# Calibration and Model acceptance

**Proposed Goals** 



Darcy Sharp, DEQ Technical Services State Office Darcy.Sharp@deq.idaho.gov

208-373-0133 5/28/2013 DEQ Conference Room D

## **Proposed Goals**

- \* Velocity within 0.1 m/sec
- \* Water level within 10 cm
- \* Temperature within 1°C
- \* Dissolved oxygen <2 mg/L in eutrophic system
- \* Nutrient and algal concentration within 10-25% of the range of the field data

RMSE accentuates the biggest outliers AME averages the big outliers

### **Time and Resource commitments**

- \* DEQ Technical Services
- \* DEQ Regional Office
- \* EPA
- \* USGS
- \* Municipalities

## **Status**

#### **Water Quantity**

- COB Lander and West estimated for April 2013 as avg of flow 1/1/12 4/1/13
- \* Flows for IDFG Eagle Fish Hatchery uses original Aquatox flow of 32 cfs.
- \* Fifteenmile Creek flow? Set at constant 100 cfs. Need to review available data for 2012 flows.
- \* Middleton WWTF flow? Set at constant o.8 cfs.
- \* Caldwell WWTF flow? Set at constant 12.2 cfs.
- \* Indian Creek flow? Set at constant 25 cfs. Need to review available data for 2012 flows.
- \* Zero unaccounted/groundwater flow into Segment 12, all into Segment 13, don't know if should be split.
- \* Groundwater inputs for all unaccounted flows. No other estimates used for groundwater, such as Schmidt estimates used previously. Rely on USGS information rather than Schmidt. No change.

## **Status**

#### **Water Quality**

- \* Only water quality data see for model simulation period are the following. Are there other data for the period? Where?
  - \* 8/21/12
  - \* 10/29/12
  - \* 3/4/13
  - \* Asked Kate and Kate replied; have not updated to her response.
- \* Have not seen Chlorophyll a data for the model simulation period. Are data available? Where?
  - \* Asked Kate and Kate replied; have not updated to her response.
- \* What is zMean input? Text includes the following. Need to update? Need to look at other spreadsheets?
  - Uses RAP Depth Discharge 1-98 to 9-02
  - Depth Discharge calibration.xls
  - Probably should look at stage data and build depth discharge spreadsheet.

## **Status**

#### **Water Quality**

- \* Need to update Shade? Have data/basis? Set at zero, maintain for now. No change.
- \* Most to all of the tribs do not have BOD data, need?
- \* IDFG WQ data?
- Middleton WWTF data? Text includes Data from Basil Tupyi, Holliday Engineering
- \* Not sure have data for NMD and SMD (N. Midd. Drain and S. Midd. Drain)?
- \* Not sure have data for Mason Drain?
- \* Not sure have data for Hartley Drain?
- \* Unclear what data goes into some of the Segment numbers and why?
- Groundwater water quality unchanged