MINUTES OF THE
LAKE POWELL PIPELINE MANAGEMENT COMMITTEE

Minutes of a public meeting of the Lake Powell Pipeline Management Committee, held on Friday, March 19, 2010, at 8:30 a.m. at 533 East Waterworks Drive, St. George, Utah.

Board Members present: Harold Shirley (Utah Board of Water Resources), Dennis Strong (Utah Board of Water Resources) R. Scott Wilson (CICWCD), and Michael Noel (KCWCD) and Ronald W. Thompson (WCWCD).

Also present: Eric Millis (Utah Division of Water Resources), Peter Samuolis (Kennedy Jenks), Marc Brown (MWH), Brian Liming (MWH), Ken Spiers (Bowen Collins & Associates), Barbara Hjelle (WCWCD), Rockey Stubbs, Harold Sersland (Utah Division of Water Resources), Craig Harman (BLM), LeAnn Skrzynski (Kaibab Paiute Tribe), D. Larry Anderson, (Utah Division of Water Resources), Corey Cram (WCWCD), Paul Wright (Utah DEQ), Lisa Rutherford (CDF), Paul Van Dam (CDF), Paul Blanchard (NWP Co), Tina Esplin (WCWCD).

Welcome—Dennis Strong welcomed those present and conducted the meeting.

Approval of November 10, 2009 Minutes—Harold Shirley made a motion to approve the November 10, 2009 minutes with the change of moving Ronald Thompson from Present to Board Members Present and also adding him as Board Members Present, Scott Wilson seconded the motion and all voted aye.

Update on Environmental Studies and Reports—Brian Liming gave an update and overview of the environmental studies:

Additional Environmental Field Studies in Amended Areas of Potential Effect (APE):
Additional studies need to be done in the amended APE in the Upper Big Water area to cover the short segment of transmission line going to the substation site near the booster pump station 2 (BPS-2) site. Moving from east to west throughout the project alignment for both the transmission lines and pipeline alignments, the 100-foot wide studies were done along US 89; and now Garkane Energy has indicated there is potential for a transmission line along the access road up to the east boundary of the Grand Staircase Escalante Monument, which is where either the booster pump station 3 (BPS-3) alternate site or the first regulating tank site will be located. We need to go back and expand that width from 100 feet to 250 feet for all studies that involve field surveys. Moving to the west side of the Cockscomb, we received some feedback from the Bureau of Land Management (BLM) in the Grand Staircase Escalante National Monument that we could mitigate some of the visual impacts they are concerned about if we could change the location of the booster pump station 4 (BPS-4) to an area lower in elevation across the highway on private land. We have also been in discussion with the BLM because of their concern about having the high point regulating tank at the trail head and horse unloading area up on top of the monument, and they suggested we use this alternate alignment, so we need to do studies there. It would be about 45 feet lower in elevation than the highpoint, and by having a lower elevation and not having to pump water up as high, energy costs would be saved throughout the life of the project. We are going to be studying along that road and down towards where the highway turns towards Kanab for the south alignment alternative that goes south toward the reservation. We

have two additional options there to extend the pipeline alignment, and we would need to study both alignments. Moving further west to the Hurricane Cliffs, this area is the fore-bay, which is up on top of the Hurricane Cliffs. The amended APE is the additional areas we are looking at for the after-bay as part of the pump storage proposal, and then there would be a tunnel that would extend from east to west underneath the ridge, then it would head northwest up towards Sand Hollow. We need to study the ridge on top to do environmental clearances for potential drilling for the tunnel, then the pipeline continues on. There is another transmission line alignment that is not quite parallel that goes over the top of the ridge. It is further north than we originally had it to avoid the glide path for the Sky Ranch airport to respond to their concerns. Up towards Cedar Valley on the Cedar Valley pipeline, the amended APE incorporates the site for the water treatment facility up in the Cross Hollow Hills, then there is a connection to an existing substation southeast towards the water treatment plant, and also an extension of pipeline down to the existing reservoir and the pipeline alignment bringing water up to the water treatment facility site. For these additional APEs, we have identified the field work that we need to do to collect the same data we collected on the rest of the project, including geology and soil resources data, archeological and historic-era resources, paleontological resources, special status plant species and noxious weed assessment, special status wildlife species, vegetation community mapping, wildlife resources and visual resources. Special plant species and noxious weed assessment is more season specific and needs to be done during the growing season.

Ongoing Field Studies: We are continuing to do the Mohave Desert tortoise work and Utah prairie dog work primarily along the Cedar Valley pipeline alignment. For the Southwestern willow flycatcher and yellow-billed cuckoo, we didn't have permission from private land owners to do those studies along the Paria River last year so we will do these studies this year. For wetlands and riparian resources, we have had crest gages and scour chain sites and will be going out and collecting more data of stage events in various streams in the spring. Ethnographic resources involve the traditional cultural properties that are important resources to various native tribes in this area, and we will continue to coordinate studies with the various Indian tribes. We are still in negotiations with several tribes. We have contracts with the Zuni and Hualapai and have a pending contract with the Paiute Indian Tribe of Utah. We are still trying to get the contract and scope of work agreed to with the Kaibab Band of Paiute Indians. We have just reconnected with the Las Vegas Paiute Indian Tribe, and the BLM has just initiated consultation with the Skull Valley Goshute and the Northern Band of Shoshone. We have some studies that are ongoing and some studies that are waiting to start.

Modeling Studies by Bureau of Reclamation: The Bureau of Reclamation, BLM and National Park Service have raised concerns, as well as other nongovernmental agencies and organizations, of what the project's impacts could be on Lake Powell levels and flows in the Colorado River downstream, so the Division of Water Resources contracted with Bureau of Reclamation to run the Colorado River system simulation model that is the model it runs to operate and also plan for operations in Colorado River system. They have taken 101 years of direct natural flow data to input into their model to simulate conditions over the planning period for this project. They have simulated 2009 to 2060; and the results received by the Bureau of Reclamation are probabilistic, statistically derived results, so they give an indication of what could happen in future, but are not time specific. The summary results are saying that there will be very minor to no effect on the reservoir levels as a result of the Lake Powell pipeline project and very minor to no effect on the reservoir releases downstream of Glen Canyon Dam. We recently had a meeting with the National Park Service to discuss their concerns over the area of potential effect, and we

convinced them, with the model results the Bureau of Reclamation has provided from these draft reports, that we don't need to extend the area of potential effect to the areas that the National Park Service was suggesting earlier in the process. We have also received the results of the Draft Water Quality modeling, which uses a portion of the Colorado River modeling results of Lake Powell levels and Glen Canyon downstream flows of salinity, temperature, dissolved oxygen, TDS; and the result is that there are no measureable changes between the Lake Powell Pipeline withdrawals and the no action alternative which would be not withdrawing water from Lake Powell. Dennis Strong said in the water quality analysis, it should be noted that the states and government are doing a lot already on salinity as a part of analyzing the effect of Lake Powell on temperature. There have been studies done and proposals and analysis of temperature, so there are a lot of things that might help understand temperature and salinity. This is a shot in time and some of these, the TDS, will get lower as we get a salinity program in the basin states and Reclamation. Brian Liming said we want to make sure that what the Bureau of Reclamation has done is really to prepare and isolate the effects of Lake Powell pipeline project and the no action alternative of not taking that water out. These were projected out through 2060.

Draft Study Reports: Preliminary Draft Reports are being updated with information either from field studies or additional studies we are doing on the amended APE. We expect to start to provide the updated drafts this month and in the coming months as we get draft study reports done. All of these reports will be available when submitted as part of the integrated licensing process. The ethnographic resources study plan was separated out. We consulted initially with 25 tribes or nations on the ethnographic resources. The Utah Board of Water Resources was named the agent for FERC to perform the informal consultation, research and discussion with the various tribes to collect this data. Federal agencies must be involved in formal consultation with these tribes. We have contracts for these tribes to do their own research. We have been in discussion with nine tribes or nations. We are still awaiting responses from six tribes or nations, and ten tribes or nations have stated that there is no need for further consultation.

FERC Initial Study Report Meeting**:** The initial study report meeting was scheduled for February 5 based on the study reports that would have been filed on January 21. However, because of some changes made, additional areas to study, delays in getting some studies completed, as well as the tremendous volume of data and analysis for the cultural resources, FERC said they want to have all the reports submitted before scheduling the meeting so the stakeholders, agencies, and interested public will have all the information to review and comment on. As we get closer to completing all 23 studies, we will coordinate with FERC on when the initial study report meeting will be scheduled, and they will post the date on their docket on the website available to the public. We anticipate that it will be scheduled for late summer or early fall, and will be held in St. George.

Update on the Engineering Studies and Report—Marc Brown gave an update on the engineering studies. They are for the most part complete. We have divided the Lake Powell pipeline into five different systems that are completed, and we are currently updating and completing the engineering reports. Those reports will document our findings on the engineering and be provided with the environmental studies Brian talked about to FERC. The first system is the intake system at Lake Powell by the dam. We completed the geotechnical drilling. There is good rock structure, and we have been able to refine our design concept and reduce the price of the intake by at least ten million dollars because of the rock structure. We have re-adjusted the pumping station that is on the surface to accommodate that reconfiguration. We are fortunate

that the underground features have identified a more acceptable solid rock structure. The water conveyance system design which is the pumping facilities that go from the intake to the high point, are complete. We have a couple of things we are refining to accommodate requests from BLM of looking at lowering the highpoint and modify slightly the location of booster pump station four. The hydro system work, which is the system from the high point down to Sand Hollow, is completed. We have recently started to document that work in conjunction with a drilling program RG&B has done for us. They just completed and submitted their findings on Hurricane Cliff and have found no fatal flaws and have identified where the fault is and that it is engineerable. It appears there are good solid rock structures where we suggest placing the dam structures for the fore- and after-bays. We have worked closely with the Sky Ranch airport to accommodate their concerns and to locate power facilities. The Cedar Valley pipeline project is completed. We are following the highway with the pipe alignment all the way to Cedar Valley and are documenting that route. The project in Kane County involving the pipeline and treatment facilities is completed, and we are documenting that as well. The final system is the power transmission facilities that will power the pump stations and also recover the electricity that comes from the hydro power facilities. We contracted with Page Electric to complete a power study at the Glen Canyon dam substation, and they are in the process of doing that study and will have results in the next month or two. Garkane Power is working very well with us and is working with their grid, their backbone and power facilities; and a draft should be coming shortly for us to review. Rocky Mountain Power, the area provider for the pumping facilities in Cedar Valley, has agreed to do those studies. We are currently negotiating with them and initiating contracts to begin this work. So, the engineering work essentially has been done, and we are documenting the work and are a little bit ahead of schedule. It appears that cost estimates that we provided a couple of years ago, have actually come down a bit because of the refinement we have done in our engineering factors. Mike Noel said on the Kanab extension that comes off, we may have some changes on that to be decided in the future in terms of treatment plant and how we want to deal with it. Marc Brown said the bidding environment is at premium level right now. It should be noted, however, that the cost estimates we will prepare and present to FERC are the best guess we can give right now using the Southern Utah market bidding environment; but we don't know what it will be in four or five years from now. Paul Van Dam asked if there have been revisions made in the estimate of the amount of power to be used to lift the water from the low point and the amount of power to be developed on the downward side. Marc Brown said he thinks quantities of power are the same as what we had in the past and has not changed. It is all relative to the amount of lift we have and drop we have and that has not changed. What we have seen is the base price for power to lift this water has stayed constant and our projections have stayed constant. We have contracted with a specialty firm that has looked out 60 years of yield to review prices off and on peak and have seen a consistency of the base power rate. What we are seeing is an increase in green power and the benefit of hydro especially with the peaking facilities. The difference between the peak sale price of power and the cost of base pump price is increasing. The delta is getting bigger, which makes the hydropower more beneficial, but with wind power and solar power being more part of the portfolio, it is not always there, so the reserve power can fill in the gaps when the wind power is not there. The intent is those generators will help offset the power. Scott Wilson said there are more governmental mandates that you shall use x volume of green power, so that creates a more ready market on the power sales side for us and makes it more attractive. Marc Brown said we are hearing more about not just the water issue here, but the need for power resource here in the future. The work we did does anticipate that there is going to be an increase in hydro, solar and nuclear as an influence of the base power generation that we have now. One thing we found very early is that some of the

earlier studies proposed just one hydro plant at the end of the system. We currently have seven hydros because we found that the price of steel was high and determined that the cost of providing these inline hydro stations compensates significantly the cost of pipe because it would reduce the pressure class by 50 to 100 PSI inside that section. We have a section of fairly high pressures in that area and have identified about $40 to $50 million in savings just in the cost of steel in the pipeline by placing a $5 to $10 million dollar hydro facility just upstream of that. So it is just not just the cost of energy we are getting benefit from, but the cost of pipe as well. In the power studies, they are going to look at their current grid and what they are capable of providing and also their own power demands in next 60 years and add on to that the Lake Powell pipeline. From that, we will get requirements or recommendations from the power companies to upgrade their facilities. They said it is not a lack of power, but a lack of facilities, so they will come back with a master plan and cost estimate of what those new facilities will require.

Basin States Study of Colorado River—Dennis Strong passed out information regarding the Colorado River Water Supply and Demand Plan of Study, which is just getting started and will be a two-year joint study between the Reclamation and the Basin States. The purpose is to conduct a comprehensive study to find current and future imbalances in the water supply and demand in the Colorado Basin and adjacent areas of the Basin. A lot of water leaves the Basin from places like Salt Lake and Southern California and Denver, and we are going to guesstimate what it is going to look like in the next 50 years and try to analyze and resolve the balances. We, and particularly the Lower Basin, are having problems meeting water supply needs. The Secretary of Interior has sent out an order about climate change and wants all future projects to look at impacts using best science and technology, so part of this study will include a climate change component. The Reclamation looked at tree rings, and there is a lot of modeling going on in the academic community. They are going to look at resources, including water allocations and delivery consistent under the law of the river. They are not talking about creating new law or doing things other than what is allowed under the current law of the river. They will be looking at hydro electric power, recreation, fish, wildlife and their habitats, including threatened and endangered species, water quality, ecology systems and flood control, so it is pretty much everything. The studies will have two co-managers, one representing the Basin states and one from Reclamation, with co-responsibility in directing the study. There will be a ten-member steering team consisting of representatives from each of the Basin states, a representative from the upper and lower Colorado regions of Reclamation and also representation from the upper Colorado River commission. The project team will include staff from the upper and lower region, staff from the non-federal cost share partners and staff from other entities who may be contracted to provide information, knowledge and support. The Reclamation has comment open right now on the study. They have four major areas that the study will cover: water supply assessment, water demand assessment, system reliability analysis and development, and evaluation of opportunities for balancing supply and demand. It will be modeling and gathering existing data where water is being used today and where it will be used in the future and ways of better operating the system. All options for improving and importing water into the river and using the water we take out will be included. The study will be completed about August or September of 2011, and then we will then be challenged to implement it.

Approval of Project Expenses—Eric Millis went over expenses in his Memorandum dated March 19, 2010:

To-date costs to be reimbursed through the eventual sale of water are the charges by MWH, the Bureau of Land Management and the Bureau of Reclamation.

MWH has billed the Division each month and staff has reviewed and approved payment.

Total at last report	**$12,230,907**	**58.4%**
October 2009	**$ 1,148,672**	**5.5%**
November 2009	**$ 1,015,750**	**4.8%**
December 2009	**$ 1,003,153**	**4.8%**
January 2010	**$ 920,710**	**4.4 %**
Total:	**$16,319,192**	**77.9% of the $20.953M contract**

The third payment to the Kaibab Paiute Tribe for the cost of tribal monitors and business activity tax for studies performed on the Reservation was made in January in the amount of $1,130. This brings the total paid to the Tribe to $14,117.01.

To date, $141,000 has been paid to the Bureau of Reclamation and $190,000 to BLM for their expenses on the project. The Bureau has expended approximately $100,000 of its amount and BLM has expended approximately $160,000.

Eric Millis said that since the time of the last meeting in November, they have received, reviewed and approved four more payments for October, November, December and January. They have also received the February bill, but have not reviewed it, so it was not included. **Ronald Thompson made a motion to approve $1,148,672 for October, $1,015,750 for November, $1,003,153 for December 2009, and $920,710 for January and an additional amount to the Kaibab Paiute Tribe of $1,130, Harold Shirley seconded the motion and all voted aye.**

Other Items—No other items.

Next meetings—Tuesday, July 13 at 8:30 a.m., location to be determined, and Tuesday, November 9 at 8:30 at Washington County Water Conservancy District.

There being no further business, the meeting was adjourned.

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Secretary