

May 20, 2008 SUMMARY
JOINT MEETING OF THE GREAT SALT LAKE SELENIUM
STEERING COMMITTEE AND STAKEHOLDERS

Department of Environmental Quality, Building #2, Room 101
168 North 1950 West
Salt Lake City, Utah 84116

GREAT SALT LAKE STEERING COMMITTEE MEMBERS PRESENT

Walter L. Baker, Chairman	Department of Environmental Quality
Kelly Payne	Kennecott Utah Copper Corporation
Nathan Darnall	U.S. Fish & Wildlife Service
Leland Myers	Central Davis Sewer District
Maunsel Pearce	Great Salt Lake Alliance
Delane McGarvey	Davis County Health Department
Richard Sprott	Department of Environmental Quality
David Naftz	U.S. Geological Survey
Clay Perschon	DNR/Division of Wildlife Resources
Richard Bay	Jordan Valley Water Conservancy District
Don Leonard	Utah Artemia Association

OTHERS PRESENT

Kevin Okleberry	Salt Lake Valley Health Department
Donald C. Dew	Citizen
John Whitehead	DEQ/DWQ
Bill Moellmer	DEQ/DWQ Science Panel Chairman
Theron Miller	DEQ/DWQ Science Panel Co-Chair
Leah Ann Lamb	DEQ/DWQ
Jodi Gardberg	DEQ/DWQ
Renette Anderson	DEQ/DWQ
Steve Speckman	Deseret News
Lou Ann Moellmer	Citizen
Brian Davis	Kennecott Utah Copper Corporation
R. Jefre Hicks	Utah Airboat Association
Kerry McCloud	Utah Airboat Association
Rohan McGowan-Jackson	Kennecott Utah Copper
Eric McCulley	Legacy Nature Preserve
Van King	Kennecott Land
Robin Naeve	BLM Salt Lake Office
Paula Doughty	Kennecott Utah Copper Corporation
Glenn Eurick	Kennecott Utah Copper Corporation
John Mackey	DEQ/DWQ

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Bruce Waddell	Citizen/ Lake Front Duck Club
Lynn Pace	UAB and Ducks Unlimited
Jeff Pace	Utah Airboats/ Ducks Unlimited/ Friends of GSL
Jason Kershaw	Lakefront Duck Club
Jake Ward	Lakefront Duck Club
Katie Pearce	Friends of Great Salt Lake
Lisa Kirschner	Parsons Behle & Latimer
Ted Wilson	Utah Rivers Council
Dale A. Christensen	Salt Lake City Water Reclamation
Joy Emory	Citizen
Merritt K. Fry	Citizen
Louis Cooper	Davis County Environmental Health
Ann O'Connell	League of Women Voters
Cory Milne	Great Salt Lake Minerals
Cullen Battle	Private
Kevin Cowan	North Davis Sewer District
Wayne Martinson	National Audubon Society
Lynn de Freitas	Friends of Great Salt Lake

1. Call to Order, Roll Call of Steering Committee and Stakeholder Introductions:

Walt Baker of DEQ Division of Water Quality (DWQ) called the meeting to order at 7:00 PM (after an open house poster session) and welcomed all in attendance. Roll Call of the Selenium Steering Committee was taken and the stakeholders introduced themselves.

2. Process of Developing a Selenium Water Quality Standard

Walt Baker, DWQ gave a presentation titled 'The Process of Developing a Selenium Water Quality Standard for Great Salt Lake.' The presentation included background information on the groundwater plumes, timeline of events, creation of the Steering Committee and Science Panel, the decision making process, funding and the science panel recommendations. The presentation is posted at this web address: http://www.deq.utah.gov/Issues/GSL_WQSC/prior_meetings.htm

3. Development of a Site Specific Standard for Selenium in Open Waters of Great Salt Lake, Utah.

Jeff DenBleyker, CH2MHill gave a presentation titled 'Development of a Site Specific Standard for Selenium in Open Waters of Great Salt Lake, Utah.' The presentation included the program objectives, research program overview, effects of concern, and key observations and recommendations from the Science Panel. The presentation is posted at this web address: http://www.deq.utah.gov/Issues/GSL_WQSC/prior_meetings.htm

Questions or comments for Walt Baker or Jeff Denblyker

Corey Milne, Great Salt Lake Minerals asked if there a water column concentration that corresponds to the egg concentrations and how that was determined?

Jeff DenBleyker, CH2MHill responded that the average water column concentrations corresponding to egg concentrations of 6.4 to 16 mg/kg are 1.5 to 3.7 ppm and are based on model results.

A member of the audience asked if trigger levels are reached what mitigation steps will be taken and who pays for it.

Jeff DenBleyker, CH2MHill describe the tiered implementation approach concept, the trigger levels for water, diet and eggs and the management implications.

Lyn de Freitas, Director of Friends of Great Salt Lake commented that shouldn't we have the answers to trigger point levels, funding and monitoring before the Steering Committee and ultimately the Water Quality Board selects a standard.

Walt Baker, DEQ/DWQ responded that there will be a great deal of discussion on the assessment methodology and trigger levels. Those numbers or trigger levels will be based on the water quality standard. Each trigger point will be a percentage of the standard. This will be discussed extensively with the Steering Committee to get their feedback.

Comments from Stakeholders:

Jason Kershaw, President of the Lake Front Duck Club: This is more of a comment than a question but I just wanted to come out and voice our opinion. We've been involved in some of the past studies and attended meetings with regards to mercury and now selenium and I think everyone in the room would agree we all know what rolls down hill. So I appreciate the science that's gone in to what you're proposing but I would just beg you, please, weigh on the side of caution, go on the low end if you can because it sounds like there's still some unknown variables and we've got birds now that we can't eat and we don't know what the selenium impact is going to be and you don't know what's going on in the north arm. I would urge you please, stay on the end of 6.4 or even lower if you can because the GSL is a unique ecosystem and everything is going to end up there.

Cullin Battle, Citizen: I practice and teach environmental law and I've been involved in the Great Salt Lake Alliance with a number of issues around the lake for many years. I wanted to address my remarks to the Committee members and first of all talk about something that really hasn't been mentioned yet and that is the purpose and philosophy behind setting a water quality standard. Step back a little bit. Focus on the bigger issue here. If we want to look at the philosophy and purpose behind the water quality standard we have to go back to the Clean Water Act and look at the regulations that EPA issued dealing with water quality standards and I think some of the language that's in those regulations might provide some helpful guidance with committee. They talk about the purpose being to set a criteria necessary to protect and to protect the aquatic resources and in particular I think appropriate here the language here in the regulations "wherever attainable, to achieve a level of water quality that provides for the protection and propagation". I think propagation is important since we're talking about egg hatch ability. The purpose of a water quality standard for fish, shellfish and wildlife is to restore and to maintain the chemical, physical biological integrity of the nation's waters. Note that these purposes do not include the protection of industry's abilities to

discharge wastes into a waterbody. If a waste can be discharged without compromising these purposes, then the water quality standard may allow that but the protection of the resource is what drives the water quality standard not the industry's need to discharge. From what I understand, we have a lake that is currently at a "no effect" concentration for selenium. That's the current situation. The question is whether to adopt the water quality standard that maintains a "no effect" concentration or to move to a standard that would allow a 10% effect. The basic choice that the Committee has to make is a recommendation. Of course, we're dealing with a lot of uncertainties, that came out in the presentation today. Does a 10% effect really have a 10% effect? It might be less, it might be more, the point is, we don't really know. The question is, in the face of these uncertainties, would it be more prudent to err on the side of caution, as one of the other questioners pointed out. I think a helpful analogy might be to look at the Migratory Bird Treaty Act. Since we're dealing with migratory birds and potential mortality, it's helpful to look at that as an example. The Migratory Bird Treaty Act prohibits any taking, harassing, harming of migratory birds unless it's done in conjunction with an officially sanctioned hunting season or trapping. And while the Act does not typically apply to degradation of habitat, it does apply to the introduction of poisons into the environment and that's potentially what we're looking at here. When an activity has a potential under that Act to cause mortality, the responsible parties typically consult with the US Fish & Wildlife Service and they come up with a plan to eliminate or at least minimize to the greatest extent practicable the potential mortality on whatever species is in concern. A good example is a power line or a wind turbine generator. The operators of these facilities sit down with the US Fish & Wildlife Service and come up with best management practices. The goal is to eliminate all mortality. Wouldn't it make sense, in where you have a US Fish & Wildlife Service science panel member telling the Committee that a no effect concentration is doable? It's reasonable. They're also saying, in their opinion, that a 10% effect cannot be justified. So wouldn't it make sense, under these circumstances, to follow this guidance and err on the side of caution. Now if this were a trout stream, we wouldn't be having an argument. We would be saying that it would be obvious that we would adopt a standard that would not allow any increase to a harmful constituent. I would submit that this resource is as important biologically if not more important biologically than any trout stream in Utah. Why not adopt the "no effect" concentration to protect the resource. If we set it too high, and we're wrong, there's really no way to undo the damage.

Jefre Hicks, Utah Airboat Association: I just wanted to make the comment, if you set a selenium standard where you start seeing troubles I feel like it's too late at that point. To adopt any proposal but the "no effect" seems to do a disservice to the lake and to the wildlife of the millions of waterfowl that come through. In addition to us, the people that use the lake, we recreate on it, we boat on it, we hunt on it and we eat some of those birds. It just seems it would be doing a disservice if we didn't stick with the lowest possible thing which would be "no effect."

Bruce Waddell, Citizen/ Lake Front Duck Club: I have prepared a written statement that I would like to give the Steering Committee members. The stated purpose of this steering committee effort was to prevent impairment of beneficial uses and sustain the beneficial resources of the lake and the associated wetlands. That purpose is a significant part of a larger purpose expressed by the people 4 years ago. When they said they did not want selenium going into the wetlands and accumulating in the birds in the ecosystem. They wanted it protected and I don't think they meant 90% protected. I'm going to shorten what I was going to talk about and go right to what I think some of the recommendations I would suggest might be applicable to some of your triggers as well as the standard setting. I also would like to say that I do represent the Lake

Front Duck Club and they asked that they could be attached to the letter. One would be to put a moratorium on new loading to the Great Salt Lake until it is determined through monitoring of water and brine shrimp similar to the Tier 1 trigger that selenium concentrations are stable or declining. At this time the best approach would be to adopt a 5 microgram/per gram dry weight concentration in bird eggs and establish a concentration no higher than the 4.9 micrograms/gram in brine shrimp which is the main food birds are eating from the Lake. And no higher than indicated by the Grosell model for the concentration of selenium in the water associated with the 4.9 micrograms/gram in the brine shrimp. I also recommend that you initiate studies for bird species. I'd like to re-emphasize how important it is to cover the major effects and lethal effects to birds. We just don't know what those effects are yet. We need to study the whole life cycle study of the eared grebes and nesting of selenium and mercury contaminated Northern Shovelers and Goldeneyes. We think this would accomplish several objectives; it would initiate the tier 1 trigger and the implementation plan under the most stable conditions and selenium standards as looking forward rather than damage control. Once discharges are authorized, it will take years to terminate or reduce the discharges or reduce loading. It would reduce your liability under the Migratory Bird Treaty Act by taking a standard that is considered non-toxic. And as far as I can tell, this is the only standard that clearly meets the goal of preventing impairment of beneficial uses and sustainment of the natural resources of the lake. We have done a couple of studies. I don't think they've been clearly incorporated into the analyses of Fish & Wildlife Service studies from 1994 through 2000. Are we increasing or declining at this point? We don't know. Three of the 133 eggs exceeded the 6.4 mg/kg. But what about 4 out of 16 eggs from the south shore – that's 25%. How do you want to deal with that? Anyway, please take a look at the letter. There's a lot of thought in it.

Ted Wilson, Utah Rivers Council: Thank you very much. It's great to be here. Thanks for the hard work. I think just to put it simply, Utah Rivers would also encourage a "no effects" standard. It may be tough, but I think it's important and think it's the kind of thing to shoot for and I would also encourage the Division to look upstream. The Great Salt Lake is the bottom of the basin of many rivers and I'm sure they all carry some selenium and to keep your diligence upstream to reduce the flow. Also, to remind us all, that we're on the edge of hotter and drier weather. Many scientific reports have indicated we're going to have less water in this state. Concentrations in the lake will go up and a standard that is flexible that deals with that is very, very important. Again, thanks for the hard work and we appreciate the chance to speak. I must confess that the wonderful letter Amy deFries wrote on the technical nature of the studies flew out of my pocket as I rode my motorcycle down North Temple but that letter should be in your custody. Thank you very much.

Wayne Martinson, National Audubon Society: Thank you. I appreciate all of the good work that has been done by the Science Panel and the Steering Committee and the Utah Division of Water Quality. I'm with the National Audubon Society. I'll be submitting a letter after I speak in hard copy and sending one by e-mail as well. The National Audubon Society owns property on the shores of the Great Salt Lake. We own property in the south arm in Gilbert Bay and also in Farmington Bay so we're a land owner that has some direct impact that will be directly affected by this decision. We also manage and own just a little bit of property in the Lake Creek area by Salt Air so we are directly concerned. The Great Salt Lake, the 5 major bays of the Great Salt Lake, have recently been announced as globally important bird area that is based on about 18 bird species with well over 1% of each of their species and their populations residing at the Great Salt Lake. Four of those species include the American Avocet, California Gull and the Black Neck Stilts and Eared Grebes which are some of the species that you're trying to address. National Audubon Society

fully supports the precautionary water principle for this area so this would mean that we would seek a selenium “no effect” concentration water quality standard for avian eggs of 5 parts per million. The letter that I’m submitting would indicate a little bit more of that but I’m not sure that people have mentioned that one person on the Science Panel who was making this recommendation of this “no effect” concentration of 5 parts per million was Joe Scorupa who is the person most intimately involved with wildlife and has a great deal of background and research in that area and in my mind, when we’re talking about wildlife, is the one that we should be listening to most. So, again, I would encourage a precautionary principle and the 5 parts per million.

Joy Emory, Citizen: I’m an environmental engineer and I’ve sat in on many of these Steering Committee meetings and the Science Panel meetings. I’m going to read my comments. I do also support a bird egg selenium of 5 milligrams/kilogram as described by Joe Scorupa in his recommendation. He describes this concentration as a compromise between normal background mean Se in bird eggs and the lower 95% confidence limit of the EC10 (he estimates the EC10 in the range of ~7.7-10 mg/kg, depending upon the method of interpreting the data). The lower 95% confidence limit, which is undefined in his written recommendation, is considered by some to be a no effect concentration. I support enforcement of this standard via a tiered management approach that is legally binding. I also strongly support a consensus recommendation from the Steering Committee to the Water Quality Board and I’d like to make a few more comments about that. The Steering Committee members were chosen to represent specific interests and although one might expect each member to advance his or her own interests during the meetings, the agreed upon goal of consensus suggests that in the end, the Committee members are willing to integrate into a decision that also respects the interests of the greater community. Properly built consensus allows all involved to own the decision and proceed with commitment. And without consensus, any recommendation that is made will be underpinned with the justification for some to disown that decision. Let’s challenge our Committee members to find common ground outside and before the formal meeting so that on May 29th, they can send an unambiguous message to the Water Quality Board that reflects the values of our community. This requires leaving rigidity behind and approaching discussions with a creative eye. We have a chance now to put consensus building power to work and it does not all have to be formally facilitated on May 29th.

Lyn de Freidas, Director of Friends of Great Salt Lake: We too will be submitting a hard copy of our comments. We are in support of a “no effect” concentration and in support of the recommendation from Joe Scorupa. In light of the fact that this is a precedent and it’s creating a model for future site-specific water quality standards for open waters of Great Salt Lake. Most likely, mercury will be next. It seems that we have an outstanding opportunity to demonstrate a real show of support for protection of the system by being supremely conservative and using that as kind of the marching call to subsequent processes. So, thank you.

Maunsel Pearce, Great Salt Lake Alliance: I agree with Joy Emory. I think that we have nine days to talk to each other and to each have ownership in this decision and unfortunately, there’s a holiday in between but we should make a real effort to talk to each other and possibly the Division of Water Quality could make an effort to get us together. I think that trying to reach consensus in half an hour before we make a decision that is as important as this one is, is a mistake, so I’m seconding Joy’s suggestions.

Walt Baker, DEQ/DWQ: I would like to thank all of those that have participated tonight for their well thought out questions and comments. There is certainly a lot of passion on this issue and I, very much, from the bottom of my heart, thank those who have participated in this process these four years. I think starting out, I did not think it would be four years to get to where we are and I'm glad we've taken the time. I'm glad there's been good science behind that. I'm glad there's been deliberation. It has certainly been illuminating to me. We want to reiterate that there will be more time for formal comments to be made. The purpose of this meeting tonight was to have the opportunity for stakeholders the opportunity to direct their comments to the Steering Committee members and to inform those that haven't been engaged in the process to see the trail that we have trod these last four years.

During the formal comment period, we will solicit not only your participation in public hearings that will be held. There will be two public hearings (one in Price and one in Salt Lake City) on the water quality standards. You should know that the selenium standard for the Great Salt Lake is only one element that we're going to public hearing on. So there will be the opportunity of voicing comments at the public hearing or written public comments. We'll be responding to each of the comments that we receive.

Wayne Martinson asked at what time can the public make comments before the meeting on the May 29th.

Walt Baker, DWQ replied that comments sent to Jodi Gardberg will be forwarded to members of the Steering Committee as soon as we get them until the final meeting on May 29th.