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Subject: Spring calibration targets
Date: Friday, February 12, 2010 4:26:13 PM
Attachments: [Springsites2009.xlsx](#)

Hi all,

As a result of the discussions and recommendations that occurred in our last meeting (February 3rd), IDWR proposes the following to help organize and better understand the strategy to use spring discharge measurements in the calibration of ESPAM version 2.0 and future model versions:

- 1) The first group of monitoring sites includes 34 springs, spring creeks, rivers, and other measurement locations (e.g., diversions, discharges, etc.) in the attached table that will be used as calibration targets in ESPAM 2.0 and/or future model versions. Nearly all of these gage sites have continuous monitoring (e.g., 15-minute intervals) as a result of efforts by IDWR, Idaho Power, the USGS, the Tribes, and IDEQ. The data are or will be acquired real time via radio and satellite telemetry, stored in an IDWR Hydrologic Database that is under construction, and eventually served to the public via internet access. The frequency of data collection is relatively more intensive, and the sites are considered good quality calibration targets (Group A Targets).
- 2) The second group (Group B Targets) consists of monitoring sites where data are provided by hatchery operations and from other measurements submitted to the Water District 130 Watermaster and currently include the Rangen Hatchery, Clear Lakes Springs, Niagara Springs, and Crystal Springs. The data from these calibration targets are also considered good quality, but the frequency of measurement and reporting to IDWR are less than for the Group A. The data will also be stored in the IDWR Hydrologic Database and made available to the public, but will be loaded annually or as obtained.
- 3) The third group (Group C Targets) are spring sites defined in Covington and Weaver (1990) that are not gaged. There are numerous springs listed in this publication (approximately 215). The flow data were obtained by estimates and often reconnaissance-level measurements taken during the period from the 1940's to the late 1980's. The ungaged sites will be separated by reach (Devil's Washbowl to Buhl, Buhl to Lower Salmon Falls, and Lower Salmon Falls to King Hill), and the flow values will be ranked and converted to a ratio (Group C Target discharge/largest Group C spring in the reach). PEST will be asked to match the ratio computed with the Covington and Weaver data using the average modeled discharge from the Group C springs. IDWR welcomes assistance from ESHMC members in identifying Group C springs that could become Group B or possibly Group A Targets.
- 4) Return flows (north and south side), perennial springs, and the ground water contribution from the south side (10%) will be subtracted from the reach gains, and PEST will be asked to match the observed reach gains.

Note also that all springs have been assigned the elevation recorded in Covington and Weaver, and the committee has previously agreed that there could be up to 3 drains per model cell with a high, mid, and a low elevation drain. Thus several drain cells contain numerous springs.

I will enter this email and all responses in a subfolder within the April 7th meeting folder. Your comments are welcome.

Thanks,

Rick