Number)**
 - **Rainfall Data Summaries**
 - **Station Data Validation Ratings**
 - **Station Data Summary Report Includes (when applicable)**
 - **Station Visits (Continuous and Episodic)**
 - **Turbidity, SSC, and Discharge**
 - **Calculated Q**
 - **SSC/Discharge Plot**
 - **Turbidity/Discharge Plot**
 - **Stage Q Plot w/equations**
 - **Q Lookup Plot**
 - **Station Cross-section Plot**
 - **Continuous Turbidity and Depth Plots**
 - **Stage vs. Machine Depth Plot w/equations**
 - **Instrument Turbidity Printout**
 - **Instrument vs. Lab Turbidity**
 - **Turbidity vs. SSC**
 - **Station Sediment Data**
 - **Turbidity vs. SSC Log Plot**
- **CD Electronic Copy**
 - **Rainfall Data**
 - **Data Validation Rating Codes Table**
 - **Continuous Sediment Data and Summary (Files by Station)**
 - **ISCO Data, Summary and Lookup Tables (All Stations in one File)**
 - **Machine Depth vs. Stage Data and Summary (All Stations in one File)**
 - **Station Sediment Data and Summary (All Stations in one File)**

- o Station Sediment and Flow Data and Summaries(All Station in one File)

TABLE 1. LISTING OF STATION DATA TRANSFER CD CONTENTS

Station	Continuous/ Episodic Station	Continuous Turbidimeter Data and Summary	Stage/Q Data, Plots and Lookup	Stage vs. Machine Depth Data and Plots	ISCO Lookup Data and Plots	Sediment Summary	Station Summary
Freshwater Creek							
500	C	cd	cd	cd	cd	cd	cd
501	C	HOLD	cd	cd	cd	cd	cd
502	C	HOLD	cd	cd	cd	cd	cd
503	C	cd	cd	cd	cd	cd	cd
504	C	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD
505	C	cd	cd	cd	cd	cd	cd
506	C	cd	cd	cd	cd	cd	cd
507	E	NONE	cd	NONE	NONE	cd	cd
508	E	NONE	cd	NONE	NONE	cd	cd

TABLE 2. LISTING OF FRESHWATER CREEK MONITORING STATIONS

NCWQCB Station Name	PALCO Station Number	General Description name
WQ-1	10-500	Incline A, unnamed tributary downstream of Stations 501 and 502
WQ-2	10-501	Incline B, Upper Freshwater Creek
WQ-3	10-502	Incline C, Upper Freshwater Creek
MG-1	10-503	McCready Gulch, upstream of the confluence with Freshwater Creek
MG-2	10-508	McCready Gulch, upstream of the confluence with Horse Gulch
HG-1	10-507	Horse Gulch, upstream of the confluence with McCready Gulch
CG-1	10-504	Cloney Gulch, upstream of the confluence with Freshwater Creek
GG-1	10-505	Graham Gulch, upstream of the confluence with Freshwater Creek
LF-1		Little Freshwater Creek, upstream of the confluence with Freshwater Creek (<i>likely to be monitored by HSU</i>)
SF-1	10-506	South Fork, upstream of the confluence with Freshwater Creek

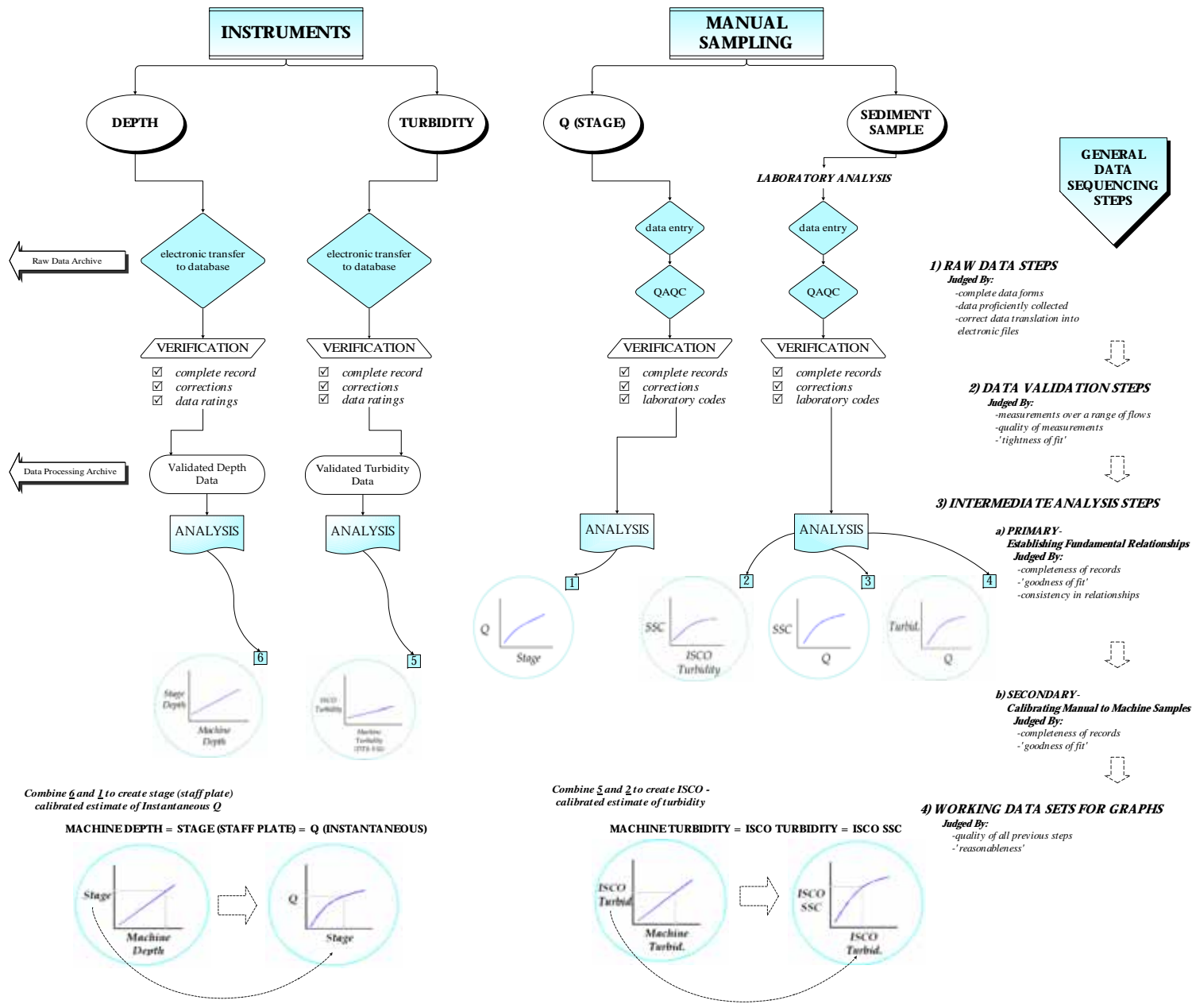
TABLE 3. MONITORING PROGRAM SUMMARY

Station Type	Station	Parameter Measurements	Sampling Frequency	Sampling Duration
Continuous Measurement Stations	McCready Gulch 1 (MG-1)	Continuous turbidity (in situ) and streamflow (stage-discharge relationships)	Continuous (every 15 minutes), with data downloads weekly	From November 4, 2002 until May 15, 2003
	Cloney Gulch (CG-1)	Weekly depth-integrated point samples for lab turbidity and suspended sediment concentration	Weekly depth-integrated point samples at each station	
	Graham Gulch (GG-1)			
	S. Fork Freshwater Cr. (SF-1)	Stormflow grab sampling for lab turbidity only	Stormflow sampling (following 5 significant rainfall events)	
Grab Sampling (only) Stations	McCready Gulch 2 (MG-2)	Turbidity (grab field for weekly, and grab lab for stormflow)	Weekly scheduled samples and stormflow sampling (following 5 significant rainfall events)	From November 4, 2002 until May 15, 2003
	Horse Gulch (HG-1)	Stage-discharge relationship		
	Cloney Gulch (CG-2)	Suspended sediment (depth-integrated point sample) – weekly samples only		
Continuous Rainfall Measurement	McCready Gulch 2 (MG-2)	Rainfall	15 minute intervals	Continuous
	S. Fork Freshwater Cr. (SF-1)			

TABLE 4. DATA VALIDATION RATING CODES

Raw data quality rating codes		Type of data recovery or correction codes		Quality of data recovery rating codes	
1	Good	1	No action necessary	0	No data to rate
2	Questionable	2	No recovery possible (data loss)	1	No recovery necessary
3	Unknown	3	Data questionable, but maintained	2	Good
4	Error: Unknown	4	Interpolation	3	Fair
5	Error: Equipment malfunction	5	Reconstruction	4	Poor
6	Error: Equipment maintenance	6	Adjustment		
7	Error: Equipment calibration error				
8	Error: Equipment fouled/water depth				
9	Error: Other measurements being taken affecting readings	9	Other	9	Other

HYDROLOGY DATA FLOW



Combine 6 and 1 to create stage (staff plate) calibrated estimate of instantaneous Q

MACHINE DEPTH = STAGE (STAFF PLATE) = Q (INSTANTANEOUS)

Stage
Machine Depth

⇒

Q
Stage

Combine 5 and 2 to create ISCO - calibrated estimate of turbidity

MACHINE TURBIDITY = ISCO TURBIDITY = ISCO SSC

ISCO Turbid.
Machine Turbid.

⇒

ISCO SSC
ISCO Turbid.