

**WATER QUALITY TEAM MEETING NOTES**  
**November 18, 2003**  
**National Marine Fisheries Service Offices**  
**Portland, Oregon**

***1. Introductions and Review of the Agenda.***

Mark Schneider of NOAA Fisheries, WQT co-chair, welcomed everyone to the meeting, held November 18 at the NOAA Fisheries office in Portland, Oregon. The meeting was facilitated by Robin Harkless. The meeting agenda and a list of attendees are attached as Enclosures A and B. Please note that some of the enclosures referenced in these meeting notes may be too lengthy to routinely attach to the minutes; please contact Kathy Ceballos (503/230-5420) to obtain copies.

***2. WQT Co-Chair Resolved.***

Schneider said that, for some time, there has been a vacancy in the chairing of the WQT. Originally, according to our guidelines, the WQT was to be co-chaired by NOAA Fisheries and EPA, he said; Mary Lou Soscia had to withdraw from participation in the WQT, however, and EPA was unable to fill the void she left. We therefore proposed to the states that, on a rotating basis, a state representative co-chair the WQT. They agreed, said Schneider; the first state co-chair of the WQT will be Russell Harding of Oregon DEQ. Schneider said he will continue to chair the team on behalf of NOAA Fisheries. Schneider asked for Harding's help in putting together future WQT agendas, and in deciding when there are enough substantive items to discuss to warrant a WQT meeting.

One question, said Schneider: how long should the rotation be? I would suggest that a year might be an appropriate term, he said. Is there a backup co-chair if Russell is unable to attend? asked John Piccininni. Not at this point, Schneider replied, but that is probably worth discussing. Mike Harold suggested that whatever state is currently on the hook for the co-chairmanship should be on the hook to provide a replacement if their appointed representative is unable to serve as co-chair for a given meeting.

Does one year seem like a reasonable term? Harkless asked. No WQT disagreements were raised to Schneider's suggestion. Harkless suggested that, during the agenda development process, the co-chairs and the facilitator reach out to other WQT members to see what issues they feel warrant discussion. Schneider agreed that this would be useful. Harold added that it might make sense for whatever state has the most urgent work ongoing in the water quality arena

to serve as co-chair. Harkless suggested that it may make sense for the WQT to begin to plan ahead for 2004, and to talk about what water quality issues will likely demand the most attention in the year to come.

After a few minutes of additional discussion, Schneider summarized the outcome of this agenda item by saying that the appointed state co-chair will serve a one-year term, unless there are compelling reasons, such as an imminent TMDL, for another state to serve as co-chair. It was agreed that Harding's term began on November 1.

### ***3. TDG Fixed Monitoring Station – Warrendale/Bonneville Tailrace.***

Jim Adams said his understanding was that there was a WQT subgroup looking at the fixed monitoring stations, convened in response to RPA 132. That group talked about the Warrendale and Camas/Washougal fixed monitoring sites, as well as a potential site in the Bonneville tailwater. We're now just about ready to make a recommendation regarding the Bonneville-area fixed monitoring stations, said Adams; that is the purpose of today's presentation.

Schneider said that, to him, it makes sense for the RPA 132 subgroup to continue to meet, to discuss not only the Lower Columbia fixed monitoring stations, but the Lower Snake sites as well. In previous years, Joe Carroll, Jim Irish, Stu McKenzie and Mike Schneider have reviewed the data from each station, then came to this group and presented their results. The WQT then developed a recommendation to the Corps as to where the fixed monitoring stations should optimally be located, said Schneider. I suggest that you reach out to the other WQT members who are interested in participating in the RPA 132 subgroup, in that case, said Adams.

Mike Schneider then led a presentation covering findings for the region at and below Bonneville following the construction of flow deflectors at that project during the winter of 2002, titled "TDG Exchange at Bonneville Dam – 2002 Spill Season." He touched on the following major topics:

- TDG exchange – in-pool processes (diagram)
- TDG exchange at Bonneville Dam – background (description of TDG exchange, additional 1999 field studies, the fast-track spillway optimization program)
- Objectives of the 2002 spill study
- The approach taken during the 2002 study – automated TDG instruments located in the spillway channel, spillway operation
- Bonneville site description – structure, tailwater channel
- Profile view of the Bonneville spillway, stilling basin and tailwater channel (diagram)
- Spillway channel bathymetry below Bonneville (map)
- Methods – instrumentation, sampling array
- 2002 TDG sampling stations below Bonneville, 2002 spill season
- Flow conditions during the 2002 spill season at Bonneville – standard operation, scheduled spill (low flow/tailwater conditions)
- Total river flow, spill and tailwater elevation at Bonneville Dam, April 1-August 31,

- 2002 (graph)
- Bonneville forebay TDG saturation in 2002: average 111%, maximum 119%, frequent large daily fluctuations (+/-7%)
  - Total river flow, spill, tailwater elevation and forebay TDG levels at Bonneville Dam, April 1-August 31, 2002 (graph)
  - Bonneville spillway exit channel TDG saturation in 2002: TDG highly correlated to spillway discharge, weakly correlated to tailwater stage or forebay TDG levels, maximum TDG levels (140.9%) recorded in mid-channel, average TDG was higher than 120% about 17% of the time
  - Lateral distribution of TDG saturation in the Bonneville spillway exit channel vs. spill pattern (graph)
  - Lateral distribution of TDG saturation in the Bonneville spillway exit channel vs. spill discharge (graph)
  - Summary of results from the spillway exit channel: each additional 10 Kcfs of spill yielded approximately 1% increase in TDG levels, the project produces 110% TDG at 40 Kcfs spill, for example.
  - TDG response at the Bradford Island (left bank) station (graph)
  - Pre-2002 vs. post-2002 TDG exchange at Bonneville (new flow deflectors and spill pattern yielded a roughly 15% TDG improvement at 52 Kcfs)
  - TDG exchange of old and new spillway flow deflectors – the new spillway deflectors generated 6% less TDG at 42 Kcfs spill
  - Response at downstream (Warrendale) fixed monitoring station: the TDG response at Warrendale was consistently lower than observed in the spillway exit channel
  - Response at downstream (Camas/Washougal) fixed monitoring station: net reduction in average TDG saturation compared to Bonneville releases was 17 mm Hg on average
  - Exceedences below Bonneville, 2002 vs. 2003: there were approximately half as many TDG excursions in 2003 compared to 2002
  - Recommendations: tailwater FMS should be moved into the spillway exit channel – it is a direct measure of project operations on TDG supersaturation, peak TDG conditions encountered by ESA listed species and average TDG content in the CR, and is consistent with water quality standards/TMDL.

The fact that the spillway discharge yields higher TDG levels should come as no surprise to anyone, observed Margaret Filardo. Back when the decision was made by the states, however, it was decided not to put the monitor in the area of highest concentration, but to seek out an area of mixing downstream. The point was to treat it as a point source pollutant, and no point source pollutant is monitored at the point, she said. However, this is the point at which passage occurs, and this is where the impact occurs, replied Adams. Where do those statements come from? Mike Schneider asked. From the notes of Earl Dawley's 1994 NOAA Fisheries subgroup, and from the 2000 FCRPS BiOp, Filardo replied.

These recommendations are simply based on the data and what it shows, said Carroll – the idea is to develop a less-ambiguous measurement of what is actually coming off the spillway. Margaret is right, however, when she says that it is no surprise that TDG concentrations are highest nearest the spillway. I just think that, in terms of interpreting compliance, this

recommendation could make a big difference in the spill program at Bonneville, said Filardo. Mike Schneider noted that Camas/Washougal will likely still be the limiting station for compliance.

The group devoted a few minutes of discussion to Mike Schneider's presentation, and the potential impacts of the subgroup's recommendations on spill operations at Bonneville. Harding noted that, from ODEQ's perspective, dams are not point sources. However, in the TMDL, what we suggest is that there will be a zone in which 110%, or even 120%, will not be met. In other words, there is a mixing zone, but it's not miles and miles downstream, Harding said.

The point of RPA 132 in the BiOp is that we felt there were other factors at work in the TDG equation, such as wind, which affect TDG measurement, said Schneider. Camas/Washougal was chosen to approximate the forebay of the next dam downstream from Bonneville, because there isn't another dam downstream, he said – in other words, it was a fairly arbitrary decision, and there are reasons to believe that Camas/Washougal may not be the best location on which to base the decision of how much Bonneville should spill.

So the Corps is making a recommendation, said Harkless – it sounds as though there will be further recommendations coming out of this process, and we should talk about the process for comments, as well as for making the decision about whether or not to move the fixed monitoring station itself. In the past, the RPA 132 subcommittee developed formal recommendations to the WQT, observed Carroll. So the subgroup will develop its consensus recommendation, and bring that back to the full WQT? Harkless asked. My understanding is that the states would make the final decision, because it is their standards we're attempting to meet, but the WQT will make its recommendation to the states, said Adams.

Harding noted that the Oregon TMDL summarizes what the State expects in terms of compliance. If the Corps decides to make significant changes to the monitoring program specified in the state compliance order, then we'll need to check with the state attorneys, and possibly with the Commission, Harding said. If you're not proposing to change the named point of compliance, that won't be necessary, he added.

In response to a question, Filardo said her concern is that the change the Corps is proposing could result in reduced spill volumes at Bonneville and, potentially, other projects. If you take out the Camas/Washougal station, she said, that will, in some years, limit the BiOp spill that is provided at Bonneville.

Ultimately, Harkless suggested that, given its potentially far-reaching implications, the WQT revisit this topic at its December meeting, once all of the participants have had an opportunity to thoroughly review the information the Corps has presented. In the interim, Mark Schneider said he will re-convene the RPA 132 subgroup to discuss this issue, and will also place today's presentation on the WQT website. Mike Schneider noted that the report on the Corps' Bonneville/Warrendale fixed monitoring station review is also available from COE Portland District's Jim Britten. Schneider said he will distribute this report to the WQT membership as soon as it is provided to him.

Is there a date by which this decision needs to be made? Schneider asked. Yes -- I would like to be able to incorporate it in the water quality plan of action appendix to the Fish Passage Plan, which is due out in draft form within a month or so, Adams replied.

#### ***4. TDG Fixed Monitoring Station Operations at The Dalles and John Day.***

Carroll led a presentation titled “RPA 132: John Day Dam – 2003 Field Study.” He briefly reviewed some of the RPA 132 subgroup’s past work, then noted that most of this year’s work focused on the John Day forebay, and the representativeness of John Day’s forebay fixed monitoring stations. In the course of his presentation, he touched on the following major topic areas:

- Tasks: review and analyze existing data from the forebay fixed monitors for representativeness and anomalies in TDG and temperature, evaluate and compare auxiliary sites at each project for performance and representativeness
- John Day 2003 objectives: evaluate the forebay TDG fixed monitoring stations, evaluate existing sites
- A map of the existing sites and the sites sampled in 2003
- John Day fixed monitoring station TDG% saturation and temperature, April 9-early August, 2003 (graph)
- John Day BRZ site temperature profile, 2003 (graph)
- John Day vs. John Day draft tube site TDG % saturation, 2003 (graph)
- John Day vs. JDA FMS TDG % saturation, 2003 (graph)
- John Day vs. JDA FBNL (navigation lock site) TDG % saturation, 2003 (graph)
- John Day BRZ site temperature profile, 2003 (graph)
- John Day vs. John Day draft tube site TDG % saturation, 2003 (graph)
- John Day vs. JDA FMS TDG % saturation, 2003 (graph)
- John Day vs. JDA FBNL (navigation lock site) TDG % saturation, 2003 (graph)
- Observations: daily variability in TDG at forebay FMS, intermittent thermal stratification.
- Recommendation for 2004: Relocate the John Day forebay TDG monitor to the JDA FBNL site at the upstream tip of the navigation lock guide wall, 15 meters deep; also, do a vertical profile of forebay temperature.

The group devoted a few minutes of discussion to Carroll’s presentation, offering a few clarifying questions and comments. Ultimately, Adams asked whether the WQT feels comfortable making a recommendation on this issue at today’s meeting. Stu McKenzie said he is concerned with data trends, and the fact that, if the John Day fixed monitoring site is moved, and it begins providing, say, lower temperature readings, that could mislead the public into thinking that water temperatures have cooled. You can still continue to take water temperatures at the same shallow depth they’ve been taken at in years past, noted one participant.

Mark Schneider suggested that the decision on the relocation of the John Day FMS be rolled into the same upcoming discussions at the RPA 132 subgroup and the December WQT meeting that the Bonneville decision will be made. That’s fine, said Adams, but we do need to

start making progress on some of these issues and recommendations. I also hoped to begin discussion of some of the Snake River fixed monitoring stations at the WQT's December meeting, Adams added. Another participant (Randy from the Corps' Walla Walla District) said that, in his opinion, it would make more sense to discuss the Snake River projects at the WQT's December issue. Again, my main concern is that we make forward progress on some of these RPA 132-related issues, said Adams.

The group devoted a few minutes of discussion to the upcoming WQT process; ultimately, it was agreed to cancel the December WQT meeting, ask the RPA 132 subgroup (plus any other interested parties) to meet as many times as necessary during December, and to come to the January 13 WQT meeting prepared to make a recommendation on the fixed monitoring station issues at John Day and Bonneville.

#### ***5. 2004 COE Plan of Action Discussion and Review.***

Adams said he had agreed to furnish a draft TDG plan of action for inclusion in the annual Fish Passage Plan, quite soon. That draft plan of action will not include any definitive details on future actions, he said, adding that he is willing to provide it to the WQT for review. Personally, he said, I would prefer to have a water quality monitoring system that isn't under constant review – I want to fully comply with RPA 132, but at some point, we're going to have to make some hard decisions. I would prefer to take the time we need to make good decisions, replied Mark Schneider. In my view, we need to get the RPA 132 subgroup up and running as soon as possible, said Adams. I agree, said Schneider.

When should we look for the draft plan of action? Harkless asked. It is currently undergoing internal Corps review, Adams replied; I should be able to provide it to Mark a couple of weeks in advance of the December WQT meeting. I would then like to receive any final comments from the WQT on the plan at the group's January meeting, said Adams. It was so agreed.

#### ***6. Next WQT Meeting Date.***

The next meeting of the Water Quality Team was set for December 9. Meeting summary prepared by Jeff Kuechle.