



USGS FERC and FURNISHED RECORDS WORKSHOP

September 11-12, 2019

Willow Suite 1, Modoc Hall, 3020 State University Drive, California State University, Sacramento, CA 95819

WORKSHOP AGENDA

DAY 1 – Wednesday, Sept. 11, 2019

8:00 am:

- Welcome: (Denis) **Instructor introductions: Denis O’Halloran, USGS FERC Coordinator; Jeff Kitchen, Surface Water Data Specialist; and Ed Parvin, Truckee Field Office Chief.**
- Logistics and Overview of workshop goals: “Best Practices, Efficiency and Consistency”

II. Roundtable: Student introductions and desired achievements from the workshop

III. Overview of USGS/FERC/Cooperator Relationships: (Denis)

- USGS Ferc and Furnished Records public website: <http://ca.water.usgs.gov/FERC/>
 - Review Process Overview: (Denis)
 - USGS Technical Memo 2016.04 Policy on Accepting Furnished Record
 - SW Quality Assurance Plan Guidelines for Furnished Records

IV. FIELD OBSERVATIONS AND MEASUREMENTS: USGS SW training Modules (Jeff)

A. STAGE: (Jeff)

USGS TM 3—A7: Stage Measurement at Gaging Stations, inside and outside gages, reference gages, datum, recording visits, peak verification, GZFs

10:00 am–10:15 am BREAK

10:15 am–12:00 pm

B. LEVELS: (Jeff)

USGS TM 3—A19: Levels at Gaging Stations, gaging levels of streamflow

- Frequency, Quality assurance – 2-peg test, rod checks, Level Summary Sheet

C. FLOW MEASUREMENTS: (Jeff)

USGS TM 3—A8: Discharge Measurements at Gaging Stations

- Equipment types: mechanical meters, ADVMs, ADCPs
- QA/QC: spin test, diagnostic tests, HIF, QREV
- Mean-weighted gage heights, Check measurements
- Frequency of measurements; natural and artificial controls

12:00 pm–1:00 pm LUNCH

1:00 pm–3:00 pm

V. STAGE-DISCHARGE RECORD COMPUTATION: (Denis, Jeff, Ed)

A. GAGE-HEIGHT RECORD, CORRECTIONS and CHECKS (Jeff, Ed)

What to look for, processes for missing data or ice-affected estimation of record

- Corrections: datum corrections, gage height corrections
- Application of datum corrections
- Application of gage height corrections

Wednesday, September 11, 2019—continued

B. RATINGS: (Ed)

- When to draw new curves, extending ratings, curve smoothness
- Logarithmic vs Rectilinear, Offsets
- TWRI 3- A13 Computation of Continuous Records of Streamflow

3:00 pm–3:15 pm BREAK

3:15 pm–5:00 pm

C. SHIFTS: (Jeff)

Application of shifts and shift types

USGS TWRI 3-A13, and USGS WRIR 01–4044: Standards for the Analysis and Processing of Surface-Water Data and Information Using Electronic Methods

DAY 2 – Thursday, September 12, 2019

8:00 am–10:00am

V. STAGE_DISCHARGE RECORD COMPUTATION—Continued from Wednesday: (Denis, Jeff, Ed)

- D. Documents needed for USGS Reviews.
- E. HYDSTRA Presentation (Dylan Evans, Kisters/Hydstra programmer)
- F. Estimated record, hydrographs, rating tables and plots, stage (raw and corrected) plots
- G. STATION ANALYSIS: Examples
- H. STATION DESCRIPTIONS: Examples including Quality Assurance (QA) paragraphs

10:00 am–10:15 am BREAK

10:15 am–12:00pm

VI. USGS Reviews: (Denis, Jeff, Ed)

- A. USGS POLICIES: USGS Policy Memorandum 2016.04, CAWSC SW Quality-Assurance Plan and Guidelines for Furnished Records
- B. FIELD MEASUREMENTS: USGS 2X/year, 2 measurements, inspect equipment, read all gages, observe cooperator measurement techniques USGS REVIEW: CAWSC and WMA Triennial Reviews
- C. FURNISHING RECORDS: Annual Deadline: Dec 15 for submission or scheduling review with local Field Office. Required documentation revisit; files or all-in-one pdf.
- D. RECORD REVIEW - in office or remote review of records
 - USGS FERC REVIEW FORMS : Current USGS review forms discussion Streamflow,
 - Lakes and Reservoirs, bathymetry updates
 - Powerplant Guidelines
- E. USGS and Cooperators Record Publishing, Archiving, Availability

12:00 pm-1:00 pm LUNCH

(followed by **1:00 pm- 4:00 pm Optional session for Questions, Discussions**)

Day 2 - Thursday Sept. 12 continued:

1:00 pm- 4:00 pm Optional session for Questions, Discussions

Possible subjects for further discussion:

Paper vs E-files

Archiving

APPROVAL of records: Publication of furnished record on NWISWeb

REWORKS and REJECTIONS: Minimizing back and forth for reworks, letters to FERC

QREV demo, AVM Reviews, BOC's (Ed, Jeff)

Bathymetry

Further Questions and Discussion:

- ADCP measurements, equipment, software, QA for various scenarios
- AVM reviews make discharge measurements across two 15 min punches for comparison.
- Power plant reviews
- Cableway safety, inspections
- ?

FERC/Licensees/USGS Roles: (Denis)

A. USGS ROLES: Reviewers, Field Office Chiefs, FERC Coordinator:

- USGS/FERC/Cooperator relationships
- FERC licenses: Modifications to streamgaging, amendments
- Documentation, verification, approval and publish

B. LICENSES: Amendments, relicensing, flow-monitoring plans, site selection, gage construction

C. RESOURCES: FERC online, contacts, information sources, training (web links and handouts)

4:00 pm ADJOURN