

APPENDIX D

Copies of Comments

Table D-1. List of Commenters, Comment Numbers, and Comment Methods

Commenter	Comment Number	Comment Method
Cache County	S-01	U.S. mail
Ray Pehrson	S-02	U.S. mail
Anonymous	S-03	Scoping meeting
David and Judy Allen	S-04	Scoping meeting
Marilyn Grunig	S-05	Scoping meeting
Wendy Hassan	S-06	Scoping meeting
Eugene Kartchner	S-07	Scoping meeting
Jack Keller	S-08	Scoping meeting
Sara Krebs	S-09	Scoping meeting
John Krusi	S-10	Scoping meeting
Dee Ann Michaelsen	S-11	Scoping meeting
J. Wilmer Rigby	S-12	Scoping meeting
Kathy Robison	S-13	Scoping meeting
Brett Roper	S-14	Scoping meeting
Leila Shultz	S-15	Scoping meeting
Leon Stucki	S-16	Scoping meeting
Kim Sullivan	S-17	Scoping meeting
Laraine Swenson	S-18	Scoping meeting
Charlotte Brennand	S-19	E-mail
Gordon Younker, Utah Association of Conservation Districts	S-20	E-mail
Larry Rupp	S-21	E-mail
Jay Monson	S-22	E-mail
Trevor Hughes	S-23	E-mail
Bruce Pendery	S-24	U.S. mail
Charles Major	S-25	E-mail
Kathy Short	S-26	E-mail
Lucy Peterson Watkins	S-27	E-mail
Ray A. Pehrson	S-28	U.S. mail
Lucy Peterson Watkins	S-29	U.S. mail
Thad Box	S-30	E-mail
Clair Marshall	S-31	Scoping meeting (court report)
Pat Pehrson	S-32	Scoping meeting (court report)
John Nelson	S-33	Scoping meeting (court report)
Wayne May	S-34	Scoping meeting (court report)
Carlos Anderson	S-35	Scoping meeting (court report)
Jeff Keller	S-36	Scoping meeting (court report)
Don Younker	S-37	Scoping meeting (court report)

Table D-1. List of Commenters, Comment Numbers, and Comment Methods

Commenter	Comment Number	Comment Method
Jon Meikle	S-38	Scoping meeting (court report)
Kay Gilgen	S-39	Scoping meeting (court report)
Linda Thorne-Probert	S-40	E-mail
Randy Oldham	S-41	U.S. mail
Pat Pehrson	S-42	U.S. mail
Cary Watkins	S-43	U.S. mail
William E. Piercy	S-44	E-mail
Jeff Watkins	S-45	E-mail
Matthew Larson	S-46	E-mail
Ray Pehrson	S-47	U.S. mail
Arden W. Lauritzen	S-48	Fax
Brian Ferebee, USFS	S-49	E-mail
Linda Thorne-Probert	S-50	U.S. mail
William E. Piercy	S-51	U.S. mail
Gene Truhn	S-52	E-mail
Jerry Boehme	S-53	E-mail
Larry Svoboda, EPA	S-54	U.S. mail
Gail Bingham	S-55	U.S. mail
Ray Wilhelm	S-56	U.S. mail
Keith Meikle	S-57	E-mail
Albert Wiebe	S-58	E-mail
Mark Nielsen, Logan City	S-59	E-mail
Jack Keller	S-60	E-mail
Whitney Matson	S-61	E-mail
Rick Major	S-62	E-mail
Doris Peterson-Rusch	S-63	E-mail
Bob Oaks	S-64	E-mail
Bruce Godfrey	S-65	E-mail
Lance Houser	S-66	E-mail
Shirley Joffs	S-67	E-mail
Julie Sharp, NPS	S-68	E-mail
Kevin Connors	S-69	E-mail
Rod Wilhelm	S-70	U.S. mail
Dean Candland	S-71	U.S. mail
Lydia Embry	S-72	U.S. mail
Polly Richman	S-73	E-mail
Marta DeBerard	S-74	E-mail
Clyde Anderson	S-75	E-mail

Table D-1. List of Commenters, Comment Numbers, and Comment Methods

Commenter	Comment Number	Comment Method
C. Val Grant, Bridgerland Audubon Society	S-76	Fax
Robert H. Schmidt	S-77	E-mail
John Eastmond	S-78	E-mail
Jordy Guth	S-79	E-mail
Leila C. O'Dell	S-80	E-mail
Kerry Jordan	S-81	E-mail
Anne Diekema	S-82	E-mail
Steven Hicken	S-83	E-mail
Richard W. Clement	S-84	E-mail
Kevin Connors	S-85	E-mail
Eric H. Joffs	S-86	E-mail
Ernest E. Bleinberger	S-87	E-mail
Trevor Hughes	S-88	E-mail
Barbara Middleton	S-89	E-mail
Jon Brunn	S-90	E-mail
James W. Huppi, USU	S-91	E-mail
Caroline Shugart	S-92	E-mail
Arthur Taylor	S-93	E-mail
Nick Eastmond	S-94	E-mail
Jeff White, Logan City Light & Power	S-95	E-mail
Bob Oaks	S-96	E-mail
Bob Oaks	S-97	E-mail
A. Leo Krebs	S-98	U.S. mail
Sharon Lauritzen	S-99	Fax
Lynne H. Goodhart	S-100	E-mail
John Derinzy, USACE	S-101	E-mail

This page is intentionally blank.

Comment S-1

Comment S-1 (continued)

CACHE COUNTY CORPORATION

M. LYNN LEMON
COUNTY EXECUTIVE/SURVEYOR

199 N. MAIN
LOGAN, UTAH 84321
TEL 435-755-1850
FAX 435-755-1981

COUNTY COUNCIL
CORY YEATES
H. CRAIG PETERSEN
KATHY ROBINSON
BRIAN CHAMBERS
GORDON A. ZILLES
CRAIG "W" BUTTARS
JON WHITE

HDR

REC: **AUG 02 2010**
PROJ: _____
FILE: _____
DIST: _____

July 29, 2010

Sue Lee
HDR Engineering
3949 South 700 East
Suite 500
Salt Lake City, UT 84107

RE: Logan Northern Canal Restoration

Dear Sue,

Attached is a copy of a letter sent to Sylvia Gillen in regards to Logan Northern Canal project as part of the Cache Counties' public comment.

Best regards,

Bob Fotheringham
Cache Water Manager

CACHE COUNTY CORPORATION

M. LYNN LEMON
COUNTY EXECUTIVE/SURVEYOR

199 N. MAIN
LOGAN, UTAH 84321
TEL 435-755-1850
FAX 435-755-1981

COUNTY COUNCIL
CORY YEATES
H. CRAIG PETERSEN
KATHY ROBINSON
BRIAN CHAMBERS
GORDON A. ZILLES
CRAIG "W" BUTTARS
JON WHITE

July 29, 2010

Sylvia Gillen
State Conservationist
USDA/Natural Resources Conservation Service
125 South State Street, Room 4402
Salt Lake City, UT 84138-1100

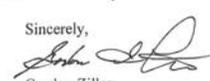
Dear Sylvia,

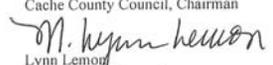
Thank you again for your support of the Cache County EWP Project (Logan Northern Canal restoration) in Cache County, Utah. The Cache County Council met on Tuesday July 27, 2010 to review the status of this project.

The social and economic impacts of the landslide disaster continue to devastate those residents of Cache Valley who are struggling without needed water. The Cache County Council unanimously supports the canal restoration effort.

The Council is extremely disheartened by the impact that one or two individuals in the community are having toward delaying this project. We believe their efforts are vindictive, self serving, and without merit. We understand that the Federal Government has made investigations concerning their arguments. We feel that the previous allegations are without merit and ask that you move forward recognizing that these opponents are searching for ambiguity to be in their favor. In other words, they want to delay or stop the project to keep their canal use in its current status. We urge you to analyze your findings and reconsider engaging in a full EIS so the project can be rapidly completed to restore water to our suffering county residents.

A motion with unanimous support of the council was made in the council meeting to request that NRCS make every effort to shorten the NEPA process so that the restoration alternative may be selected and action taken to remedy the disaster as soon as possible. We support and stand by your efforts for a speedy decision to restore Logan Northern Canal water delivery in Cache County, Utah.

Sincerely,

Gordon Zilles
Cache County Council, Chairman


Lynn Lemon
Cache County Executive

BF:kp
Eel
Copy: Sue Lee

Comment S-2

8-3-10

Attn Sylvia Gillen

You received a letter from Councilman Gordon Zilles and County EX Lynn Lemon Complaining about several people complaining your people ordering a LIS studie about our Canal Water problems. Well isn't it too bad that it will take longer to solve issues that are festering. US Share holders who have Logan Northern stock are not going to stand by and let our water being stolen & money to repair our Logan Northern Canal.

I live on Canyon Rd in Logan and have water stock in The Logan Northern Canal.

We have been completely Ignored about getting water I have 2 1/2 acres of land that were watered via Logan Northern, A Pear orchard horse pasture & Apple Orchard No water last year & this year about 5 to 6 inches to divide between 50 ^{share holders} share holders on Canyon Rd We have had to sand bag 3 bags high to get enough pressure to get any water, We now have to water 7 days a week & still we can't get enough water to water our property On top of this our water stock assment has doubled We used to water one Day a week

The money allocated to repair is being chulange by The New Highland Canal company We feel we are getting the shaft, The Emergency watershed protection Funds are being stolen by the New Highland company EWP Web site is to be used to remedy emergencies created by natural disaster such as Floods & Fire

Comment S-2 (continued)

From all I gather you people are not protecting our Water rights it is against the Law to steal water from ONE Canal & putting it into another Canal. It sure is strange that we have to have people who don't have water stock in Logan Northern or property adjoining The Canal Tell us what we can't have This crying bunch in North Logan Hyde Park etc have the same amount of water allocated to them as our Canal Logan Northern B&E's, They loose almost half through seepage I have no sympathy for them, they won't be the first to loose their farms bc cause of water shortage, The 305 Dust Bowl many people left, you know more about the problem than I do, but I'll tell you when Mr Lee gets elected to replace Bob Bennett he will hear from us. If we loose our water & money I for one will join in a law suite to protect our water rights You have no right to support what transpiring with the change that might come. Utah State University is breaking the law by dumping their waste water from parking lots above Canyon Road into our Canal. How come you aren't doing anything about this In 1865 people from the Logan 5th Ward dug with blood sweat & tears to bring water to the Logan Temple The Temple has 30 water shares of Logan Northern but not a drop of water get because of failure to repair restore the Break on Canyon Rd - Respectfully Ray Peterson

Comment S-3

Comment S-4



**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: _____
Address: _____

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

OPTION 3 " SUGGEST REBUILD THE SLOPE AT THE
LANDSLIDE, BUILD A PIPELINE WITHIN THE EXISTING
LOGAN & NORTHERN ALIGNMENT TO THE GAP E/400 N
LOCATION, THEN PUT WATER INTO THE LOGAN & NORTHERN
CANAL. L&N USERS UPSTREAM OF THE SLOPE FAILURE
COULD BE SERVED WITH PIPELINES CONNECTED TO THE
PIPELINE IN THE L&N ALIGNMENT



**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: David & Judy Allen
Address: _____

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

We hope option 4 be approved.
We have great concern for the agriculture community of
this valley. It is up to the current citizens and officials
to preserve the great tradition of agriculture productivity
for future generations. We have a great opportunity
and responsibility to provide water in the best
possible way for future generations. We need to
be progressive in this decision.

We want to thank Keith Meikle and his board
for all the hours and hard work in trying to
solve this unprecedented incident.

Comment S-5

Comment S-6

United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: Marilyn Grunice
Address: [REDACTED]

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

*What environmental issues and impacts are you concerned about?
Please be as specific as possible.*

I am a share holder in the canal. The water from that canal provides water for my yard and a large garden for family food production. The restoration of that water service is critical for us.
I support alternative /option 4. The money to repair the upper canal and replace the Logan Northern Canal would be the investment. The purpose of the canal is to deliver water to the share holders. It is critical to the farmers/ agricultural users.

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: Nancy Nasson
Address: [REDACTED]

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

*What environmental issues and impacts are you concerned about?
Please be as specific as possible.*

I would like to see water restored to users as soon as possible. Thanks to all who participated in the quick fix through Lundstrom. Most expensive does not equal best. I'm mostly concerned about the loss of open roads and trails in Lundstrom Park area. Beautiful amenity. Please endeavor to preserve. Worried about those who lose service through all 4 plans. Worried about Logan City Utility. Irrigation water is so much better than culinary water. Will piping and covering make it harder for new users to connect? How will the plan affect stormwater? This is unneeded but why did we have to fence off tubing access. What a loss to the community. Why can't it be available at user risk? What about vegetation that has grown up fed by seepage that could dry up & fall down or create fire hazards -- recharging of the aquifer is another issue. I am very disappointed with the lack of communication between the canal companies and property owners. Many trees have been cut without consulting the property owners along the canal.
Bob! GJ

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

Comment S-6 (continued)

Comment S-7


 United States Department of Agriculture
 Natural Resources Conservation Service

Logan was known as Venice of the West for our open waterways. Let's not lose that.

Fix the problem!! not what's not the problem

Keep it going through the generators

I don't like this format! Should have had a public Q&A!

Restore it as close as possible to the original & spend the money increasing access + use of non utility water for irrigation

Keep the canals open

coarsing allows sediment to build up

Logan Northern Canal Reconstruction Project Public Scoping Comment Form


 United States Department of Agriculture
 Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: EUGENE KARTCHNER
 Address: [REDACTED]

Comments can be submitted to:
 Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

OPTIONS 1 & 3 SEEM TO TAKE INTO CONSIDERATION THE USERS SOUTH & EAST OF 1200 OR 1400 NORTH
1
BUT OPTIONS 2 & 4 DO NOT SEEM TO MAKE ANY PROVISIONS FOR THE "SOUTHWEST" USERS

UNLESS YOU INTEND TO USE EXTENSIVE PIPING UPON THIS BEACH AND PLAN TO CONTINUE TO OPEN CANAL THEN THESE "SOUTHWEST" USERS UP ON THE BEACH WOULD HAVE TO OPT FOR OPTIONS 1 OR 3 AND OPTION 3 WOULD BE PREFERABLE TO USERS SUCH AS THOSE IN THE TEMPLE DITCH WHICH TO MY LIMITED UNDERSTANDING HAS A SIGNIFICANT LEGAL SHARE OF THE WATER IN THE LNC SYSTEM

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

Comment S-8

I am a practicing licensed Agricultural and Irrigation Engineer and have been a Work Unit Engineer in Colorado for the SCS (now NRCS). Thus I have a good understanding of small irrigation canal systems and Environmental Assessments and Environmental Impact Studies. I am concerned with how the NRCS, the administrating agency, is using the Emergency Watershed Project Program (EWP) funds to repair service to roughly 3500 acres served by the Logan Northern Canal following its disastrous failure last July.

The Utah NRCS and the local sponsor's representatives are ignoring the guidelines for how the EWP funds are to be used. They are focusing on predetermined options for restoring service to the Logan Northern Canal water users that combine it with the unaffected Logan, Hyde Park, Smithfield Canal Co (the upper canal). They are assuming this would qualify for the standard sponsor's cost share of only 25 percent, which is misleading in view of the official guidelines for use of EWP funds (see: <http://www.nrcs.usda.gov/programs/ewp/ewpfinalrule4405.pdf>). In accordance with Section 624.6 (b) (4) of the guidelines:

"--- if the sponsor desires to increase the level of protection that would be provided by the EWP practice, the sponsor will be responsible for paying 100 percent of the costs of the upgrade or additional work."

It is strange that shortly after the failure of the Logan Northern Canal, \$19.5 million of EWP funding was allocated to support bringing it back into service. This was 75 percent of the estimated \$26 million cost for the combined canal alternative. However, NRCS's rough estimate to bypass the unstable hillside to bring the Logan Northern Canal back into service was \$12 million. This would only require \$9 million of EWP funding plus the standard sponsors' 25 percent cost share. Based on the EWP funding guidelines and the above estimated costs for the two alternatives, the sponsors' share for the combined canal alternative is roughly \$16 million, not the \$6.5 million the sponsors' representatives are promoting.

The upper or higher canal is in ill repair due to many years of deferred maintenance and is need of repair. Its President admitted this in his "Your View" submission in the 29/03/2010 Herald Journal: "The upper canal was built in 1860 and is in dire need of repair. If the upper canal is not included in one of the alternatives its shareholders will have to repair the canyon portion with just their own money."

An Environmental Assessment would suffice for bringing the Logan Northern Canal back into service because any new environmental consequences would be minimal. Furthermore, the study alternatives should be focused on reducing costs and the level of public inconvenience associated with the repairs.

The combined canal option requires a more expensive and time consuming Environmental Impact Study because: 1) it changes the Logan river flow below the high canal's diversion, which in turn significantly reduces Logan City's and USU's hydro power generation, and affects fisheries habitat and the USU Water Laboratory's research operations; 2) it has the potential to significantly reduce canal seepage losses, which will reduce aquifer recharge, spring flows, wetlands, and may jeopardize dependent water rights; 3) it affects the cultural heritage afforded by the two canal systems; and 4) it is not the least cost nor most environmentally friendly option for restoring service to the Logan Northern Canal users.

Jack Keller

Comment S-9



**Logan Northern Canal Reconstruction Project
 Public Scoping Comment Form**

Name: Sara Krebs
 Address:

Comments can be submitted to:

Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

*What environmental issues and impacts are you concerned about?
 Please be as specific as possible.*

I'm very concerned about the impact to farm land if this project is delayed. It is vital that farmers have adequate access to water for their crops. I'm in favor of Option 4. It is the ^{Provides} most efficient use of funds to provide deliver the maximum amount of water. Please do whatever possible to move this process forward as quickly as possible. The farm land in this valley is beneficial to all and it can't survive if the water isn't delivered. The farmers can't wait 3 or 4 years. I'm convinced that safety and environmental concerns are best addressed with Option #4

Logan Northern Canal Reconstruction Project

Public Scoping Comment Form

Comment S-10

Comment S-10 (continued)



Logan Northern Canal Reconstruction Project
Public Scoping Comment Form

Name:
Address:

John F. Krusi
[Redacted]

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

The LHP + Smf canal seems to have been well run so far this year. I would like to see the canal open as much as possible but I recognize that some portions may need to be covered especially sensitive areas from the diversion to the golf course.

The purpose of the canal is not necessarily recreational. I would like to see it open to non-motorized traffic. It has been my experience that most water users - hikers are most helpful in identifying problems for the most part.

*The alternative that I strongly favor is taking the water in *LHP + Smf canal* up to 3100 north.*

Logan Northern Canal Reconstruction Project

Public Scoping Comment Form



I am a past president and long time board member in LHP + Smf canal as well as a stockholder. I have a long term interest in the canal and I am at one of my diversions every day, some times several times.

again I favor improving the canal to take LN water up to 3100 north.

Logan Northern Canal Reconstruction Project

Public Scoping Comment Form

Comment S-11

Natural Resource Conservation Service:

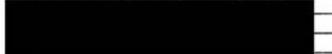
I am in favor of the alternative that would refurbish and cover the Logan, Hyde Park, Smithfield Canal and build a link to the Logan Northern Canal at 3100 North. My concern is what the canal area will look like once the pipe is installed. North Logan City wants to use the canal for storm drainage. Will the canal become filled with weeds and occasional stagnant puddles of water to collect mosquitoes? I think we need a more complete plan before the decision is made.

Dee Ann Michaelsen


Comment S-12



**Logan Northern Canal Reconstruction Project
 Public Scoping Comment Form**

Name: Jo Wilmer Right
 Address: 

Comments can be submitted to:
 Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
 Please be as specific as possible.

I am extremely concerned about the safety of our home and even our lives is nothing is done to prevent another tragic event such as the happenings on July 11, 2009. We purchased our home almost fourteen years ago and were given absolutely no warning about the potential danger of living there. No mention was ever made that the slope above was being studied and monitored. This was the case until a few days following the 2009 disaster, when Logan City should delivered a warning bulletin to our door. My wife and I asked what we should be doing to protect ourselves. The curt response was "Just be careful." A solution to the problem has never been

Comment S-12 (continued)

Comment S-13



addressed in the media or otherwise.

The third paragraph on your hand out sheet states "EWP funds of \$19.35 million were available to help protect property along the LNC from any future event of a similar magnitude."

So my concern is, what is being done or is proposed to be done to realize the safety for which said \$19.35 million was allocated? I honestly feel I am entitled to a direct honest answer on this issue.

THANK YOU

Melissa Rigby



Logan Northern Canal Reconstruction Project
Public Scoping Comment Form

Name: *Kathy Robinson*
Address: [Redacted]

Comments can be submitted to:

Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

- 1) loss of irrigation water to the farmers in the northern part of Cache Valley. Three to five years is too long for them to wait to realize their full agricultural potential without 100% water access.
- 2) loss of water/power generation through the Logan City generators on the Logan River. This loss of power affects about 1/2 the population of Cache Valley. Purchasing the power on the open market is costly & an unfair economic impact on our citizenry.
- 3) Building a replacement canal that may be way more than is necessary to fix the problem.

Comment S-14

August 11, 2010

To whom it may concern;

This letter represents my initial comments to the Logan Canal Reconstruction Project located within Cache County. I live within 100 yards of the failure and was directly affected by this event and any changes in the operation of this canal will affect me in the future.

One of the biggest errors in the draft information provided for scoping was the study area map did not include the location where the canal failed, the homes and people that were directly impacted by the canal failure, or many of those indirectly affected by the canal failure. To artificially constrain the study area is in direct contradiction to regulations implementing the National Environmental Policy Act (NEPA), which states; "The environmental impact statement shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration." (Counsel of Environmental Quality (CEQ) regulation for implementing NEPA section 1502.15). The current map does not succinctly describe the affected environment because it does not include all of the canal which will likely be closed in the future.

One alternative must be to repair the canal in its historic location. Failure to consider this alternative will affect the ability to evaluate the loss of my ability to walk the path on the side of the canal and to let my dog get cool in the water during the summer. The proximity of my house to this canal is one of the reasons I enjoy living where I do. Not only has this failure affected my enjoyment but also the hundreds if not thousands of people that use this canal path annually – this potential loss must be assessed in the tradeoff among alternatives. I would argue that at a minimum the proper description of the affected area would include the entire Island area of Logan and properties along the canal which have had their access to water affected. It could be argued that the loss of this trail and canal will affect the amenities and energy production for the entire City of Logan so that this should be the proper affected area. It is important to describe the direct, indirect and cumulative effects of this project as described 1508.7 and 1508.8 in CEQs regulation for NEPA. The current limited study area implies a decision has already been made not to repair the canal in its current location. This is pre- decisional, improperly defines the scope of environmental effects, is arbitrary, and goes against the premise of reasoned decision put forth by NEPA.

As stated in the last paragraph, one alternative must assess the canal as it was operating on July 10, 2009. The canal had been in place for many decades and to argue returning it to its historic location is not a viable alternative without analysis in a NEPA document is not an honest assessment of viable alternatives (i.e. arbitrary). To that end I also think they should explore alternatives which pipe water down Canyon Road, fix the canal for reduced flow to serve customers on the Island and near 6th East, to serve as a mechanism for flood control, and keep in the same place but remove houses along Canyon Road threatened by another failure. It will not suffice to discount any of these alternatives because of lack of jurisdiction; 1502.14c specifically states "Include reasonable alternatives not within the jurisdiction of the lead agency".

Comment S-14 (continued)

On the subject of floods there needs to be serious analysis of the effects of this decision on potential flooding within the Lower Logan River. Choosing an alternative with only one canal will reduce the capacity for the canals to divert flood flows during spring and early summer. Will the single canal have the same maximum capacity as both canals historically did? Since the last major floods (mid 1980's) there has been considerable construction in on the south part of town (i.e., Walmart, Marriot, housing developments) that may now be at risk if enough water cannot be diverted. Will reduced diversion capacity increase the likelihood of flooding in this area? This aspect needs to be evaluated as an indirect effect and comparisons made among alternatives.

The likelihood of the upper canal failing or being damaged within Logan Canyon and elsewhere need to be evaluated. How often has this canal been closed due to damage in the past? What happens if a land slide within the Logan Canyon closes the upper canal? Will doubling the capacity of this canal increase the likelihood of failure? How would a breach of such a large canal within Lundstrom area of Logan affect public safety? The failure of the upper canal has to be evaluated because one of the reasons to have two canals is redundancy. Permanently closing one of the canals reduces redundancy thereby alters the value and resiliency of the whole system. How will the loss of this single remaining canal during summer affect irrigators and what is the likelihood of this?

It needs to be recognized that diverting all the water at the upper canal will reduce the ability of Logan City to produce energy – this is an obvious effect even if the City of Logan does not want to pursue it. The cost of buying energy on the open market will affect all Logan's citizen not just those who use water from the irrigation system. Certainly such analysis should be included in the indirect environmental consequences which are defined "Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." (1508.8b) Given that hydroelectric energy does not produce carbon and is renewable it is not a stretch to suggest that this decision may affect climate change (as a cumulative effect) if this energy is replaced by carbon based (coal) power. At the very least the amount of clean energy lost over the next decade should be evaluated and incorporated into a comparison of the alternatives and addressed in the decision.

Another concern is due to possible changes within the Logan River between the outtakes of the two diversions, Given that more water will be diverted higher up there will be less water in the section between the two diversions. What effect will this have on the already fragmented populations of whitefish in this portion of the river; especially during drought years? What effect will these changes have on fishing and other recreation activities within this reach?

There have been some suggestions that water in the canal should be covered or piped. Both canals have developed extensive vegetative communities which foster healthy animal populations. Covering these canals will have an indirect effect (see above) on vegetative cover and therefore animal communities. What will those impacts be? Given that more and more streams now run dry because of irrigation it is important to evaluate the cumulative effects of the loss of the habitats along canals. Alternatives should evaluate the effects on these communities with both covered and uncovered canals.

Comment S-14 (continued)

Regardless of the final decision relative to where the water flows in the canals it is important that people's ability to use and walk along these canals be preserved. These canals have been used for decades without efforts to dissuade use. To that end, there are prescriptive easements along both canals and this need to be formalized; especially given the millions of dollars that will go to serve a few individuals interest. Evaluation of access should include reopening the upper canal to floating in inner tubes from the highway to just above 1st dam. Some may argue that this has no connection to the failure of the lower canal but the closure to tubing occurred soon after the failure – to soon after to be a coincidence. This recreational activity has been an important part of the Valley's heritage that was shut down (I think without legal justification) following the slide last July. For the canal company to do this at the same time they were asking for millions of tax payer dollars to repair these canals makes me question the overall intent of the canal company. They may argue they did this to limit liability – but there is already limited liability in the Utah for trespassing when the people are not charged. If such actions are not considered within alternatives they at least need to be considered as mitigation as described under 1508.20. Protecting public access to these easements should be a key component of the final decision.

Finally, it is very important that the purpose and need for this project not only address the need of the canal company but also those of us who live near to and use the canal system for activities other than irrigation. The alternatives, analysis, and decisions must reflect a trade-off between company and community needs. I would argue that given the large public expenditure on this project the balance should tip towards benefiting the tax payer rather than the irrigator.

Please send any additional information/publications on this project to the address below.

Sincerely,



Brett Roper



References to the upper canal refers to the canal diverting water just below 2nd Dam and currently where most of the flow is diverted following last year's failure.

References to the lower canal refers to the canal diverting water below first dam and the canal which failed.

CEQ NEPA refers to the document located at; http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.htm

Comment S-15



Logan Northern Canal Reconstruction Project
Public Scoping Comment Form

Name: Leila Shultz
Address: 

Comments can be submitted to:

Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

1) Section of old canal between
6th East and the 2009 landslide.

- Water continues to seep from
springs and storm drainage on
the slope above (mostly north of)
the canal

→ What will be done to handle standing,
stagnant pools of water in
this canal? Mosquitoes are a problem
(Marsh grasses may fill in if dirt
is added + some drainage
provided)

2) Will residents west of landslide, along
Canyon Road, have access to water?

Comment S-16

Comment S-17

United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: Leon Stucki Family ^{is rent} Stucki
 Address: [Redacted]

Comments can be submitted to:
 Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

1 - Green line is the best for where we
live down Highway 89

2 - Would be down Canyon Road up to
600 East Highway 89

yellow line

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: Kim Sullivan
 Address: [Redacted]

Comments can be submitted to:
 Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

The purpose and need for this project is to
restore water to Logan and Northern canal
share holders. None of the maps presented at
this meeting show our section of the canal
receiving water, like we are on 800 N in Logan
and raise lambs and tomatoes commercially.
At the present time we do not receive
adequate water. We have a trickle of water
compared to before the canal broke. This
has limited our ability to keep livestock
on pasture and has required us to purchase
additional hay. I do not care which
option is pursued as long as we receive
our water share as soon as possible.

Do not leave the Logan share holders out
of the delivery plans.

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

Comment S-18

Comment S-19

United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

Name: Laraine Swenson (Logan City Council)
 Address: [Redacted]

Comments can be submitted to:
 Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

*What environmental issues and impacts are you concerned about?
Please be as specific as possible.*

I favor the canyon Road Road alternative. The concern w/ any other alternative is the loss of power generation by the Logan City turbine. Any loss would have to be adjusted for present power costs which are likely to increase 3x in the next 10 years.

Another concern that I have personally is the loss of amenity with open water features. Both the canyon Rd & golf course have been established & much used trails adjacent. The inclusion of the water would represent a huge loss to the community.

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

From: [Redacted]
To: [LNC-EIS](#)
Subject: canal plans
Date: Thursday, August 12, 2010 1:03:58 PM

I don't have a strong preference over which of the canal plans is best. However, I would hate to see the still functional canal (northern-most one, previously called Logan-Hyde Park-Smithfield canal) changed from an open canal to a pipe. Not only would that be expensive, it would be an aesthetic loss. The path by the canal is a nice place to walk. Wildlife use the canal for a water source. Kids play in the water.

I can understand the desirability of having a concrete canal instead of a dirt one to cut down on water loss even if it would probably result in death of trees beside the canal. Your engineers probably have considered it's effect on the water table in the valley. However, please leave the canal open.

Charlotte Brennand
water-share owner

Comment S-20

Comment S-20 (continued)

From: [Younker, Gordon - Gordon, UT](#)
To: LNC-EIS
Cc: [REDACTED]
Subject: Logan Northern Canal Reconstruction Comments to Scoping Meeting 8 11 10
Date: Thursday, August 12, 2010 2:10:05 PM

Dear Sirs/Madams,

I with my family are shareholders on the Logan Hyde Park Smithfield Canal at [REDACTED]. I appreciate that the NRCS is moving forward with an evaluation of the alternatives to address water delivery to shareholders on both canals.

I favor the overall objective to address long-term the needs for the Logan Northern Canal and Logan Hyde Park Smithfield Canal to provide a dependable source of irrigation water to their shareholders. In doing this the preferred alternative should.

--1. Minimize the loss of water throughout the systems improving the efficiency of water delivered to agriculture and residential uses. Logan River surface water divert for irrigation is high quality and a precious resource that in the future will have greater demands on it.

--2. Maximize the benefit to shareholders for dollars spent. It is easy for the discussion of pros and cons to be from the prospective of one's own backyard. The professionals, though taking in to consideration the comments of the public, should have the interests of shareholders first, and the general public second. The use of public dollars for private irrigation companies, though criticized by some, if used for improvements that will serve agricultural users and municipalities will benefits either directly or indirectly every citizen.

--3. Storm water management for municipalities should be a major concern and the preferred alternative should be designed to receive and carry away future storm water.

--4. I am concerned that an amenity of the canal flowing open through our properties will potentially be lost, if alternative 4 is selected. This would eliminate vegetation, wildlife habitat, recreational use. It is my recommendation that where this is the impact a recreational trail be established adjacent to or over the existing canal right-of-way. Trails are becoming a part of the communities and the canal maintenance ROW connects the communities of Logan, N. Logan, Hyde Park and Smithfield. Further, the project plan should consider the open parts of the canal that will not be reconstructed and take advantage now of the ROW that is open and used for recreation. As I ride and walk the canal ROW from N. Logan at 3100 N. to Smithfield I wonder if the public use easement has already been established by adverse use [prescriptive right]. I would hope this is addressed in your study and a recommendation for mitigation be to establish, as much as feasible, a recreational trail from the Logan Canyon diversion to Smithfield. I am most concerned about the upper canal, though for those living along the Logan Northern canal they could as well be served by a trail.

--5. Since water use will likely be metered at each headgate my concern is that additional headgates or outlets be identified during design. We [with my parents] share a headgate. Since we

own separate parcels could an additional headgate be allowed.

--6. Timing.. The reconstruction needs to be expedited so that irrigations not now receiving adequate water, their needs are met sooner than later. Family livelihoods and the ability to maintain agriculture land in agriculture are threatened by further delay.

Thank you.. Please feel free to inquire if further information is needed...Gordon Younker

Gordon L. Younker, Executive Vice President
 Utah Association of Conservation Districts



Comment S-21

From: [Larry Rupp](#)
To: [LNC-EIS](#)
Subject: LNC Canal Project
Date: Saturday, August 14, 2010 5:40:12 PM

I am a property owner who lives immediately below the canal in Hyde Park. My concerns about the canal are as follows:

1. I think whatever is done should be done with the longterm future in mind. Specifically, this is probably a great time to develop a pressurized irrigation system for the Logan-Richmond area similar to the secondary water system operated by the Weber Basin Water Conservancy District. Given the growth of the valley and the inevitable demand for water, this seems to be the most prudent thing to do. As long as we are spending money, we might as well be upgrading things, rather than just patching the break in the canal. I hate to lose the open water-way, but demands for safety and efficiency will inevitably require that it be piped.
2. I am very concerned about a dry canal being maintained as a storm drain. I bought my home to be by the canal, not to be by a drainage ditch. I would suggest if it is maintained as a drain that it also be maintained as a non-motorized trail. We need the trails, and having traffic along the trail may help keep it in the public mind so that it is properly maintained. I have no confidence that the cities will maintain it in a clean, weed-free state.
3. I am concerned about the lack of respect to my property rights along the canal. As I understand it, I own the land to the middle of the canal, and the canal company has an easement to run water over my property. I don't know the legal ramifications, but can they change the easement to a drain without consulting property owners?
4. If the canal is pressurized, I think there should be serious consideration of selling hook-ups to individuals who are currently using culinary water for landscape irrigation. There should be enough water savings to pick up additional users, and a significant amount of funding could be generated. This would also help conserve drinking water.
5. I think there should be some changes in the requirements as to how the canal company works. For years they have had their heads in the sand and pretended that there was no urban encroachment on the canal. In addition, they have basically done nothing to improve the canal or prepare for potential disasters.

Thanks for the opportunity to have some input.

Larry Rupp, PhD
 Center for Water Efficient Landscaping
 Plants, Soils, and Climate Department
 Utah State University

Hyde Park Resident


Comment S-22

From: [Jay Monson](#)
To: [LNC-EIS](#)
Subject: Some Feedback
Date: Sunday, August 15, 2010 6:15:51 PM

Thank you for considering feedback on the Logan Canal issue.

As a member of the Logan City Council, currently serving as Chair, I have been closely involved with the whole 'canal disaster' since the day it happened. Although months have passed, the memory of that fateful day will never leave me, nor of the following week when the three bodies were recovered and I went to their funeral. A sad day in the history of our city and valley.

Now it seems that there are many alternatives to what we hoped, as a city, could be a speedy alternative.

As you now, Logan City has gone the extra-mile in providing a 'temporary' alternative--both this summer and last summer--for the former canal users. Now a 'permanent' alternative is to be finalized and constructed.

I hope you will consider Alternative two as the most desirable, and the least expensive, solution.

I am 100% against the plan to build a new canal, all underground, destroying the beautiful ambiance of the canal through Logan's East Bench (and one out into other cities in the valley), the resulting forever destroyed green-strip along the canal, AND greatly diminishing the already-in-place additional source of "green" energy for Logan City power users. Also of major consideration is the world-renowned Utah Water Research Laboratory built near the mouth of Logan Canyon.

I wish you the best as you consider the various plans presented and hope whatever solution you agree to pursue is one that the vast majority of Logan and Cache Valley citizens would have done.

Sincere best wishes in this important endeavor.

Jay A. Monson


Comment S-23

Memorandum

Date: 8/16/2010

To: Sue Lee
 HDR Engineering
 3949 South 700 East, Suite 500
 SLC, UT 84107
 LNC-EIS @hdrinc.com

From: Trevor C. Hughes


I am Professor Emeritus in Civil and Environmental Engineering at USU and am also the engineer of record for several pressure irrigation systems in Utah. My comments on the Logan Northern Canal Project follow:

Three of the four alternatives you define will require Logan City to shut down one of their hydropower turbines during July, August and September. This will result in a substantial cost to Logan City for purchasing replacement energy which logically should be paid by the canal company. I will anticipate seeing your estimate of this cost – not a single annual cost, but rather the present value of the resulting series of future annual costs.

Your current version of alternative 3 (pipe under Canyon road) apparently consists of two 48 inch diameter pipes due to the low head available from the current river diversion to 600 east. It would be extremely difficult to add two pipes this size under that road. Fortunately only one 48 inch pipe is required if you move the diversion from the river to inside First Dam. This will add about 30 feet of head (almost doubling what is available) and will have the happy result of almost cutting the cost in half.

Comment S-24



HDR

REC: AUG 16 2010

PROJ: _____

E: _____

DIST: _____

**Logan Northern Canal Reconstruction Project
 Public Scoping Comment Form**

Name: Bruce PENDERY
 Address: 

Comments can be submitted to:

Sue Lee, Project Manager
 HDR, Inc.
 3949 So. 700 E., Suite 500
 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
 Please be as specific as possible.

My wife and I have 115 shares in the Logan Northern Irrigation Company, as it was known. Since the accident that destroyed the canal we have only received roughly 20 percent of our former water supply. We use this water for our pasture where we raise sheep and our garden where we raise tomatoes for commercial sale. Thus our biggest concern is that any alternative considered, especially the preferred alternative, ensure that a full water supply is returned to our portion of the canal (The 600 East 700 North headgate).

Unfortunately it is not certain that the alternatives as presented would do this. The "possible solutions" handout does not clearly indicate that the 600 East 700 North headgate would be

Logan Northern Canal Reconstruction Project

Public Scoping Comment Form

Comment S-24 (continued)

Comment S-25



returned to its former water level, I believe that a fundamental "purpose and need" for this project -- and thus the EIS -- is to return water supplies to their former condition. The Logan Northern Irrigation Company has specifically said this is its objective at public meetings it has held. Thus, I think there must be assurance that all alternatives considered fully return water supplies to their former conditions and levels.

Of the alternatives presented, Option 1 appears most desirable to me. It would clearly return water to us. Perhaps the issue of diverting water about the Logan City hydropower plant has to be dealt with. I encourage you to deal with that issue. Option 4 may be the next most preferable from my perspective. Again, it would clearly return water to us. And it seems to have the advantage of not diverting water about the hydropower plant.

Thank you for considering these comments and please finalize this EIS and issue a record of ~~decision~~ decision as soon as possible.

From: [redacted] on behalf of Charles R. Major
 To: [LNC-EIS](#)
 Subject: LNCRP Concern
 Date: Monday, August 16, 2010 4:45:58 PM

Dear Ms. Lee,

I grew up in Logan and will be returning in a couple of weeks to start a masters program at USU. The house where I lived during High School is on the North Logan canal and it was a wonderful part of my youth. My family and friends love walking our dogs along the canal, where it is cool and shady even in the hottest parts of the summer, tubing the canal on Fourth of July weekend, and enjoying the ducks and other wildlife the canal brings around. Already the trees that have been removed along the Country Club and north of Lundstrom Park have hurt the experience, but it is still a wonderful area. Enclosing the canal would completely ruin the feel of the neighborhood and would be detrimental to all of Cache Valley -- even when my family lived on cliffside we would go and tube the North Logan canal.

Thanks for taking your time to read this,

Charles Major

[redacted]

Comment S-26

From: [Cathy Short](#)
To: [LNC-EIS](#)
Subject: my concern about plans to cover canal
Date: Monday, August 16, 2010 3:24:53 PM

Particularly after reading comments by Jack Keller and Thad Box in the Herald-Journal, I am concerned about your plans for canal rehab. to include covering the canal. Open canals provide not only nourishment for trees and underbrush alongside them, and habitat for ducks in certain areas, but mainly an aesthetic asset for neighborhoods they bisect. I've hiked many times along the canal above Canyon Road; I have friends with homes adjacent to the canal in North Logan, with large trees. Please allocate the funds wisely in deference to community and agricultural needs and ambience and CERTAINLY in consideration of prudent financing and points raised by such professionals as Jack Keller!!!

Comment S-27

From: [REDACTED]
To: [LNC-EIS](#)
Subject: EIS Comments Canal reconstruction projects due Aug 31
Date: Tuesday, August 17, 2010 11:11:09 AM

Memorandum

Date: 8/18/2010

To: Sue Lee
 HDR Engineering
 3949 South 700 East, Suite 500
 SLC, UT 84107
 LNC-EIS @hdrinc.com

CC: Cache County Council
 Bob Farthingham
 James Swink, County Attorney
 Logan City Municipal Council
 Mayor Randy Watts

From: Lucy Peterson Watkins

My concern as a resident of Cache Valley and share holder in the Logan , Hyde Park Smithfield Canal: Combining the diversion point of the Logan Northern and Logan Hyde Park Smithfield Canal Companies.

- True cost of routes 2 and 4 (Lundstrum Park, 3100 North)

Most typically in this area private property lines on both sides of the canal go the middle of the canal. Most easements in this area are 9 feet (prescriptive easements) on the downhill side. Piping the canal or constructing open cement channels would require more space on both the easement side and the non-easement side of private properties. What is the dollar cost of purchasing this extra space? Has this cost been calculated in the \$28,500,000.00 for the 3100 North plan? What would be the time frame to secure the extra land needed? Will property owners be reimbursed for trees and landscaping that will be destroyed by construction of routes 2 and 4? Property owners may claim a diminution of their property either by the piping or by cement channels that would require high fencing on each side of the canal. These will be at significant costs and could cause a longer time line prior to construction because of appraisals needed and perhaps even litigation. Delaying construction to mitigate these issues could increase the construction cost by potential inflation. What is the impact of closing 8-10 miles of open canals that have provided habitat for wildlife over 100 years? How is this loss calculated?

- The impact of closing canals to North Logan. The city of North Logan will be most hurt by the 3100 route. Effectively there will be no more open waterways that have flowed in North Logan for well over 100 years. There is no flood water management benefit to North Logan as the middle canal in our town runs through flat fields and has no benefit to water runoff. Water in

Comment S-27 (continued)

newly developments must be kept on site by Utah law. Piping or cement aqueducts offer absolutely no benefit to North Logan for the cost of the 3100 North project and all impacts to North Logan are essentially negative.

Page 1 of 2

- What is the estimated cost and risk of construction to rehabilitate the diversion point from Logan River for combined routes 1 (HWY 89) 2 (Lundstrum Park) 4 (3100North) ? Re: Article Salt Lake Tribune July 22, 2009 "Under the option(3100 North) that would phase out the Logan Northern Canal, the head gate and opening of the Smithfield Canal would be widened and improved. It wouldn't be easy – the start of the canal sits on a rock ledge in Logan Canyon. "I joke with my guys about having some kind of extreme engineering reality television show here," Smart said. (Bronson Smart, head engineer NRCS).
- I am also very concerned with the initial error in the contract signed by Cache County Executive and Sylvia Gillen, State Conservationist. Taken from the Cooperative Agreement with the USDA/NRCS and Cache County signed by Cache County Executive 4/2/10.

Page 2 of 16 Clause II. "Purpose: On July 11, 2009, a landslide occurred that caused loss of life, property damage and damage to the Logan Northern Canal system. The Logan Northern Canal System delivers irrigation water to over 7000 acres of agricultural land and communities in Cache County." Ill: Benefits "Relocation of the Logan Northern Canal will restore delivery of irrigation water to over 7000 acres of agricultural land and communities in Cache County...."

- Federal emergency funds were not needed for the upper canal and the use of a combined acreage of both canal companies to mathematically suggest a higher cost benefit is wrong and misleading. This acreage (7000) was stated in the contract signed by the Cache County and I have misgivings that is was not clarified and it reflects an untruth regarding emergency dollars for 7000 acres rather than the 3,340 acres served by the middle canal. *Incidentally the acreage I have for the upper canal is 2810. Could you clarify the issue? The Cooperative Agreement should be amended to correct this obvious error.*

I believe there are two Canyon Road alternatives (alternate route 3) that should be considered, which are:

- a. One that diverts the water for the Logan Northern Canal through a pipeline under Canyon Road from near the current diversion point to a point along the old canal past the slide hazard area. This would maintain both Logan City's and USU's hydropower generation returns from the Logan River and have no adverse effect to the USU Water Lab.
- b. An alternative plan that would take advantage of the elevation head created by First Dam and only require a much smaller (one 48" diameter) pipe under Canyon Road to bypass the unstable hillside. This would maintain Logan City's but reduce USU's (which are considerably smaller) hydropower generation returns from the Logan River.

It would appear that with either of these alternatives, an Environmental assessment would be in order rather than a more costly Environmental Impact Study, because the hydrology of the Logan River, the reduction of riparian canal vegetation, and the aquifer recharge

Comment S-27 (continued)

resulting from canal seepage would be essentially unaffected.

Sincerely,
Lucy Peterson Watkins

Page 2/2

Comment S-28

Comment S-28 (continued)

8-16-10

HDR
 REC: AUG 19 2010
 PROJ: _____
 FILE: In Regards to the Canal Disputes in
 DIST: Logan,
 No one has addressed in public Notices or
 Radio a problem I see Important.
 The upper canal hopes to get The Water
 Allocated to The Logan Northern Canal
 Here is The problem -
 The allocated to The upper Canal Comes
 From The Second Dam in Logan Canyon
 Is The pipe leading From The dam to The
 Open Canal Large enough to Handle Double
 The water if merger is approved -
 Is The bridge under US Hwy 89 designed
 To handle double amount of water
 Is it possible The dam Spillway Need to be
 Raised to supply This water
 It would surprise me For The US Highway
 System to approve replacing The bridge to
 Carry more water Just to satisfy a few
 Farmers
 In closed is more Information From our
 Local Paper, you will find it Very Interesting
 Respectively.
 Ray A Peterson

 S-28

Speak now on canal project or forever hold your peace

Editor's note: Thad Box's regular column in The Herald Journal normally appears every other Wednesday. He was granted this special installment urging public comments on the Logan canal project since a deadline for public input is fast approaching.

By Thad Box

Farmers need water now. Others want their money spent effectively and their lifestyle protected. I recently attended a public scoping meeting about the Logan canal project. Some people left frustrated. Many did not understand that the Environmental Impact Statement (EIS) process gave them a voice in the decision. By law, designers of the project must listen to what we say. But input time is short. Comments are due Aug. 31.



Since 1970, I have participated in dozens, maybe hundreds, of EISs. The Natural Resource Conservation Service (NRCS) acted appropriately by going directly to an EIS. The canal failure caused loss of life. The project includes multiple political entities — towns, cities, county, state. And millions of taxpayer dollars may be spent. The complexity of the project almost guarantees multiple lawsuits, and delays, if any shortcut is taken.

Unthoughtful comments should be avoided. A canal company official called their desired system "gold plated." A county council member called a shareholder who objected to the plan "vindictive and selfish." Blunders and name calling undermine confidence in fairness. Trying to "sell" a scheme before public input is analyzed often turns what should be a logical, science-based process into an emotional exercise settled by courts.

Water rights and canal systems are privately owned. The canal company has every right to build the kind of delivery system shareholders want. That is, if they stay within the law and do it with their own money. But a multi-million dollar taxpayer contribution is expected. Public money and unique conditions in this project make every citizen

of Cache Valley a legitimate stakeholder. Three lives were lost in the canal failure. Emergency public funds are to protect life and property. Until responsibility for the deaths are determined, everyone associated with the canal has a potential liability. And depending on who is liable, public funding for improvement may not be appropriate.

The general public has a cultural "right" documented by well over a hundred years of peaceful use of the canals for recreation, waste water disposal and lifestyle enhancement. Wallace Stogner and other writers have characterized Utah towns as having amenities associated with flowing water in open canals.

Many miles of trees and other riparian vegetation associated with canals add to human community values. In addition, these canals support biotic diversity with values that go beyond our valley.

Electricity is generated by Logan city with water from the river. Diversion above the plant would result in generation from "dirtier" sources, extending environmental impacts beyond the borders of our state.

With federal spending an issue in political campaigns, a canal system described as gold plated serving a few hundred farmers is bailout fodder for national organizations.

All of the above argue for an objective, rigorous EIS. The EIS procedure protects both the general public and canal shareholders. Officials and special interest groups must follow the rules, listen carefully and consider all people affected by the project. The NEPA web page states: "The public has an important role in the NEPA process ... The lead agency must take into consideration all comments received from the public and other parties on NEPA documents during the comment period."

The "public" in Cache Valley includes faculty and graduates of a world-acclaimed university in water, agriculture and natural resources. Some of our country's most experienced water people are in engineering and ecological service firms in our valley. Local engineers, biologists, sociologists, economists, landscape architects, etc., can provide expert input on every aspect of the proposed project. And they have a civic

responsibility to do so. But "experts" are not responsible for the quality of life we cherish. Quality is determined by people who till the land, harvest the produce, mow the lawns, teach our kids, lube our cars, flip our burgers, treat our illnesses. And by people we meet on the trail, in the grocery store, at funerals and tailgate parties. Comments from these people are needed and must be considered seriously. They not only raise issues, they raise the next generation of citizens. It is their tax money that will be used.

The scoping meeting presented five alternatives: no action, putting the canal in a pipe down Canyon Road, running in a pipe down 4th North, diverting water between canals through a pipe in Lundstrom Park and the "gold plated" redesign of the canal systems with buried pipes and lined canals. These vary greatly in cost, efficiency and public impact.

In a valley where only about a fourth of the people bother to vote, it may be unrealistic to expect folks to think, write and send a letter or email. But anyone who eats food, pays taxes and enjoys the lifestyle here has a dog in this fight. They have a responsibility to send comments to those redesigning the canal. And this time there is a law that says those working for us must pay attention to what we say. Comments may be sent electronically to LNC-EIS@hdrinc.com.

For those who want more information, links to almost every aspect of The National Environmental Policy Act (NEPA) can be found at <http://www.epa.gov/occearth/basics/pepa.html>. The NRCS web page is (<http://www.ut.nrcs.usda.gov/programs/EWP/LNCRP/index.html>). Details are available from the State Conservationist, USDA — NRCS, Wallace F. Bennett Federal Building, 125 South State Street, Room 4402, Salt Lake City, UT 84138-1100, Phone: (801) 524-4550. The engineer in charge is Bronson Smart, phone 801-524-4559. Comments may be made to Sue Lee, HDR Engineering, 3949 South 700 East, Suite 500, Salt Lake City, UT 84107, phone 801-743-7811.

Thad Box is a freelance columnist for The Herald Journal. He is a resident of Logan.

Comment S-29

Comment S-29 (continued)



REC: AUG 19 2010
 PROJ: _____
 FILE: _____
 DIST: _____

Memorandum

Date: 8/18/2010

To: Sue Lee
 HDR Engineering
 3949 South 700 East, Suite 500
 SLC, UT 84107
 LNG-EIS @hdrinc.com

CC: Cache County Council
 Bob Farthingham
 James Swink, County Attorney
 Logan City Municipal Council
 Mayor Randy Watts

From: Lucy Peterson Watkins


My concern as a resident of Cache Valley and share holder in the Logan, Hyde Park Smithfield Canal: Combining the diversion point of the Logan Northern and Logan Hyde Park Smithfield Canal Companies.

- True cost of routes 2 and 4 (Lundstrum Park, 3100 North)

Most typically in this area private property lines on both sides of the canal go the middle of the canal. Most easements in this area are 9 feet (prescriptive easements) on the downhill side. Piping the canal or constructing open cement channels would require more space on both the easement side and the non-easement side of private properties. What is the dollar cost of purchasing this extra space? Has this cost been calculated in the \$28,500,000.00 for the 3100 North plan? What would be the time frame to secure the extra land needed? Will property owners be reimbursed for trees and landscaping that will be destroyed by construction of routes 2 and 4? Property owners may claim a diminution of their property either by the piping or by cement channels that would require high fencing on each side of the canal. These will be at significant costs and could cause a longer time line prior to construction because of appraisals needed and perhaps even litigation. Delaying construction to mitigate these issues could increase the construction cost by potential inflation.

What is the impact of closing 8-10 miles of open canals that have provided habitat for wildlife over 100 years? How is this loss calculated?

- The impact of closing canals to North Logan. The city of North Logan will be most hurt by the 3100 route. Effectively there will be no more open waterways that have flowed in North Logan for well over 100 years. There is no flood water management benefit to North Logan as the middle canal in our town runs through flat fields and has no benefit to water runoff. Water in newly developments must be kept on site by Utah law. Piping or cement aqueducts offer absolutely no benefit to North Logan for the cost of the 3100 North project and all impacts to North Logan are essentially negative.

Page 1 of 2

S-29

- What is the estimated cost and risk of construction to rehabilitate the diversion point from Logan River for combined routes 1 (HWY 89) 2 (Lundstrum Park) 4 (3100North) ? Re: Article Salt Lake Tribune July 22, 2009 "Under the option(3100 North) that would phase out the Logan Northern Canal, the head gate and opening of the Smithfield Canal would be widened and improved. It wouldn't be easy -- the start of the canal sits on a rock ledge in Logan Canyon. "I joke with my guys about having some kind of extreme engineering reality television show here," Smart said. (Bronson Smart, head engineer NRCS).
- I am also very concerned with the initial error in the contract signed by Cache County Executive and Sylvia Gillen, State Conservationist. Taken from the Cooperative Agreement with the USDA/NRCS and Cache County signed by Cache County Executive 4/2/10.
Page 2 of 16 Clause II. "Purpose: On July 11, 2009, a landslide occurred that caused loss of life, property damage and damage to the Logan Northern Canal system. The Logan Northern Canal System delivers irrigation water to over 7000 acres of agricultural land and communities in Cache County."
III: Benefits "Relocation of the Logan Northern Canal will restore delivery of irrigation water to over 7000 acres of agricultural land and communities in Cache County...."
- Federal emergency funds were not needed for the upper canal and the use of a combined acreage of both canal companies to mathematically suggest a higher cost benefit is wrong and misleading. This acreage (7000) was stated in the contract signed by the Cache County and I have misgivings that is was not clarified and it reflects an untruth regarding emergency dollars for 7000 acres rather than the 3,340 acres served by the middle canal. *Incidentally the acreage I have for the upper canal is 2810.* Could you clarify the issue? The Cooperative Agreement should be amended to correct this obvious error.

I believe there are two Canyon Road alternatives (alternate route 3) that should be considered, which are:

- One that diverts the water for the Logan Northern Canal through a pipeline under Canyon Road from near the current diversion point to a point along the old canal past the slide hazard area. This would maintain both Logan City's and USU's hydropower generation returns from the Logan River and have no adverse effect to the USU Water Lab.
- An alternative plan that would take advantage of the elevation head created by First Dam and only require a much smaller (one 48" diameter) pipe under Canyon Road to bypass the unstable hillside. This would maintain Logan City's but reduce USU's (which are considerably smaller) hydropower generation returns from the Logan River.

It would appear that with either of these alternatives, an Environmental assessment would be in order rather than a more costly Environmental Impact Study, because the hydrology of the Logan River, the reduction of riparian canal vegetation, and the aquifer recharge resulting from canal seepage would be essentially unaffected.

Sincerely,
 Lucy Peterson Watkins

Page 2/2

Comment S-30

Comment S-30 (continued)

From: [Thad Box](#)
To: [LNC-EIS: bronson.smart@ut.usda.gov](mailto:bronson.smart@ut.usda.gov)
Subject: Comments on Logan Canal EIS
Date: Thursday, August 19, 2010 2:52:22 PM

SCOPING PROCESS COMMENTS
 LOGAN CANAL PROJECT
 19 August 2010
 By Thad Box

My name is Thadis W. Box. I live at [REDACTED]. I may be contacted at [REDACTED]. I am a retired Professor and Dean emeritus, College of Natural Resources, Utah State University. I am a certified consultant (Cert. #2-1978, SRM) dba Thadis W. Box and Associates. I have education appropriate for those positions and 51 years of professional experience with agriculture and environmental problems. My vita and list of publications is available if requested.

My personal knowledge of the subject canal, and its study area, dates back to 1959 when I lived on Canyon Road near the recent canal break. Almost daily, I walked along the canal and up the hill to the University where I worked. Later I owned a farm near Smithfield and was a canal shareholder for many years. For 20 years, 1970 to 1990, I lived in River Heights and walked to work at the University, using the trail along subject canal near the recent failure and climbing the hill at various locations. During that time I was Dean of Natural Resources, intimately involved with water research, agriculture, watersheds and environmental analyses.

I submit these comments as a citizen. I have no financial interest in the canal, own no shares in any canal company, have no contract with anyone or any business connected to the project. I am not a member of any organization with a financial interest in the project. These comments are my own and do not represent any organization or person other than me.

SCOPING THE PROJECT

I believe the Natural Resource Conservation Service acted appropriately by going directly to an EIS. The canal failure caused loss of life. The project includes multiple political entities---towns, cities, county, state. And millions of taxpayer money may be spent. The complexity of the project almost guarantees multiple law suits, and delays, if any shortcut is taken.

Until responsibility for deaths that occurred at time of canal failure is determined, everyone associated with the canal has a potential liability. And depending on who is liable, and which alternative is selected, public funding for improvement may, or may not, be appropriate.

I have examined the five alternatives and consider them appropriate. However, a sixth alternative, repair of the failed canal and stabilization of the hillside, should be included as an option. The canal has served its purpose for over a hundred years with only one event causing loss of life. By including repair of the canal as an alternative, the EIS would need to include an examination of why the

canal failed. But unless the EIS process shows that another alternative is superior to repair of the old canal and/or less costly to the taxpayer this EIS process fails from the beginning. To ignore a repair alternative without a rigorous evaluation leaves an impression that the project is driven by politics rather than science or economics.

The Sixth Alternative—Repair of the canal and stabilization of the hillside

The subject canal has served its purpose for multiple human generations. Modern technology and construction techniques are far superior to those when the canal was last upgraded. Over the years several failures have occurred between the canal's point of diversion from Logan River to 6th East. Restricting the current project to the short segment that cuts into a hillside between U. S. Highway 89 and Canyon Road has many advantages: It would minimize environmental impact on the vast "study area" shown in the scoping documents for the other five alternatives. Only a small area would be disturbed. It fits the historical and cultural ambiance of the valley.

The obvious disadvantage is building that segment sufficiently strong to protect human life. But we can now build bomb resistant shelters and buildings to withstand earthquakes. Since subject canal was built over a century ago, loss of human life has occurred only once. And indications are that the failure was below a leaking canal with a seeping spring on the hill above. Data and facts must determine whether the canal can be rebuilt in place.

Over the years I observed many leaks in the canal and several springs and seeps in the hillside. Some of the springs were "developed" with pipes leading the water into the irrigation ditch. Most were poorly maintained. The Sixth Alternative should include ways to manage the ditch water and seep water from the hillside to include, but not be limited to:

- 1.Reinforced concrete ditch that would not leak
- 2.Strategically placed retaining walls and anchors
- 3.Capturing water from springs and seeps and putting it in the ditch
- 4.Drilling horizontal wells into perched water table below bench and diverting water into the ditch
- 5.Electronic sensors that would cut off water coming into the ditch in emergencies

Rebuilding the ditch in its current location may not emerge as the best choice. But if it is practicable to do so, it will prevent disrupting roads, burying pipes, bulldozing backyards and destroying critical habitat.

The main point I want to make is that unless a serious and rigorous evaluation of rebuilding a canal that has served several generations is included, the EIS process will not be taken seriously. It could be attacked as supporting a political move to get government money. With federal spending an issue in political campaigns, a canal system described as gold plated serving a few hundred farmers is bailout fodder for national organizations.

Decision criteria for selecting the preferred alternative

The canal system is privately owned. Shareholders, through their respective companies, have every right to develop the kind of delivery system they want. That is, if they abide by the law and do it with their

Comment S-30 (continued)

own money. However, when public funds are sought, or even if accepted, the rules change and the prime objective becomes maximizing public benefit from taxpayer money.

This EIS should contain a thorough analysis of all five published alternatives plus the option of rebuilding the canal in place. The decision criteria for use of public funds in selecting the preferred alternative should be made widely available in language lay persons can understand. I believe those criteria should be weighted in order listed below:

1. Health and human safety including protection of human life, and improved public safety in general
2. Protection of biological diversity through maintaining habitats, including soil communities, that have existed for generations
3. Preservation of quality of life, historical and cultural ambience associated with flowing canals
4. Maintaining and enhancing the economic viability of end users of canal water
5. Cost of the project to taxpayers
6. Minimal disturbance of existing communities

Some thoughts on what is needed to evaluate alternatives

This project is projected to deal with private property and established easements. The preferred alternative should not cut out options for canal shareholders to improve water delivery for beneficial use with their own funds. Taxpayer funds should not be used to reduce the amount of water below that arriving at the farm today.

Logan City has generated electricity with water from the river for generations. High priority should be given to maintaining that ability at the pre-break level. Diversion above the plant would result in loss of that generation potential. The following should be examined in the EIS.

1. "Dirtier" sources, such as fossil fuel generation facilities should not be used for mitigation. They would degrade the air and environment, thus extending environmental impacts beyond the borders of our state.
2. Placing low-head hydroelectric generators in pipes included in designs of each alternative.

The general public has well over a hundred years of peaceful use of the canals for recreation, waste water disposal and lifestyle enhancement. Wallace Stegner and other writers have characterized Utah towns as having amenities associated with flowing water in open canals.

Many miles of trees and other riparian vegetation support biotic diversity with values that go beyond our valley. Open canals enhance habitat for everything from soil organisms to large mammals and birds.

All of the above argue for a system with maximum amount of flowing canals and a minimum of piped water---a system that sustains the quality of life we cherish. Quality is determined by people who till the land, harvest the produce, mow the lawns, teach our kids, lube our car, flip our burgers, treat our illnesses. And by people we meet on the trail, in the grocery store, at funerals and tailgate parties. Comments from these people are needed and must be considered seriously. They not only raise issues, they raise the next generation of citizens. It is their tax money that will be used.

Comment S-30 (continued)

Rebuilding the damaged segment of the canal in place will prevent the least disruption to the present system. In my opinion, that must be one of the alternatives that is thoroughly evaluated in this EIS process.

Thadis W. Box
19 August 2010

Public Scoping Meeting

8/11/2010

[3]

1 presentation and we will repeat the presentation again
 2 at 6:30. There isn't going to be anything presented
 3 later on at 6:30 than there is right now. So why is
 4 this project needed: The project was a result of a
 5 landslide that happened last year, on July 11th, in
 6 the island area near Logan. And during the landslide,
 7 that canal was taken out, and requests, or a request,
 8 came from Cache County for NRCS to provide assistance
 9 under the Emergency Watershed Program.

10 And NRCS made that application to our
 11 national headquarters for funding, and we received
 12 that funding from national headquarters under the
 13 Emergency Watershed Program. So as a part of the
 14 federal project, we follow the National Environmental
 15 Policy Act. So the purpose of EWP is to protect life
 16 and property from natural disasters and to help
 17 recover from those natural disasters. So that is the
 18 purpose of the funding.

19 And so any federal action that the
 20 government undertakes has to go through a
 21 national -- has to comply with the National
 22 Environmental Policy Act, or NEPA, and this is part of
 23 that process, to determine what -- to write an
 24 environmental impact statement to determine what the
 25 correct alternative, or the preferred alternative,

Public Scoping Meeting

8/11/2010

[4]

1 will be and to document the impacts to the social, to
 2 the economic, to the other natural resources that are
 3 around us. So we have to document the reasoning
 4 behind what we are doing and why we are doing it, and
 5 what impacts will be had by the community, by
 6 populations of fish and plants and animals that are
 7 around us. So that is the purpose of why we conduct
 8 an environmental impact statement.

9 This is the study area for the project.
 10 As you will notice, one of the alternatives falls
 11 outside the study area. That is just a minor glitch
 12 and that will be fixed. We just didn't want to change
 13 it at the last minute because we'd already submitted
 14 the fact sheet to publish on the website. And so the
 15 study area will include the Canyon Road alternative,
 16 as well.

17 This is the first alternative to restore
 18 water use to the Logan Northern Canal. It involves
 19 taking and piping the irrigation canal down Canyon
 20 Road, then trying to bring it up there near 4th East,
 21 and back on up over 89 and into the existing canal.
 22 So that alignment, there is also a return line that
 23 would have to be run back to the river, and so that
 24 would be the area that would be impacted by the
 25 project, if that were the alternative that was

Public Scoping Meeting

8/11/2010

[5]

1 selected as the preferred alternative, and so that's
2 how that alternative would play out.

3 The next alternative is to bring the
4 irrigation water down from the upper canal, which is
5 the Logan Hyde Park and Smithfield Canal, we would
6 divert all the water from the Logan Northern Canal,
7 bring it up to that upper canal, and divert those two
8 canals together until we go down to the golf course;
9 we would run west along the golf course, and then down
10 Highway 89, in front of Utah State University, and
11 then continue on down 89 until we got to where we ran
12 into the Logan Northern Canal, and dump the water into
13 the canal, and it would continue on so we could kind
14 of avoid the landslide area that isn't stable.

15 The next alternative -- and as you can
16 imagine, there are different impacts and different
17 things associated with each of these alternatives, and
18 I hope you will take time to comment on which
19 alternative you would prefer and also the reason you
20 do not prefer the other alternatives.

21 So this alternative would take the water
22 down the upper division, the Logan Hyde Park and
23 Smithfield Canal, combine the two canals, they would
24 come down together to where Lundstrom Park was, then
25 go west at Lundstrom Park, and then curve around and

Public Scoping Meeting

8/11/2010

[6]

1 eventually join the Logan Northern Canal at about 14th
2 North. This would have impacts to those residential
3 areas that are around and in that vicinity. I
4 apologize, I am not going to take questions tonight
5 from the Mic, but during the open session, I would be
6 more than willing to talk to you off to the side. I
7 just want to try and hurry and give the presentation,
8 give an overview, and then you can have your comments.

9 And then the last alternative is to take
10 it, combine both canals, and take it all the way to
11 31st North, in North Logan, and combine the canals to
12 that point, and then take it down a field -- or down a
13 road there, and then dump the water from the Logan
14 Northern Canal back to the open channel and let it
15 continue to flow.

16 So those are the four alignments that are
17 associated that we have looked at. So we would like
18 you provide us your comments on, of course, which
19 alternative you would like, and any issues you see in
20 some of the alternatives that you don't like, or if
21 there is another alternative that you would like to
22 suggest, then we would be open to that, as well.

23 So the schedule: We have, of course, in
24 the second part of the schedule, we've received the
25 funding and began the statement process, issued a

Comment S-31 (Marshall)

Comment S-31 (Marshall, continued)

Public Scoping Meeting 8/11/2010

[7]

1 notice of intent for the public's involvement, now we
 2 are in the scoping project. Hopefully, by this
 3 timeframe next year, we have a draft environment
 4 impact statement, then finishing up the project
 5 towards next summer. So that is kind of the timeframe
 6 associated.

7 So as I said, comments, we welcome your
 8 comments, they are due by August 31st. Again, they
 9 can be given verbally to the court reporter here
 10 tonight, through email, US mail, or through the
 11 comment sheets that were provided here, or if you have
 12 written statements that you came with, you can deposit
 13 those in one of those boxes, and we will analyze and
 14 publish and respond to your comments.

15 And with that, that ends the presentation
 16 portion. Again, you are welcome to give your comments
 17 verbally to the court reporter. We will be -- I will
 18 be in the audience, and there are several from the
 19 NRCS here, or HDR, that can hopefully answer your
 20 questions, and we look forward to hearing from you.
 21 Thank you.

22 (End of presentation)

23 COMMENTS

24 CLAIR MARSHALL: Clair Marshall, and I am
 25 from Lewiston, Utah, and alternative one is very

Public Scoping Meeting 8/11/2010

[8]

1 disruptive to the community. We would be digging in a
 2 hill that is unstable. I just don't feel like that is
 3 a good option. Option 2, to try to put a line down
 4 the highway, that doesn't seem feasible.

5 I don't feel the option down Canyon Road
 6 would work because you are digging in the toe of an
 7 unstable hill. It's very disruptive to the community,
 8 all the utilities, and I really feel like it doesn't
 9 solve the problem, and we don't get as good as value
 10 for the dollar as other options.

11 The option of going down the highway, the
 12 disruption of the highway, I don't feel is a good
 13 option, because there are tunnels to the Utah State
 14 University under the highway. It would be very hard
 15 to get past those, if U-DOT would even give
 16 permission.

17 The option of coming down from Lundstrom
 18 Park would work, but, there again, you have got a lot
 19 of people and utilities that you disrupt. So I feel
 20 that going out to 3100 North is the very best option.
 21 It's more money but it helps a lot more people. It
 22 helps the city with their drainage, storm drainage,
 23 and it is the most cost effective for the amount of
 24 help it gives people. And it's a very good option in
 25 saving water, which would help the whole valley,

Comment S-32 (Pehrson)

Public Scoping Meeting

8/11/2010

[9]

1 everyone in the valley, on water systems, especially
2 the ones that use the Bear River for water.

3 Where I am in Lewiston, I use water out of
4 the Bear River to water my farm ground in Lewiston. I
5 feel this project will even be a benefit to me because
6 it will save water that we are allowed, to come from
7 Idaho, in Bear River, and use in Utah, so it will even
8 benefit me in Lewiston. So I feel the 3100 North is
9 definitely the best option, and we need do this as
10 fast as possible. We have got farmers who are looking
11 at a very big loss of income and we need to keep the
12 farmers in business.

13 PAT PEHRSON: Pat Pehrson, I am opposed to
14 all of these proposals because I seriously think and
15 know that with all the technologies and things they
16 have, they could fix that hillside and the break where
17 the break -- where the canyon -- where the canal
18 broke. And it would be far less money to do that and
19 put the water back through there and on down toward
20 its regular route.

21 And we have three and a half acres of
22 land. We live east of Canyon Road or -- yes, east of
23 the break, and we've got six inches of water in the
24 canal for 50 water users to use, and we can't get
25 everything watered. Don Hansen has given me

Comment S-32 (Pehrson, continued)

Public Scoping Meeting

8/11/2010

[10]

1 permission to protest 250 shares between what he has
2 and what is renting, but he thinks the canal should be
3 put back. It would cost far less to figure out some
4 way to put the water back down through where it's
5 supposed to go, then it would be to put two canal
6 companies full of water into one. That's a disaster
7 waiting to happen.

8 The upper canal and the northern canal get
9 the same second feet of water. And the northern
10 canal -- or, no, the upper canal can't handle their
11 water alone, how are they going to handle another
12 canal full of water. It's a disaster waiting to
13 happen, and I plead with somebody to please come and
14 look over the hillside and the canal company with very
15 serious intent of doing something along there. Now
16 why can a handful of people that don't have shares in
17 the northern canal, don't live along the canal,
18 dictate to the rest of us what we can do and what we
19 can't.

20 If they take all of the water from the
21 northern canal and turn it into the upper canal, that
22 leaves Logan Light and Power without water to run
23 their generators, and who's going to pay for all the
24 lost electricity that they are going to have to buy to
25 supplement the electricity for the city?

Comment S-33 (Nelson)

Comment S-33 (Nelson, continued)

Public Scoping Meeting 8/11/2010

[11]

1 I do believe that if we hastily cover our
 2 canals and drastically change the upper canal, that we
 3 will change the ambience and the character of this
 4 valley, and once we have done it, it will be too late.
 5 It will ecologically and environmentally make a huge
 6 difference and I believe it will be sad if we take
 7 that alternative.

8 JOHN NELSON: My name is John Nelson. We
 9 live at [REDACTED]. We have
 10 300 feet of canal frontage. We have lived in that
 11 house for 30 years. Our concerns, and we get a long
 12 well with the canal company, but our concerns are, No.
 13 1, we are very much in doubt as to whether it's
 14 appropriate for our tax money, in the form of a 20
 15 million dollar disaster relief, to go to remediating
 16 problems with the related canal, which is what they
 17 are planning to do. We think that that is an
 18 inappropriate use of our money.

19 No. 2, by taking two canals worth of water
 20 out above the generating plant in Logan Canyon, we are
 21 significantly already reducing significantly the
 22 amount of power production of that generator, which is
 23 clean hydroelectric water, cheap power, that the
 24 citizens, all the citizens of Logan, benefit from, and
 25 a few of the citizens of the area benefit from the

Public Scoping Meeting 8/11/2010

[12]

1 canal. So everyone is going to be paying more for
 2 their power, and it's not as clean Rocky Mountain
 3 Power's pull-generated power that we have been buying,
 4 and I think that is something that everybody should
 5 take into consideration.

6 No. 3, by enclosing the canal as they are
 7 taking about doing, they are going to be destroying
 8 100 plus years of riparian development along all of
 9 the canals, especially right along our canal. We
 10 have, in our big lot, innumerable trees and other
 11 growing things that are dependent on the very seepage
 12 that they are concerned about for their living, and
 13 they are going to disappear, as is the riparian area
 14 all along the canal. And all the creatures and birds
 15 and frogs and animals that are dependent on that, for
 16 well over a century, and it's going to significantly
 17 change the environment, I think, of the community.

18 Fourth, when we bought that property 30
 19 something years ago, part of the amenity that really
 20 drew us to that was the free flowing canal. There is
 21 no question that it is going to lower our property
 22 value and the value of our property use, for our
 23 enjoyment of it, and, also, if we are going to sell
 24 our property to someone who might consider it. And
 25 the canal company, last fall after the disaster that

Comment S-33 (Nelson, continued)

Comment S-33 (Nelson, continued)

Public Scoping Meeting

8/11/2010

[13]

1 happened in the lower canal, the upper canal company
 2 determined that they were going to reduce the risk of
 3 a rupture of the upper canal by eliminating all of the
 4 trees in their right-of-way, and they proceeded to do
 5 that until they apparently ran out of money, I heard,
 6 but I am not sure that that is the reason.

7 So what they have done in our section and
 8 for quite a ways north of us, is to have -- cut down
 9 all the trees but left the stumps, and the stumps are
 10 still totally alive and vital. And now we have a
 11 small series of box elder bushes growing along that
 12 canal, which are providing no canopy to prevent
 13 evaporation, so they are losing a significant amount
 14 of water vapor to evaporation, and that appears their
 15 issue by enclosing the canal.

16 Plus, between each of these box elder
 17 bushes that we now have, there is a substantial amount
 18 of additional weed growth right along that canal edge
 19 and all along their right-of-way because so much more
 20 sunlight is getting into that area. And that weed
 21 growth, I can't keep track of it, I can't keep up with
 22 it. So it's all going into the canal and contributing
 23 to the weeds for those users down the canal further.

24 And one other point, I guess, besides
 25 having -- making it disappear, it is a defect in the

Public Scoping Meeting

8/11/2010

[14]

1 lower canal that was associated with the rupture of
 2 the lower canal. It's reasonably clear that the
 3 slumping of the bank above, for whatever reason,
 4 natural groundwater or irrigation water or whatever,
 5 was displacing that rigid line to the lower canal, and
 6 cracks appeared, and they were weren't taken care of.
 7 Then, eventually, more cracks, more waters came out,
 8 eventually, there was a catastrophic destruction of
 9 the canal. I have heard people with a Ph.D. after
 10 their name that are smarter than I. I am saying that
 11 a canal encloser is more likely to rupture than the
 12 open canal would. The advantage is to not lose the
 13 water to the groundwater or evaporation, but every
 14 other one of these items is a disadvantage, as far as
 15 I am concerned, to them and to all of us in this
 16 community.

17 And as a separate paragraph, I would like
 18 to say, although I don't have anything to say about
 19 the laws in Utah and the water right law stems back to
 20 the 19th century, now that the Logan City and the
 21 Cache Valley is now populated by lots more people that
 22 existed then, most of who with no dependents or
 23 interest other than the aesthetic interest in these
 24 canals, the fact that we still -- the citizens have no
 25 input and nothing to say except maybe to this

Comment S-33 (Nelson, continued)

Comment S-34 (May), Comment S-35 (Anderson)

Public Scoping Meeting

8/11/2010

[15]

1 organization here about what is done, which affects
 2 us, the tax money, the increase of our power costs,
 3 the aesthetics; there must be some way to make a
 4 change, or, at least, make an input into the allotment
 5 and allow the citizens to have something to say about
 6 it. Thank you very much.

7 Well, option No -- - well, one of the
 8 options, the one of running a diversion pipe through
 9 Lundstrom Park and making the connection at 1400
 10 presently exists as a remedial temporary connection.
 11 Why, if we are not -- if we are not going to be able
 12 to use the Canyon Road option and if we are not going
 13 to be able to, which, in my opinion, would be the
 14 better choice from the citizen's standpoint, to be
 15 able to use the original outlet of the water so that
 16 the water can pass through the power plant and we can
 17 get the benefit of the hydroelectric clean power.

18 But if, for some reason that is not
 19 possible, it sure seems like the best option is to
 20 simply correct the problem and to get the water to
 21 water users would be to enlarge the necessary channel
 22 through Lundstrom Park and make the connection there.
 23 Then there would be no need to back pump it, and
 24 they've already gone through there, and they have
 25 already disrupted the whole thing.

Public Scoping Meeting

8/11/2010

[16]

1 WAYNE MAY: Wayne May. The biggest
 2 concern that I have is we need to conserve water, and
 3 the current system, we lose, essentially, 50 percent
 4 of our water through evaporation. Our water is just
 5 sinking into the soil, the rocks, and so a pipe, an
 6 enclosed pipe, to me, would do one thing: You would
 7 save a lot of water; and No. 2, it would be the
 8 natural flow of the water. We would eliminate a lot
 9 of electric pumps and save electricity and expense
 10 there.

11 And so as I have studied this, the one
 12 plan that looks the most feasible is coming down 3100
 13 North, and in an enclosed pipe, and then running the
 14 pipe north and south and that would be a very
 15 important thing to me.

16 CARLOS ANDERSON: Carlos Anderson, and I
 17 am the president of Greenbelt Irrigation Company, and
 18 that is off the Logan and northern canal. And I don't
 19 know how much you got from him, but there are a few
 20 things I would like to bring up. One is we are not
 21 having that much problem where we are at with water,
 22 but it is people out north; we can want get enough
 23 water to them. We have experienced the second washout
 24 in our canal for trying to divert water through our
 25 system, and every time that happens, it's a \$700 to

Comment S-35 (Anderson, continued)

Public Scoping Meeting 8/11/2010

[17]

1 \$1,000 bill to fix it.

2 The other thing that is happening up there
3 right now, I drove the canal yesterday, we've got moss
4 growing. The water flow is so slow that the moss is,
5 at least, six inches deep in the bottom already, and
6 it was de-mossed this year.

7 The other thing you need to be aware of,
8 Logan and northern canal, because of spring fed and
9 runoff water, has about six inches of water in it year
10 round. That is never dry. Every time we go to work
11 on it, we have to work in water.

12 The other thing about our water company,
13 we serve about 50/50, 50 percent residential, 50
14 percent agriculture, and I think that's about it.

15 P R O C E E D I N G S

16 BRYSON SMART: Good evening, I am Bryson
17 Smart, with the Natural Resources Conservation
18 Services. We are a part of the US agriculture. It's
19 nice to have you here with us tonight. To open up,
20 the beginning of the project is that we have to
21 restore water service to the canal users who were
22 affected by the landslide that happened last July
23 11th, and I am glad you are here. I hope you can
24 provide us some comments, as the lead federal agency
25 behind this project, that will help us mold our

Public Scoping Meeting 8/11/2010

[18]

1 project to what the local residents of Cache County
2 would like to see.

3 And so with that, I will begin my
4 presentation. I will make a short presentation, about
5 ten minutes, then we will be here in the audience to
6 answer any questions that you have following that
7 presentation. And you will be welcome to make
8 comments to our court reporter that we have here, or
9 through the written form and place in of the boxes
10 while you are here tonight, or you can take the form
11 home, or include more comments on another document
12 that you prefer and mail those in to the address that
13 was provided, or also by email.

14 The background of the project was after
15 the landslide occurred last summer, the Cache County
16 requested assistance to NRCS, the Natural Resources
17 Conservation Services, the agency I work for, for the
18 assistance in recovering from this landslide that
19 happened. And so after that request we made, an
20 initial quick assessment and submitted a request for
21 funding to our national headquarters, and we've
22 received that funding.

23 And so as part of the progress of the
24 project, the first thing that we have to do is to
25 undertake NEPA, which is the National Environmental

Public Scoping Meeting

8/11/2010

[19]

1 Policy Act, and what this act requires the federal
 2 agency to do is to, basically, look at the effects
 3 socially, economically, environmentally of the project
 4 and make an assessment of that. And so that is why we
 5 are beginning to conduct an environmental impact
 6 statement, so we can document the impacts of what the
 7 project would be.

8 Here is our study area; when the water
 9 service was disrupted last July, we looked at several
 10 alternatives. There are several alternatives you
 11 won't see me discuss tonight because they were looked
 12 at and either thrown out or disregarded, but if there
 13 are alternatives that you don't see that you would
 14 like NRCS to consider, you are more than welcome to
 15 make that comment, as well.

16 So the first alternative to bring water
 17 here is, where the landslide occurred, where the slope
 18 failure occurred, right here on Canyon Road, the first
 19 alternative would be to bring water out of the current
 20 diversion that the Logan Northern Canal operates, and
 21 it would bring that water down underneath Canyon Road,
 22 then take it back up the dugway, if you are familiar
 23 with that area, up on top by 89, and it would dump it
 24 into the existing canal. That would be -- and it's
 25 actually listed as Alternative 3, but I want to work

Public Scoping Meeting

8/11/2010

[20]

1 south to north, so I apologize. If you want if make
 2 comments, you can say the yellow alternative. So that
 3 is the first alternative and that would involving
 4 piping that section there and try to find a way to get
 5 back up on top of the hill at that point.

6 The second alternative is to pick the
 7 water up in an upper diversion that is up between the
 8 first and second dam. There is a diversion operated
 9 by the Logan Hyde Park and Smithfield Canal, and this
 10 would move the Logan Northern's diversion up and
 11 combine it with that upper diversion, between the
 12 first and second dam, and we would, then, combine the
 13 flows in those canals down east of -- or north of 89,
 14 and bring it down to where the golf course is, and
 15 then we would follow down, down past the golf course,
 16 down past Utah State University, following US 89, and
 17 then return it down to 4th East, where it would dump
 18 into the existing canal. So there would be some
 19 effects there related to Highway 89, to Utah State
 20 University and some other things.

21 The third alternative would, again, go up
 22 and combine the diversions, bring it further down to
 23 Logan Hyde Park and Smithfield Canal until about
 24 Lundstrom Park. And at Lundstrom Park, it would drop
 25 off to the west through the residential areas, and,

Public Scoping Meeting

8/11/2010

[21]

1 basically, you end up at about 14, 15 North when you
2 run into the Logan Canal again. And it would, it
3 would be just open channel from there north, but this
4 piece of the canal would be piped to that point, and
5 the canals will be combined. The upper canal would
6 stay up from this point here, and the lower canal
7 would stay in. It would just be open after that
8 point, kind of like it is right now.

9 The fourth alternative takes the water a
10 little further to the north and drops it down through
11 some fields, so there's a little less impact to
12 residential areas, but we are dealing with a longer
13 length of pipe, as well. So this would pipe the canal
14 all the way to 3100 North, drop it off to the hill to
15 the lower canal, it would -- the portion of the canal
16 flow that needed to go north from 3100 North would be
17 open channels to Logan, and northern canal would stay
18 open from there north and running back to 1500 North,
19 in a smaller pressurized pipeline, to service any
20 users that are in this area right here, by -- from
21 1500 North to 3100 North, through a pressurized
22 system. So those are the four alternatives that NRCS
23 has looked at in cooperation in Cache County.

24 So our schedule, we are right here in
25 phase two, what we call scoping, and scoping means

Public Scoping Meeting

8/11/2010

[22]

1 that we are -- we have these rough ideas of
2 alternatives, and we are asking you for your inputs.
3 If you see any other alternatives, or if you see
4 alternatives that you dislike, if you see an
5 alternative that you like, please let us know that in
6 your comments, and comment both ways; comment for the
7 ones that you like and for the ones that you dislike,
8 and please state a reason why you would like or
9 dislike each of those comments so we can analyze the
10 reasoning behind why we would select one of these
11 alternatives as the preferred alternative.

12 And then we will be, by December, on the
13 schedule. We will publish a draft, an EIS draft,
14 environmental impact statement, and at that time, we
15 will take the comments then on the details of all
16 the -- of looking at all of these comments that we
17 gathered this time, plus all of the research that we
18 have done, we will publish a draft EIS, then hold
19 public meetings to take comments on what you thought
20 about our decision-making process. And then, hope
21 fully, by summer 2011, we are through the process, we
22 have a preferred alternative, and things can begin to
23 begin and the project can continue to move on.

24 So here's the results or the comments you
25 should be listing: Comments based on, what if we do

Comment S-36 (Keller)

Comment S-36 (Keller, continued)

Public Scoping Meeting 8/11/2010

[23]

1 nothing, what would be the reaction; what would be
 2 your reaction to nothing, or what would be your
 3 reaction to any of the four alternatives; would you be
 4 for or against them. So that is what we looking for
 5 in commenting on. And you can give comments, of
 6 course, here with the court reporter verbally tonight,
 7 and she will put those into the record. Also, you can
 8 give comments to the boxes that are around the table
 9 through the form, or you can email, or mail, comments
 10 to the address that was provided on the fax sheet that
 11 you picked up as you walked in.

12 So with that, we will end our presentation
 13 and I'll be up here to take any questions that you
 14 have.

15 (End of presentation.)

16 COMMENTS

17 JEFF KELLER: My name is Jeff Keller. My
 18 concern is that my understanding of this whole
 19 project, using EWP funds to improve the upper two
 20 canal systems, is a misappropriation of the EWP funds.
 21 EWP funds are for, as what was shown on the slides
 22 here, to fix what was damaged. In this case, that was
 23 the lower canal, the LNC, the Logan Northern Canal.
 24 So I am a Logan City resident. I am also a
 25 shareholder of the LNC Canal, and my concern is that

Public Scoping Meeting 8/11/2010

[24]

1 with this misappropriation of government funds, that
 2 by using that to make improvements for the upper
 3 canal, ultimately, I will be held, and other
 4 taxpayers, in fact, all the citizen of Cache Valley
 5 will be responsible for this misappropriation of funds
 6 and have to pay it back.

7 The second thing I am concerned with is
 8 the loss of hydroelectric power, and, therefore, an
 9 increase in my utility rates because we would have to
 10 buy power elsewhere, so I have those two issues. I am
 11 not against the canal holders wanting to improve
 12 things, but they should have to pay for the
 13 improvements themselves.

14 If it states -- if the sponsor desires to
 15 increase the level of the protection and bring in the
 16 EWP practice, the sponsor will be responsible for
 17 paying one hundred percent of additional work. Since
 18 they are not calculated, the least cost, the actual
 19 least cost which would be to just fix the canal, run
 20 it under Canyon Road, then by getting the 19 -- they
 21 have what? About 19.5 million dollars allocated? So
 22 about 6.5 of that came from the canal people. That
 23 means the government is paying the balance of that 13
 24 million.

25 All the numbers I have heard and seen for

Comment S-37 (Yunker)

Comment S-37 (Yunker, continued)

Public Scoping Meeting 8/11/2010

[25]

1 fixing what was actually damaged here, what the EWP
 2 money is for, is less than 13 million total. So if
 3 the government is only supposed to pay 75 percent and
 4 the project is going to cost definitely less than 13
 5 million, I think that an alternative that should
 6 be -- I don't even view it as an alternative. That is
 7 the one that should be done.

8 DON YUNKER: Don Yunker, and our land is
 9 both sides of the canal. We are the family -- we own
 10 30 acres there, and the canal runs right through our
 11 lane. One of our concerns is what is going to happen
 12 if the canal is put in a pipe, or whatever they are
 13 going to talk about, what is going to happen to all
 14 the trees; what is going to happen to the deer and all
 15 the other things that come down to drink. If all the
 16 trees go, how does that effect our environment. That
 17 is one of the things that we are really concerned
 18 about.

19 The things need to get done as quick as
 20 possible so that the people that are having problems
 21 can get their water, but, you know, our concern is
 22 that that canal has been there over a hundred years.
 23 It took over 20 years just to go through the rock to
 24 ever start the canal, and that canal was the last
 25 canal. All the others were working. So 20 years,

Public Scoping Meeting 8/11/2010

[26]

1 just to go through the limestone to get started with
 2 the canal, and I understand now that maybe they might
 3 have to do something -- more work in the limestone,
 4 getting the canal out.

5 So our big concern is what is going to
 6 happen to the environment, and it seems like that's a
 7 concern that if we lose all the vegetation, and what
 8 is going to happen to the animals and stuff that rely
 9 on that canal for a drink.

10 And then another thing is how are they
 11 going to make our connections to bring the water for
 12 what we -- what our water rights are. And this is
 13 what I don't know. I think with us that live there,
 14 one of our big things is to walk the canal and see how
 15 nice it is. Right now, there is a mother duck up
 16 there that's got ten little ones. That will all be
 17 gone.

18 We have got a fox den there that
 19 has -- there are seven foxes. Now they will probably
 20 be able to go somewhere else and find something to
 21 eat, but for us that's lived there for 80 years, over
 22 80 years, and we have enjoyed going up and down the
 23 canal. And the ones that used to float it, and our
 24 children all floated the canal, and I am sure I have,
 25 and jogged the canal all the way from the mouth, all

Comment S-38 (Meilke)

Comment S-39 (Gilgen)

Public Scoping Meeting 8/11/2010

[27]

1 the way to Smithfield, that, I guess, is going to be
 2 gone if things go through.
 3 And this goes, you know, through our whole
 4 family, as a family that owns that, so there's -- now
 5 there's our children, our grandchildren, and now
 6 there's great grandchildren that won't be able to have
 7 what their fathers and mothers had if all this is
 8 changed.
 9 JON MEIKLE: Jon Meikle, and the comment
 10 that -- I am president of Logan Northern Canal, and we
 11 have worked as a Cache high line water association
 12 with four cities, the two canal companies, for the
 13 past year plus. And, really, the alternative that, in
 14 the long run, that is the cheapest and makes the most
 15 sense and is -- will carry water into the future for
 16 this valley, is the 3100 option.
 17 Richmond Irrigation is highly impacted by
 18 not getting their water, or, you know, they own close
 19 to 200 shares in Logan Northern Canal. And Smithfield
 20 City culinary water is dependent on the delivery of
 21 water to Smithfield. A lot of years, Smithfield has
 22 not gotten water and that impacts that threatens the
 23 ability of the city to deliver culinary water.
 24 So this water does more than just water
 25 crops. It helps to provide culinary water to the

Public Scoping Meeting 8/11/2010

[28]

1 cities. And with this is a number that is easy to
 2 remember; at a 1.1 percent growth rate, population
 3 doubles every 50 years, there is not a city from Logan
 4 to Smithfield that isn't growing faster than a 1.1
 5 percent growth rate, so you can get a picture as to
 6 the demand of water needs for that population in the
 7 next 50 years. And this is the system that is going
 8 to be built into the future for the next 150 years to
 9 help provide water to people. It has the most
 10 advantage, the most bang for the dollar spent. People
 11 may look at it as the most expensive system, but when
 12 they understand the numbers, it is actually cheaper
 13 than any of them.
 14 KAY GILGEN: I am Kay Gilgen. I own
 15 shares in the North Logan or the Logan Hype Park
 16 Smithfield Company, and I am all in favor of
 17 completely covering the canal from the Logan River
 18 down to 3100 North to save our water and allow us to
 19 actually put more land under the auspices of the canal
 20 company. And that would also save the water from the
 21 seepage and the evaporation in the air, which would be
 22 a big plus to everybody; not only North Logan but all
 23 the other towns and Logan City.
 24 So, once again, I am all in favor of
 25 complete coverage of the canal. If you leave it

Comment S-39 (Gilgen, continued)

Public Scoping Meeting 8/11/2010

[29]

1 partially open and cement just the bottom to leave an
 2 open canal for so-called beauty, or whatever, then you
 3 just create a really bad environmental hazard for the
 4 safety of children, anything else, because if they
 5 fall in, they won't be able to get out. And in the
 6 winter, if water comes down in the spring because of
 7 the snow pack at the bottom, at the line canal, the
 8 frost comes and lifts it out, and there is just a
 9 continue maintaining of those sections. So cost-wise,
 10 I don't feel that that's even an option to partially
 11 line that canal.

(The hearing was concluded at 7:45.)

12
13
14
15
16
17
18
19
20
21
22
23
24
25

Public Scoping Meeting 8/11/2010

[30]

Reporter's Certificate

1
2
3 State of Utah)
 4 County of Salt Lake)

5
6 I, Kellie Peterson, Certified Shorthand
 7 Reporter, Registered Professional Reporter, and Notary
 8 Public for the State of Utah, do hereby certify:
 9 THAT the foregoing proceedings were taken
 10 before me at the time and place set forth herein; that
 11 the witness was duly sworn to tell the truth, the
 12 whole truth, and nothing but the truth; and that the
 13 proceedings were taken down by me in shorthand and
 14 thereafter transcribed into typewriting under my
 15 direction and supervision;
 16 THAT the foregoing pages contain a true
 17 and correct transcription of my said shorthand notes
 18 so taken.
 19 IN WITNESS WHEREOF, I have subscribed my
 20 name and affixed my seal this 18th day of August,
 21 2010.

 Notary Public

24 My commission expires:
 25 December 29, 2012

Comment S-40

Linda Thorne-Probert



August 21, 2010

Sue Lee
HDR Engineering
3949 South 700 East, Suite 500
Salt Lake City, UT 84107

To whom it may concern:

I am a shareholder in the Logan, Hyde Park, Smithfield Canal and a retired research biologist. I am also a shareholder and the current Office Manager of the Palomar Mountain Mutual Water Company on Palomar Mountain California. My husband is the Systems Operator of the company.

First of all let me express my great sympathy on the loss of life that occurred when the canal was breached. This is certainly something that should not have happened and was a great tragedy.

That being said, I don't understand why the available Federal Emergency Fund was not used to safely repair the breach in a timely manor. If this had been done, the middle canal would probably be irrigating fields by now.

Why all this fuss about using Federal Funds to re-plumb the Cache Valley canal system? As far as I know it is not broken and does not need fixing. *This large project is hardly an emergency so how can the use of federal emergency funds be justified?* It seems to me that this is just a way to put public money into private hands. *It will increase the net worth of a few large shareholders in the canal companies, but certainly decrease the property value of many property owners along the existing canals.*

As far as the environment goes, piping the system will eliminate the habitat of open canal supported plant and animal life. It will also alter the character and decrease the beauty of Cache Valley. This affects everyone who loves the Valley for its unique character.

Repair the canal so that it will function safely at the breached end. Restore the system that has worked for over 100 years. Forget about the re-plumbing of Cache Valley!

Thank-you,

Linda Thorne-Probert

P.S. Free money is rarely free. Who will be paying for the EIS, the Matching Funds, the Engineering Reports, etc.?

Cc: Cache County Council

Comment S-41



HDR
REC: AUG 23 2010
PROJ:
FILE:

Logan Northern Canal Reconstruction Project
Public Scoping Comment Form

Name: Logan Golf and Country Club (Andy Oldham)
Address: Golf Course Superintendent



Comments can be submitted to:

Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

We are a private Golf Club with a limited budget at this time. We have been in operation since 1938. These are some of the issues that we have with piping the canal through the Golf course.

1. loss of play and disturbance during construction.

2. loss of water in the fall and spring due to construction. We need water from April 1st to Nov 1st if we do not have water the course will die and so will we.

Logan Northern Canal Reconstruction Project

Public Scoping Comment Form

Comment S-41 (continued)

Comment S-42



3. The cost to restore the course after long periods with out water would be considerable. Plus the loss of play, and poor conditions.

4. The canal is a part of the design of the course & golf holes would be negatively affected and would have to be reconstructed.

5. The cost of a Golf Course architect and construction would be in the 100,000 of thousands.

6. We would have to change our filter systems and our intake to our pump station that would be in the \$50,000 range.

7. We would have to design and construct water features to mitigate the loss of wetlands on the course. (the canal)

8. The wild life would be negatively affected the ducks would not nest here, the deer would not have a place to drink, we encourage the wild life and have established natural areas on the course and we feel that loss of the canal would negatively affect the wild life here on the course.

We do not want to see the canal increased through the golf course for the reasons stated.

Thanks Randy Oldham Logan Golf and Country Club

August 13, 2010

Hi!

Just thought you would like to read the comments that were in our paper yesterday!

Good luck
Pat Johnson

HDR

REC: AUG 23 2010
PROJ:
FILE:
DIST:

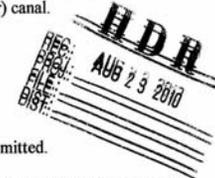
Comment S-42 (continued)

Comment S-43



Public comment re: EIS in connection with alternative plans to join the Northern (middle) canal and the Smithfield, Hyde Park & Logan (upper) canal.

From: Cary Watkins (shareholder in the upper canal)



The following comments contained herein (pages 1-3) are submitted.

1. With respect to the choices offered on the four alternative plans, Alternative Plan 3 is the only plan with the greatest cost/benefit. Within Plan 3, there can be a couple of iterations which will achieve the goal of providing the Logan Northern Canal in operation. Each may have a slightly different cost, depending upon which one is implemented. These are:

- A. One that diverts the water for the Logan Northern Canal through a pipeline either under Canyon Road or in the north road easement from near the current diversion point to a point along the old canal past the slide hazard area.
Or- connect to the eastern portion of the previous aqueduct well before the break, then drop a pipe with a declination of about 30 degrees, to flow along the base of the hillside well past the west break point, then reconnect with a 30 degree inclination to the existing aqueduct. This avoids having to deal with underground lines. A winter drain line along the level portion of the pipe can be installed then taken under canyon road and discharged into the ditch area thence into the river just south of Canyon Road. It should be noted that it may require the purchase of a few homes near the break area and possibly some land area to place the pipe. This will maintain both Logan City's and USU's hydropower generation returns from the Logan River.
- B. An alternative plan that would take advantage of the elevation head created by First Dam and only require a much smaller (one 48" diameter) pipe as suggested in (a) above This would maintain Logan City's but reduce USU's (which are considerably smaller) hydropower generation returns from the Logan River
There haven't been any costs associated with this plan, but without question the cost could likely be less than 20% of the cost estimated for the "preferred" plan Alternative 4. Without question, Alternative Plan 3 provides the greatest cost/benefit.

2. The calculation of cost/benefit of each plan should first be calculated based upon the amount of acreage directly impacted by each canal, time to permanently restore water in the middle canal, the cost of this restoration, and the least environmental impact upon people, people and environment. The goal therefore is should not be to create what has been aptly termed in the Preferred Plan, "a gold plated canal at a discount price", but

Comment S-43 (continued)

instead, use the least amount of federal emergency money coupled with local resources to get the middle canal safely functioning.

Page 2 of 16 Clause II. "Purpose: On July 11, 2009, a landslide occurred that caused loss of life, property damage and damage to the Logan Northern Canal system. The Logan Northern Canal System delivers irrigation water to over 7000 acres of agricultural land and communities in Cache County." II: Benefits "Relocation of the Logan Northern Canal will restore delivery of irrigation water to over 7000 acres of agricultural land and communities in Cache County...."
This agreement needs to be amended to reflect the actual acreage of 3340 that applies to the Logan Northern Canal.

- Federal emergency funds were not needed for the upper canal and the use of a combined acreage of both canal companies. The cost benefit analysis based upon combining the acreage of both canals is wrong and appears to be a deliberate attempt to skew the analysis in favor of Alternative plan 4, the "Preferred" plan.

When the middle canal failed last year, what would have happened if the upper canal didn't exist?

The answer is simple. State and federal resources would have come together quickly. A pipe would have been installed along or near canyon road right of way. There wouldn't have been any significant environmental issues and the cost, a few million dollars. The fact that the upper canal does exist has changed everything. The immediate disaster was mitigated by diverting water from the upper canal via the Logan storm drain system. This now buys time to re-shape a disaster and turn it into an opportunity to not only fix the middle canal but completely re-construct the upper canal — a disaster that becomes an opportunity. That opportunity now is estimated to cost \$27 million. The 19 million approved by the Feds is a fixed amount and will not be increased. Therefore in addition to the 25% match required to meet the 27 million by canal shareholders, and a few cities (now in the form of a State loan) all other additional costs which are unknown, ie: increased costs due to inflation and higher construction costs, not to mention the unknown true costs of "extreme" engineering and rebuilding from the Logan river point of diversion, along the steep slope canyon slope will be borne by shareholders and effected cities.

One of the benefits of having this "new and improved" system this that irrigation water will be more efficiently delivered to the ones who are entitled to use it. The canals that have carried water for a hundred years are inefficient in that about on third of the water flowing through the canals seeps out the bottom. This leakage isn't all bad because water is captured that would otherwise make its way to the Bear River and down to Salt Lake. It also provides some re-charging of the aquifer. This is a good thing. The captured water can't be re-allocated someplace else, like Salt Lake and surrounds where the state water engineer is eyeing un-used water from Cache Valley as a source of more to serve an expanding population.

Right now there is about 900 acre feet of water is not being used in Cache Valley and water use deficit is expanding. There are two reasons for this. For decades most farm land was flood irrigated and is now being irrigated with pressurized sprinkling systems. Most significant is less land being farmed and more being developed. This situation is irreversible. There is an unintended consequence of a more efficient system. More water will leave Cache Valley and be efficiently delivered to Salt Lake Valley.

3. Impact upon private property owners who live along the canal

Typically private property lines on both sides of the upper canal meet in the middle of the canal... Most easements in this area are 9 feet (prescriptive) on the downhill side. Piping

Comment S-43 (continued)

the canal or constructing open cement channels would require more space on both the easement side and the non-easement side of private properties. There is a cost to acquire wider easements and unless private property owners are compensated, it will constitute a "Taking". To my knowledge costs are not part of the 19 million approved nor is there any estimate of the time required to secure easements along the canal to 3100N. The operators of the upper canal recently started to take down trees, and in some cases have intruded on private property beyond easement right of way without obtaining permission or notifying owners. Because the canal company has dredged parts of the canal in conjunction with removing trees, the compacted clay soils have been disturbed and the canal bank has begun to leak excessively. Right now, water is leaking at 40 gal/min onto the Logan golf course. Some property owners who live along the canal are seeing seepage that had not existed earlier.

There is an impact upon the values of property along the canal and there could be claims of diminution of property either by the piping or by cement channels that would require high fencing on each side of the canal. There is a high probability that additional time to address and possible mitigate these issues and perhaps litigation.

There is an impact of closing a few miles of open canals that have provided habitat for wildlife over 100 years. It is obvious that if the canal is piped, wildlife will not longer have access to this established habitat. The same goes if the canal is fenced on both sides.

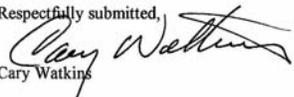
4. Storm water management

With respect to Logan, there well could be a storm water management benefit as they have a piped storm water drain system in place where storm water can be directed into what will be a dry (unused) canal system. It should be noted that any water drained into the canal area must meet new EPA requirement for treatment before it can be discharged. From the storm drain system.

There is very little if any benefit the middle canal offers with respect to storm water management to North Logan, Hyde Park or Smithfield as none of these cities has a piped storm water system. In the absence of hard piped system, all water with the exception of "historical flow" (this has a specific calculation according to slope, existing natural drainage etc.) must remain on site. This is accomplished by retention/detention areas. Additionally, storm water with the exception of the mouth of Green Canyon, and a couple of smaller canyon draws, doesn't pose any significant issue until a point well below the elevation of the middle canal. This is not to say that the middle canal won't collect some water during a summer thunderstorm, but any water collected can't be mixed and moved with a flowing canal and will become stagnant pools which could create a breeding place of mosquito's and pos a health problem.

For the reasons listed in my comments, I ask that Alternative Plan 3 be selected as the preferred plan to re-connect the Logan Northern Canal as soon as practicable...

Respectfully submitted,



Cary Watkins

Comment S-44

Comment S-44 (continued)

Sue Lee, Project Manager
 HDR, Inc.
 3949 South 700 East, Suite 500
 Salt Lake City, Utah 84107

Subject: Comments on Logan Northern Canal Reconstruction Project

Dear Ms. Lee:

Thank you for the opportunity to comment on the various options available for repairing the Logan canal that failed so catastrophically last year. I am a retired Environmental, Health and Safety Engineer/Manager who spent my entire career in industry dealing with issues such as you face in deciding which option to recommend. I also have lived adjacent to the upper canal (Smithfield/Hyde Park) for the past thirteen years.

I see several criteria that the ultimate design choice should satisfy:

1. **Improved Public Safety:** The reconstructed canal should not include design elements subject to future catastrophic failure, even given poor maintenance practices and neglect, which, I believe, contributed significantly to the canal breach last year. The final design should not include unusual or expensive inspection/maintenance requirements, since the canal company will likely not have the financial resources to provide them on a consistent basis.
2. **Adequate Water Supply:** The shareholders of the failed canal should receive their full allotment of water. Additional water supply, while desirable, should not be a reason for selecting an option with increased costs to the taxpayers.
3. **Minimal Environmental Damage:** As a canal neighbor, I can personally attest to the critical role the open water plays for dependent flora and fauna, especially ducks, deer, and canal side vegetation, which includes many large, mature trees. Likewise, the current canal takeoff points on the Logan River allow for significant generation of clean hydropower. The final choice should not create irreversible losses so long as there is a viable, less disruptive alternative.
4. **Aesthetics/Public Enjoyment:** Open, flowing water in the arid west should be considered a public treasure. Not a day goes by that I do not see several walkers enjoying the tranquility provided by the canal. And even though the canal company has (after over 100 years) suddenly decided that there is a liability crisis, I still see many kids who still love to float down and play in the cool water. It would be tragic to take this away without a compelling reason.
5. **Minimal Construction Disruption:** The final solution to the problem should be engineered so that it can be constructed quickly and with minimal disruption to those living in the area. Since construction will have to occur during the irrigation season, the best solution would avoid prolonged water shutdowns for the shareholders.

6. **Cost:** As a taxpayer, I do not want to foot the bill for a "gold-plated" solution that benefits a few at the cost/detriment to many. In a state that prizes itself on being fiscally conservative, we should not add to the nation's deficit by spending taxpayers' dollars unwisely.

As you might guess, I favor piping the middle canal down Canyon road in order to bypass the unstable hillside. This, in my opinion, would satisfy all of the criteria listed above at the lowest taxpayer cost.

The other options, save one, might be acceptable, but would have significant downsides.

The option being pushed by the canal companies and some local leaders, namely the gold-plated reconstruction of miles of the upper canal would be a design disaster and a financial boondoggle. The remainder of my comments will address why I believe that this is so.

Public Safety: I understand that several miles of the upper canal would be enclosed in a covered, concrete structure and then pressurized to obtain the required flow rate. At the recent public meeting I could not get a clear answer to my question regarding the degree of pressurization. As you know, as the pressure increases, so does the risk of leakage, especially in a structure with many joints and seams. Even a small leak (which could easily go undetected) could undermine the structure causing a catastrophic failure, such as we saw last year on the middle canal. Given the large volume of water contained in the enclosed canal, the potentially large hydraulic head providing the pressurization, and the delay inherent in shutting off and then draining down the system, the potential for disaster is very large, eclipsing that of the middle canal as it existed before the failure. In addition inspecting and maintaining such a structure is well beyond the means of the canal company and its shareholders.

The current open canal system also provides an important, but little recognized, function – capturing and removing excessive storm water flow. While I suppose design provisions could be made for "ordinary" storm flows, what about major events, such as a sudden springtime snow melt? An open empty canal is an important safety valve in such a case and is a much better option than letting the water flow downhill through people's yards and into their basements. A rapid spring snowmelt is very likely (remember Salt Lake City a few years back?). We need to preserve what protections we have in place.

Adequate Water Supply: All of the options seemingly satisfy this requirement, including the upper canal reconstruction. Recently, the local paper quoted canal company official stating that there was a 50% seepage rate on the upper canal; and I suppose this was done to justify spending extra

Comment S-44 (continued)

tens of millions of dollars. I doubt the accuracy of this seepage number and would hope that you look carefully at how it was determined. After the water was cut off last year, a large track hoe worked its way down the canal behind my house scooping out no more than six inches of the bottom of the canal. At the time I was puzzled, since they did not remove enough material to significantly increase the canal flow capacity. Now, I am suspicious as to their motive. By scooping out the silt and other debris in the bottom of the canal, they effectively removed the natural seal. If the quoted seepage rate was measured this year after the seal was removed, the number would be no more valid than measuring water infiltration into your garden by pouring water into a freshly-plowed furrow.

By the way, in my thirteen years of living along the canal, I had never seen any "maintenance" like this before. Until last fall, all I ever noted was someone walking the canal in the spring, throwing out large debris such as limbs and wind-blown trash.

Minimal Environmental Damage: Needless to say, a closed, concrete-lined canal will have a devastating effect on the dependent flora and fauna. Say goodbye to the ducks and many of the trees. Also, bid farewell to a goodly amount of clean hydropower. Perhaps you can tell me; how much coal will have to be burned to make up the difference? Also, how will the canal shareholders (who already seemingly balk at the cost of necessary maintenance) pay for the lost power from now on? Or will they?

Aesthetics/Public Enjoyment: The only possible benefit of the long concrete structure being proposed is as a bike path; but I suspect that the canal company will forbid this citing "liability" concerns. The beauty of flowing water, the tranquility, the cool shade, and the recreation for our children will be eliminated forever.

Minimal Construction Disruption: As an engineer who has overseen large construction projects, I suspect that the upper canal reconstruction will take the longest, cost the most, and be the most disruptive to the greatest number of people, including those who are dependent on a reliable supply of irrigation water. I have a fence and a large tree on my property bordering the canal. Between that fence and the canal is buried phone and cable wiring. How many more homeowners have issues like this? Major construction cannot occur without some damage to nearby property that lies just a few feet away. This option, if chosen, will cause much grief, unnecessary damage/costs, and diminished property values for many for the sole benefit of a few.

Cost: At the public meeting I asked about ballpark costs for the various options and was told that they range from about \$10 million to \$30 million. I can guess which option is the most expensive and suspect that the Canyon

Comment S-44 (continued)

Road option is the least expensive. For the extra \$20 million, what do we get and who gets it? As a taxpayer I object to subsidizing a private enterprise that was conveniently restructured after the disaster to take maximum advantage of funds that are designed specifically to remedy an emergency.

Thanks again for giving me the opportunity to comment on this important issue (and for bearing with my time on the soapbox). I do not envy your job and realize how frustrating it can be for an engineer to deliver a logical answer to a people who are oftentimes not the least bit logical in what they want to hear.

Sincerely,

William E. Piercy



Comment S-45

From: [Redacted]
 To: [LNC-EIS](#)
 Subject: Logan Canal Options
 Date: Monday, August 23, 2010 12:14:28 PM

I want you to choose the option that has the lowest total cost in terms of 1) construction and environmental mitigation costs today and 2) potential additional costs in the future as a result of the option chosen. We should not make a choice that causes future harm in terms of additional seismic risk nor environmental degradation.

Thank you.

Jeff Watkins
 Newton, Utah

Comment S-46

From: [Matt Larson](#)
 To: [LNC-EIS](#)
 Subject: Logan Northern Canal Reconstruction Project Comment
 Date: Tuesday, August 24, 2010 10:07:52 AM

To whom it may concern:

As a share holder of the LHPS canal, I support option 3 for several reasons. I am concerned people are overlooking that taking water solely out of the LHPS to support both canals is not going to have the same overall water capacity in drought years. We already are diverting as much water as we can at the moment out of the alignment and cannot support the shareholders. Also limiting water to the Logan Hydro plant will be affected.

With option 3, it seems to restore what we had and we can also update both canals that with overall increase in capacity water. I think the main focus should be focused on overall extraction of water from Logan River. Option 3 will do that for the canal systems because of two separate extraction points.

I am afraid that pulling water only from the LHPS alignment will cause a lot more problems than we solve. God help us if we are in a drought year and we are trying to fill both canals from only 1 point in the river. We will also be paying Logan City for electrical subsidies for loss water at the hydro plant.

Let stick to what our pioneer fathers intended and have two separate canals with two different extraction points!

Matthew Larson
 [Redacted]

Comment S-47

Comment S-47 (continued)

HDR

REG: AUG 24 2010
 PROJ: _____
 FILE: _____
 DIST: _____

8-21-10

Sue Lee Project Manager
 Please Find article written by Lucy Watkins
 appearing in our local paper

If sure would be nice if we could arrest
 & send to jail people who circumvent the
 law, Mr Bronson Smart, our County officials
 our Mayor & anyone else who
 don't seem to represent us stock holders
 who have shares in the Logan Northern
 Canal

This whole circus is getting to be a
 laughing joke this article tells it all what
 they are trying to do. Which is illegal
 I hope the truth will prevail & we will
 get our canal repaired & water back in it

Ray Peterson

S-47

8/19/10

► Your view

Canal grant numbers invalid

To the editor:
 Repeat an untruth enough times and it becomes as fact — or does it? The Cooperative Agreement with the USDA/NRCS and Cache County signed April 2, 2010, contains a serious error that misstates the acreage served by Logan Northern Canal. Item II: "Purpose: On July 11, 2009, a landslide occurred that caused a loss of life, property damage and damage to the Logan Northern Canal system. The Logan Northern Canal System delivers irrigation water to over 7,000 acres of agricultural land and communities in Cache County." Item III: "Benefits: Relocation of the Logan Northern Canal will restore delivery of irrigation water to over 7,000 acres of agricultural land and communities in Cache County ..."

The Logan Northern Canal serves 3,340 acres. The 7,000 acres used in the agreement includes the acreage served by the Logan, Hyde Park, Smithfield Canal, which was unaffected by the landslide. That such an obvious error was made by NRCS and Cache County Council in the contract for sponsorship can lead one to two opinions: A way to manipulate amount of acreage to create the lowest cost and highest benefits to justify the \$19.3 million, or Cache County Council and NRCS failed to verify the amount of acreage actually served by the Logan Northern prior to signing. Whatever the case, the representation of 7,000 acres is false. It is leading to the NRCS's fraudulent administration of EWP funding by including and subsidizing benefits unrelated to the landslide.

My e-mail (May 8, 2010) to NRCS Engineer Bronson Smart: "I am curious about your cost benefit use of 7,000 acres for the 3100 North project. Federal emergency funds were not needed for the upper canal and the use of a combined acreage of both canal companies to mathematically suggest a higher cost benefit is wrong and misleading. This acreage (7,000) was stated in the contract signed by the Cache County and I have misgivings that it was not clarified and it reflects an untruth regarding emergency dollars for 7,000 acres rather than the 3,340 acres served by the middle canal."

Bronson Smart response: "There will be different benefits and costs to each alternative. As these alternatives are addressed the costs and benefits of each will be outlined in the NEPA document (Step 7 below). The 7,000 acre preliminary estimate provided in the agreement is an estimate to give a broad scope of the project. Exact acreage figures will be used in the NEPA document."

I sent copies of the e-mail to: Mr. Smart's superiors in the Utah and National NRCS, Cache County, the county attorney, Logan city officials and Sen. Bob Bennett. None have responded. They continue to focus on 7,000 acres, not the 3,340 acres affected by the landslide that ruptured the Logan Northern Canal.

Lucy Peterson Watkins
 North Logan

"Right conclusions are more likely to be gathered out of a multitude of to"

S-47

Comment S-48

Comment S-48 (continued)

AUG-24-2010 04:35P FROM:AWLAURITZEN 14357538331 TO:18017437878 P.2/5

United States Department of Agriculture
Natural Resources Conservation Service

Logan Northern Canal Reconstruction Project
Public Scoping Comment Form

Name: ARDEN W LAURITZEN
Address:

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

*What environmental issues and impacts are you concerned about?
Please be as specific as possible.*

SEE ATTACHED THREE PAGES COMMENCING
W/ "THE NRCS INQUIRY THAT ELICITS THIS
RESPONS--" AND ENDS W/ "ABOUT A TUN-
NEL + A PIPE FOR PRACTICAL PURPOSES THE
SAME THING?"

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

Received Time Aug. 24. 2010 4:39PM No. 1659

AUG-24-2010 04:35P FROM:AWLAURITZEN TO:18017437878 P.3/5

The NRCS inquiry that elicits this response carefully limits the scope of the comment provided hereby. The issues of overriding importance which should be addressed preliminarily might include question's relating to 1-realignment of the politics of water, 2-the ability of those involved economic units to fund ancillary costs and 3-the justice of the inherently preferential and unequal impact of the reconstruction .

The exclusion of such preliminary questions leads one to wonder why the enquiry addresses only one of the many recognized alternatives. There are, even at this early stage, those that seem to say "the die is cast, the project must go through as originally conceived and as now funded and the EIS only creates a delay which must be overcome as quickly and painlessly as possible." Another preliminary question then arises; who influenced and conceived the plan that is now presented as the de facto solution that must be adopted?

When the canals on the Eastern benches of Cache Valley were constructed beginning in 1860 the impact to the environment could scarcely have been more profound. The flora and fauna indigenous to the area were at once excluded and destroyed by men and their plows and what little of the biome that survived that onslaught fell victim to the water introduced as a result of the encroachment.

Now man, in his wisdom, seeks to again degrade the resulting environment by a curious semi-reversion to the pre 1860 state, at once reintroducing the less hospitable aspects of the original desert environs and excluding the more redeeming features of the post 1860 era. If the water is piped through the area where it has, for the last 130 years or so, been exposed as an open waterway, will that not restore the area but for the few acres occupied by farmers fields, to the pristine semi-arid bench lands? It is suggested that it will not.

1

Received Time Aug. 24. 2010 4:39PM No. 1659

Comment S-48 (continued)

Comment S-48 (continued)

AUG-24-2010 04:36P FROM:AWLAURITZEN [REDACTED] TO:18017437878 P.4/5

Unfortunately for all of us, and we are all more or less directly affected by the turn of events because the environmental and economic issues are inextricably intertwined. The bloc of interests that this writer represents voted for the obviously flawed concept proposed for restoration of the Logan Northern Canal only after much soul searching which finally gave way to self interest. The question became, was the group willing to sacrifice the pastoral beauty and simple charm of the upper canal for the benefits of pressurization and the money directly realized from enhanced land values? The sacrifice was made but the commitment was based on a "modest" price tag, a mere 12 million or so dollars. Now we are dealing with a figure greater than twice the original amount.

The labyrinth of competing interests will ultimately produce a creature which is neither fish nor fowl. In 1860 the upland environment was mostly a dry, shaley, and sloped area punctuated by a few oasis sustained by springs and seasonal creeks. Only an occasional "gully washer" brought significant change to the area. The open waterways provided by the canals changed all of that but if those canals are now enclosed and thereby deleted, the area cannot revert to pre-settlement days. The springs and streams have been dried up by or diverted for culinary use and the only water left available to the areas will be seasonal and intermittent. May through September will bring water to the area and then only during those times when the farmer irrigates his crop. There will be little flowing water, all water will be metered, pressurized and controlled.

To allow the project as originally conceived to go forward one must be willing to forgo the cottonwoods and lombardys, the deer and the ducks, as well as most of the birds and mammals that now abound in the streamside environs. The wetlands and seeps created by flood irrigation and water necessarily lost in transit from the Logan River to Summit Creek and beyond will

2

Received Time Aug. 24. 2010 4:39PM No. 1659

AUG-24-2010 04:36P FROM:AWLAURITZEN [REDACTED] TO:18017437878 P.5/5

become parched and unproductive. How and where will mitigation for these losses occur and at what cost?

The project, however justifiable and beneficial, must look to another alternative, one that is not only economically feasible but which maintains open and flowing water---we must remember, this water doesn't belong to a few farmers and landowners, it belongs to all of us and those who would use some of it some of the time must use that portion wisely and with consideration for his fellows.

Granted those diversions from Logan River were achieved only after great sacrifice and at considerable expense by those who envisioned a utopian agrarian based society, but the scope of that vision has expanded and changed. Our water resources cannot be controlled by a few myopic individuals with a tunnel vision mindset (aren't a tunnel and a pipe, for practical purposes the same thing?).

3

Received Time Aug. 24. 2010 4:39PM No. 1659

Comment S-49

Comment S-50

RECEIVED AUG 24 2010

SYLVIA
Branson
Elise
Norm

United States
Department of
Agriculture

Forest
Service

Uinta-Wasatch-Cache National Forest
88 West 100 North
Provo, UT 84601
801-342-5100

125 South State Street
Federal Building, Room 8236
Salt Lake City, UT 84138
801-236-3400

File Code: 1950-4
Date: August 20, 2010

Sylvia Gillen
State Conservationist
4402 Federal Building
125 South State St.
Salt Lake City, UT 84138

Dear Ms Gillen,

I have received your letter of July 16 inviting the Forest to be a cooperating agency for the preparation of an Environmental Impact Statement for the proposed reconstruction of the North Logan Canal in Logan, Utah. I accept your request and appreciate the opportunity to participate. I agree that being a cooperating agency will create a more efficient, thorough environmental analysis. Jennefer Parker, Logan District Ranger, will be the USFS representative for this project.

For us to adopt the EIS to make the decision on the portion of the canal on National Forest certain unique disclosures are needed in the EIS. Forest Service required disclosures include project effects to Intermountain Region sensitive species, project effects to Management Indicator Species and their population trend and consistency with relevant Forest Plan standards and guidelines. We would appreciate the opportunity to review and comment on several items, including: 1) inventories, assessments, and reports concerning National Forest system lands, 2) the alternatives to be considered in detail, and 3) the draft and final EIS. We will rely on NRCS to be responsible for consultation with the Utah State Historic Preservation Office and US Fish and Wildlife Service on our behalf.

Please feel free to meet with us to discuss any elements that pertain to National Forest system lands.

Sincerely,

BRIAN FEREBEE
Forest Supervisor

cc: Jennefer L Parker

Caring for the Land and Serving People

Printed on Recycled Paper

HDR

REC: AUG 25 2010
PROJ:
FILE:
DIST:

Linda Thorne-Probert

August 21, 2010

Sue Lee
HDR Engineering
3949 South 700 East, Suite 550
Salt Lake City, UT. 84107

To whom it may Concern:

I am a shareholder in the Logan, Hyde Park, Smithfield Canal and a retired research biologist. I am also a shareholder and the current Office Manager of the Palomar Mountain Mutual Water Company on Palomar Mountain California. My husband is the Systems Operator of the company.

First of all let me express my great sympathy on the loss of life that occurred when the canal was breached. This is certainly something that should not have happened and was a great tragedy.

That being said, I don't understand why the available Federal Emergency Fund was not used to safely repair the breach in a timely manner. If this had been done, the middle canal would probably be irrigating fields by now.

Why all this fuss about using Federal Funds to re-plumb the Cache Valley canal system? As far as I know it is not broken and does not need fixing. *This large project is hardly an emergency so how can the use of federal emergency funds be justified?* It seems to me that this is just a way to put public money into private hands. *It will increase the net worth of a few large shareholders in the canal companies, but certainly decrease the property value of many property owners along the existing canals.*

As far as the environment goes, piping the system will eliminate the habitat of open canal supported plant and animal life. It will also alter the character and decrease the beauty of Cache Valley. This affects everyone who loves the Valley for its unique character.

Repair the canal so that it will function safely at the breached end. Restore the system that has worked for over 100 years. Forget about the re-plumbing of Cache Valley!

Thank-you,

Linda Thorne-Probert

P.S. Free money is rarely free. Who will be paying for the EIS, the Matching Funds, the Engineering Reports, etc.?

cc: Cache County Council

S-50

Comment S-51

Comment S-51 (continued)

Sue Lee, Project Manager
 HDR, Inc.
 3949 South 700 East, Suite 500
 Salt Lake City, Utah 84107

HDR

REC: AUG 25 2010
 PROJ: _____
 FILE: _____
 DIST: _____

Subject: Comments on Logan Northern Canal Reconstruction Project

Dear Ms. Lee:

Thank you for the opportunity to comment on the various options available for repairing the Logan canal that failed so catastrophically last year. I am a retired Environmental, Health and Safety Engineer/Manager who spent my entire career in industry dealing with issues such as you face in deciding which option to recommend. I also have lived adjacent to the upper canal (Smithfield/Hyde Park) for the past thirteen years.

I see several criteria that the ultimate design choice should satisfy:

1. **Improved Public Safety:** The reconstructed canal should not include design elements subject to future catastrophic failure, even given poor maintenance practices and neglect, which, I believe, contributed significantly to the canal breach last year. The final design should not include unusual or expensive inspection/maintenance requirements, since the canal company will likely not have the financial resources to provide them on a consistent basis.
2. **Adequate Water Supply:** The shareholders of the failed canal should receive their full allotment of water. Additional water supply, while desirable, should not be a reason for selecting an option with increased costs to the taxpayers.
3. **Minimal Environmental Damage:** As a canal neighbor, I can personally attest to the critical role the open water plays for dependent flora and fauna, especially ducks, deer, and canal side vegetation, which includes many large, mature trees. Likewise, the current canal takeoff points on the Logan River allow for significant generation of clean hydropower. The final choice should not create irreversible losses so long is there a viable, less disruptive alternative.
4. **Aesthetics/Public Enjoyment:** Open, flowing water in the arid west should be considered a public treasure. Not a day goes by that I do not see several walkers enjoying the tranquility provided by the canal. And even though the canal company has (after over 100 years) suddenly decided that there is a liability crisis, I still see many kids who still love to float down and play in the cool water. It would be tragic to take this away without a compelling reason.
5. **Minimal Construction Disruption:** The final solution to the problem should be engineered so that it can be constructed quickly and with minimal disruption to those living in the area. Since construction will have to occur during the irrigation season, the best solution would avoid prolonged water shutdowns for the shareholders.

S-51

6. **Cost:** As a taxpayer, I do not want to foot the bill for a "gold-plated" solution that benefits a few at the cost/detriment to many. In a state that prizes itself on being fiscally conservative, we should not add to the nation's deficit by spending taxpayers' dollars unwisely.

As you might guess, I favor piping the middle canal down Canyon road in order to bypass the unstable hillside. This, in my opinion, would satisfy all of the criteria listed above at the lowest taxpayer cost.

The other options, save one, might be acceptable, but would have significant downsides.

The option being pushed by the canal companies and some local leaders, namely the gold-plated reconstruction of miles of the upper canal would be a design disaster and a financial boondoggle. The remainder of my comments will address why I believe that this is so.

Public Safety: I understand that several miles of the upper canal would be enclosed in a covered, concrete structure and then pressurized to obtain the required flow rate. At the recent public meeting I could not get a clear answer to my question regarding the degree of pressurization. As you know, as the pressure increases, so does the risk of leakage, especially in a structure with many joints and seams. Even a small leak (which could easily go undetected) could undermine the structure causing a catastrophic failure, such as we saw last year on the middle canal. Given the large volume of water contained in the enclosed canal, the potentially large hydraulic head providing the pressurization, and the delay inherent in shutting off and then draining down the system, the potential for disaster is very large, eclipsing that of the middle canal as it existed before the failure. In addition inspecting and maintaining such a structure is well beyond the means of the canal company and its shareholders.

The current open canal system also provides an important, but little recognized, function - capturing and removing excessive storm water flow. While I suppose design provisions could be made for "ordinary" storm flows, what about major events, such as a sudden springtime snow melt? An open empty canal is an important safety valve in such a case and is a much better option than letting the water flow downhill through people's yards and into their basements. A rapid spring snowmelt is very likely (remember Salt Lake City a few years back?). We need to preserve what protections we have in place.

Adequate Water Supply: All of the options seemingly satisfy this requirement, including the upper canal reconstruction. Recently, the local paper quoted canal company official stating that there was a 50% seepage rate on the upper canal; and I suppose this was done to justify spending extra

Comment S-51 (continued)

tens of millions of dollars. I doubt the accuracy of this seepage number and would hope that you look carefully at how it was determined. After the water was cut off last year, a large track hoe worked its way down the canal behind my house scooping out no more than six inches of the bottom of the canal. At the time I was puzzled, since they did not remove enough material to significantly increase the canal flow capacity. Now, I am suspicious as to their motive. By scooping out the silt and other debris in the bottom of the canal, they effectively removed the natural seal. If the quoted seepage rate was measured this year after the seal was removed, the number would be no more valid than measuring water infiltration into your garden by pouring water into a freshly-plowed furrow.

By the way, in my thirteen years of living along the canal, I had never seen any "maintenance" like this before. Until last fall, all I ever noted was someone walking the canal in the spring, throwing out large debris such as limbs and wind-blown trash.

Minimal Environmental Damage: Needless to say, a closed, concrete-lined canal will have a devastating effect on the dependent flora and fauna. Say goodbye to the ducks and many of the trees. Also, bid farewell to a goodly amount of clean hydropower. Perhaps you can tell me; how much coal will have to be burned to make up the difference? Also, how will the canal shareholders (who already seemingly balk at the cost of necessary maintenance) pay for the lost power from now on? Or will they?

Aesthetics/Public Enjoyment: The only possible benefit of the long concrete structure being proposed is as a bike path; but I suspect that the canal company will forbid this citing "liability" concerns. The beauty of flowing water, the tranquility, the cool shade, and the recreation for our children will be eliminated forever.

Minimal Construction Disruption: As an engineer who has overseen large construction projects, I suspect that the upper canal reconstruction will take the longest, cost the most, and be the most disruptive to the greatest number of people, including those who are dependent on a reliable supply of irrigation water. I have a fence and a large tree on my property bordering the canal. Between that fence and the canal is buried phone and cable wiring. How many more homeowners have issues like this? Major construction cannot occur without some damage to nearby property that lies just a few feet away. This option, if chosen, will cause much grief, unnecessary damage/costs, and diminished property values for many for the sole benefit of a few.

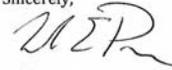
Cost: At the public meeting I asked about ballpark costs for the various options and was told that they range from about \$10 million to \$30 million. I can guess which option is the most expensive and suspect that the Canyon

Comment S-51 (continued)

Road option is the least expensive. For the extra \$20 million, what do we get and who gets it? As a taxpayer I object to subsidizing a private enterprise that was conveniently restructured after the disaster to take maximum advantage of funds that are designed specifically to remedy an emergency.

Thanks again for giving me the opportunity to comment on this important issue (and for bearing with my time on the soapbox). I do not envy your job and realize how frustrating it can be for an engineer to deliver a logical answer to a people who are oftentimes not the least bit logical in what they want to hear.

Sincerely,



William E. Piercy



Comment S-52

From: [Redacted]
To: [LNC-EIS](#)
Subject: Comment on the canal rebuild
Date: Wednesday, August 25, 2010 12:00:41 PM

I live near the Logan, Hyde Park & Smithfield Canal and within the study area in North Logan but receive no direct benefit from it other than using it to remove storm water runoff. I do appreciate the aesthetics of the flowing water and the green borders. I have always thought the canals are an underused resource. For several years we would walk or mountain bike along the bank trail. Deer, water fowl and other wildlife were observed frequently. Sadly, a few property owners have now restricted access and effectively stopped this historic use of the trail. The canals remain landmarks of the valley where the roads cross them and backyards border them. As open water and cover they are a significant resource for wildlife which adds to the quality of life in Cache Valley. It is difficult to put a tangible value to this benefit. However, as a taxpayer I have other reasons to be concerned about the proposed changes to the canals. I have studied with great interest the articles and letters in the Herald Journal and other sources of information and opinion. I have also observed activities along the canals over several years. When considering the alternatives for repair of the canals it is my conclusion that there is no justification to do more than repair the break and continue use as originally designed. There is justification to use the emergency funds for the purpose of stabilizing the Logan Canyon hillside. There is no justification to use a much larger amount of emergency funds and additional tax funds to revamp the whole system. There are few benefits and significant disadvantages to the taxpayers and citizens of Cache Valley in the full redesign proposal. I believe the canal shareholders have put insufficient funds and efforts into maintenance of the canals over the years which has contributed to the multiple leaks and watershed problems that exist now. A plan where taxpayers provide the majority of funds (emergency funds and city tax dollars) to rebuild the whole system is illogical and an unfairly high subsidy of the irrigation system and the shareholders who are the primary beneficiaries. If shareholders want to continue plans to rebuild the whole system then they need to fund most of the cost. Such a plan must include accommodations for Logan power, USU and the aesthetic losses to the valley. The cost to the cities should be limited to a reasonable portion based on the right of way and storm water runoff for those cities.

Gene Truhn
 [Redacted]

Comment S-53

From: [Jerry Boehme](#)
To: [LNC-EIS](#)
Subject: Canal Comments
Date: Wednesday, August 25, 2010 4:16:00 PM

Jerry Boehme
 [Redacted]

I have studied the 4 Canal Alternatives to get water into the LN Canal. I strongly support Alternative #3, which uses the existing LN Canal's point of diversion from Logan River, places the water in a conveyance pipeline under Canyon Road to 600 East, then North to the intersection of 400 North and 600 East, and places the water back into the existing LN Canal. This alternative results in the least disruption from the original water conveyance system used for the last 100 years when the canal was first dug. It eliminates the problems with Utah State University water research lab and Logan City's concerns regarding the hydro-electric power generation plant. The canal water in the summer added considerable artistic appeal to the properties that bordered the canal on either side. It also added increased property value to those same properties. There are a considerable number of property owners in Logan that used the Canal water to irrigate their gardens and yards. This alternative would continue that tradition with the least disruption. There are also a large number of animals and vegetation that relied on the Canal water during the summer months. We used to have ducks, musk rats and other water loving animals in our backyard when the water was in the Canal and this year all we have is a small amount of mosquito infested stagnant water. Alternative 3 would seem to be the least disruptive and not as costly as some of the other alternatives. Since the City installed a large overflow pipe on Cliffside Drive to the river, this alternative should be feasible and a lot less costly than that project. Thanks for considering my recommendation and input.

Comment S-54

Comment S-54 (continued)



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

AUG 23 2010

Ref: 8EPR-N

Mr. Bronson Smart
State Conservation Engineer
U.S. Department of Agriculture, Natural Resources Conservation Service
Wallace F. Bennett Federal Building
125 South State Street, Room 4402
Salt Lake City, Utah 84138-1100

Subject: EPA Scoping Comments on the
Logan Northern Canal
Reconstruction Project

Dear Mr. Smart:

This letter is written in response to the Natural Resources Conservation Service's (NRCS) request for scoping comments for the proposed Logan Northern Canal Reconstruction Project (LNCRP) as described in its Notice of Intent to prepare an Environmental Impact Statement (EIS)¹. The U.S. Environmental Protection Agency Region 8 (EPA) will review this project in accordance with EPA's responsibilities under the National Environmental Policy Act (NEPA), and EPA's authority under Section 309 of the Clean Air Act.

NRCS is preparing an EIS in accordance with NEPA, its implementing regulations at 40 CFR § 1500-1508, and NRCS regulations that implement NEPA at 7 CFR § 650. The proposed project is the reconstruction and modification of the Logan and Northern Canal (LN Canal) in order to restore the conveyance of water for irrigation and municipal water supply to over 7,000 acres of agricultural land and cities in Cache County, Utah. A portion of the LN Canal breached in the spring of 2009, preventing its operation and, consequently, the delivery of water to permitted shareholders. The LNCRP will receive approximately \$20 million in Emergency Watershed Protection (EWP) funding. The scoping notice identifies four alternatives which are variations on where or whether the LN Canal will be diverted into the existing Logan, Hyde Park, and Smithfield Canal (LHPS Canal) and the location of the replacement conveyance structure for the LN Canal itself. The notice indicates that it will also study a no-action alternative.

EPA recognizes that the project is in the scoping phase and full information is not available to evaluate the project at this time. EPA offers the following preliminary areas of

¹ Federal Register Vol. 75, No. 140; July 22, 2010

consideration as you develop the EIS: a reasonable range of alternatives that includes sustainable water management, conservation, and growth considerations; the identification of any changes to canal operations or water distribution throughout the service area that may affect stream flows or permitted discharges; Clean Water Act 404(b)(1) Guideline requirements in the NEPA process; potential impacts to surface and subsurface water quality and the identification of mitigation measures, such as a stormwater construction permit and its associated best management practices (BMPs); and description of a no-action alternative and baseline conditions.

Based upon conversation between yourself and my staff, EPA understands that the project does not entail expansion of the canal's capacity or service area. However, if the scoping process identifies a need to consider expansion of the canal system or its service area as an alternative, the EIS should include an analysis of indirect and cumulative impacts resulting specifically from growth. In addition, the analysis should disclose the impacts of all reasonably foreseeable actions on environmental resources in a way for decision-makers and any participating cities or counties to be able to effectively plan to reduce impacts on such resources as much as possible.

EPA appreciates the opportunity to provide scoping comments at this early stage of the EIS process. Our review and participation in LNCRP will be coordinated by Maggie Pierce of my staff. If we may provide further explanation of our comments during this phase of your planning process, please contact Ms. Pierce at (303) 312-6550, or me at (303) 312-6004.

Sincerely,



Larry Svoboda
Director, NEPA Compliance and Review Program
Ecosystems Protection and Remediation

Comment S-55

Comment S-56

United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Public Scoping Comment Form**

HDR

REC: AUG 26 2010
PROJ:
FILE:
DIST:

Name: Gail Bingham
Address: [REDACTED]

Comments can be submitted to:
Sue Lee, Project Manager
HDR, Inc.
3949 So. 700 E., Suite 500
Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: August 31, 2010

What environmental issues and impacts are you concerned about?
Please be as specific as possible.

1. Please consider the water saving advantages of an enclosed system in the design. If climate becomes drier, water saved could be very important.

2. This would also allow use of current rights of way as bike and walking paths - much needed as area grows -
Thank you. *Gail Bingham*

Logan Northern Canal Reconstruction Project Public Scoping Comment Form

HDR

REC: AUG 26 2010
PROJ:
FILE:
DIST:

August 23, 2010

Sue Lee, Project Manager
HDR, Inc.
3949 South 700 East, Suite 500
Salt Lake City, UT 84107

Re: Logan Northern Canal Reconstruction Project

Dear Ms. Lee:

Here are some of the reasons I strongly favor combining Logan Northern Canal and the Logan, Hyde Park and Smithfield Canal; and piping through the canyon and on through to the 3100 North area, with pressurized pipe down to Logan Northern Canal, and back south to Logan City (Option #4).

I served for many years as a director on the Logan, Hyde Park and Smithfield Canal. In its present state, that old canal is a disaster waiting to happen. On several occasions, we have had boulders roll off of the mountain, destroying old rock and concrete walls. On three instances that I clearly recall, dynamite was required on boulders so large, that they had to be broken up in order to be removed.

At times, vandals, canal floaters and others, have rolled rock or boulders to build dams for the sake of mischief or to make rapids, etc.; thereby blocking the waterway; creating the potential for flooding and washout of the canal.

Leaks of all sizes causing the loss of many second feet of water are an ongoing problem; and are very difficult to locate and repair.

We have been very fortunate up to this point, not to have had a major disaster, similar to the break that occurred in Logan in July 2009, causing the loss of life and property.

Encroachment on the canals has increased drastically each year with people playing in the canals; even riding four-wheelers in the water stirring up silt and mud. Lawn clippings and other yard waste is an increasing problem to irrigation systems. We receive a great deal of opposition from an increasing number of homeowners, as residential areas continue to expand, when required maintenance work is done on the canals.

The 3100 North plan (Option #4) is the best option for reasons including:

- Safety of people and property;
- Water savings of 30% to 40% (my estimate);
- Water quality (no silt, leaves, yard waste, or contaminants, etc.);
- No weed seeds from canal banks or private property;
- Electricity savings by pressuring the system (eliminating the need and cost for over twenty electrical pumps from 3100 North back to 1400 North).
- Option #4 would cause much less disruption for the community and its residents during its development (as opposed to the other options).

Money is better spent on Option #4, with these benefits in mind, than on any of the other options. Thank you for your attention to this matter. Please also find enclosed photos documenting some of the items I've mentioned in this letter.

Sincerely,
Ray Wilhelm
Mr. Ray Wilhelm
[REDACTED]

Enclosures

Comment S-56 (continued)

Comment S-56 (continued)

H D R
REC: AUG 26 2010
PROJ:
FILE:

These pictures show a few of the many times we've had obstructions in Logan Hyde Park Smithfield Canal (Logan Canyon)

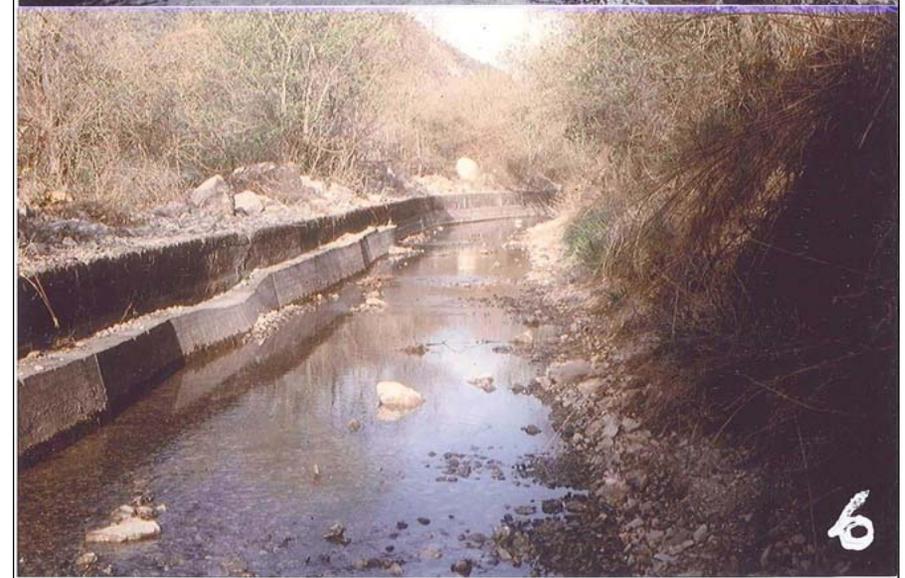
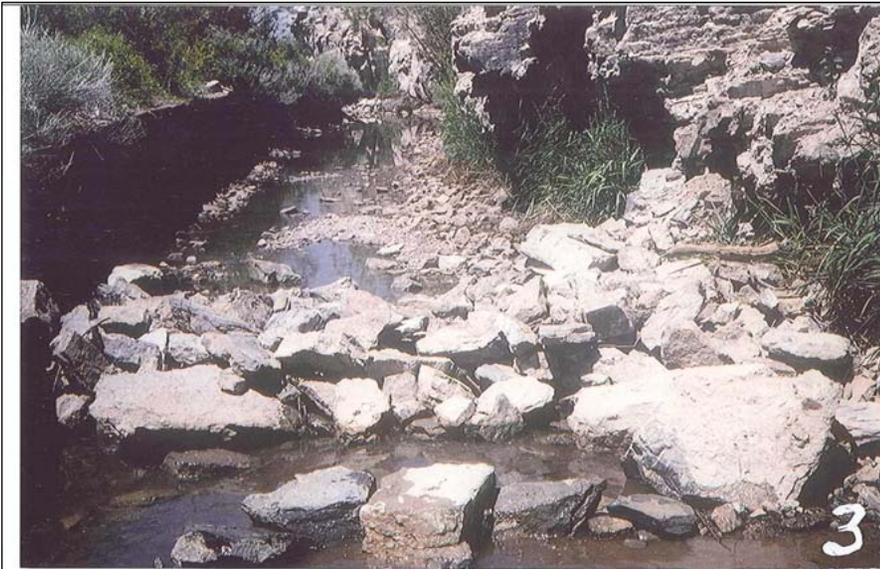
- #1 rock slide filling canal in early spring of 1996 before water was turned in
- #2, 3, & 4 (Vandal) man made dams
- #5 start of rock dam they've rolled off the cliffs.
- #6 a better section of canal
- #7 spring work - over hanging cliff -
- #8 looking up under canal - cobble, rock wall at top
- #9 is a close-up of #8, rail road rail & wood plank holds up concrete floor and rock wall to get canal water over this crevice. This is directly east, behind Logan City Hydro Plant.
- #10 Logan Northern Canal at 2000N in North Logan. increasing opposition by property owners (there is an other fence just like this one, just beyond the equipment, were grass starts, it doesn't show up on picture - a very narrow strip of property.)

thank you Ray Wilhelm
1516 E 2300N
North Logan UT 84341
435-752-0309

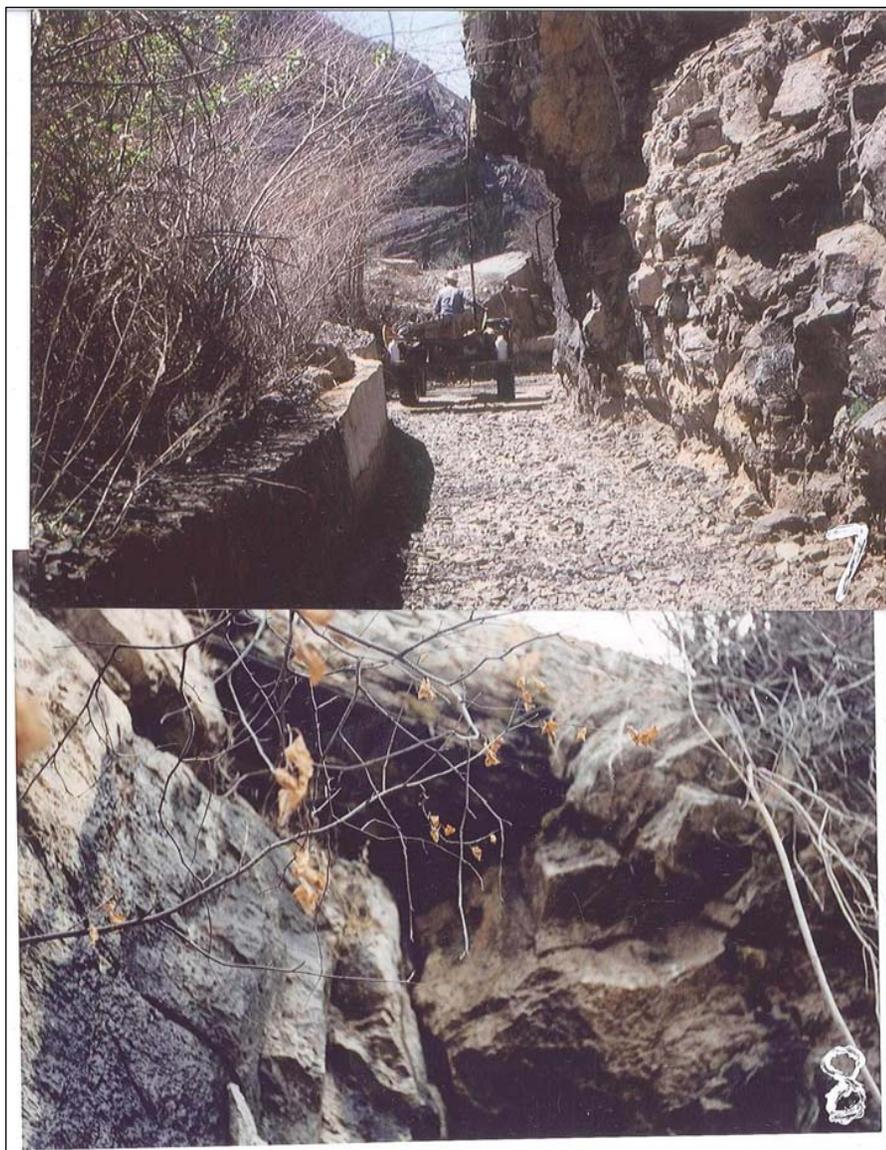


Comment S-56 (continued)

Comment S-56 (continued)



Comment S-56 (continued)



Comment S-56 (continued)



Comment S-57

From: [Keith Meikle](#)
To: [LNC-EIS](#)
Subject: Logan Northern Canal Reconstruction Project, Cache County, Utah
Date: Friday, August 27, 2010 9:17:19 AM

3100 North alternative is far and away the only alternative worth doing. It saves energy by saving pumping on the canal. It delivers the water without costly seepage loss to more than one canal thus water savings to both canals. It has the least cost to the public's infrastructure and lives. Minimal road destruction and other infrastructure. 3100 north is the only alternative that gives to the people of the valley as a whole the long term benefits that even none irrigators can benefit from i.e. storm water solutions and the ability of water to be used throughout the valley that is saved in this area as well recapturing water rights that have been hard to deliver for years. These canals leak out just under half the water they have placed in them for delivery. There is no geological study that shows that the water benefits any wells in the valley in fact they show it hitting perched layers and going to the river and out. It is lost. This area can't continue with these losses.

Lundstrom park is a good alternative not a great one. You have almost as much pipe to lay as 3100 but you lose all the benefits. No pump savings and a lot of disruption to people's lives as you tear up miles of streets and water lines. I can not see any real benefits beyond water is back in the same old canal it was before without the huge water savings from seepage as 3100 gives. These seepage losses are horrible and will stifle the growth of this valley and damage us economically every time we have less than a sufficient water year.

Highway 89 is bad. You have 4 Pedestrian crossings in that road that will be lost since UDOT if they even allow you to dig the road up will not allow them to stay. USU will then be left without parking in that area. As well to dig under them you would need to be at least 30 feet down in an unstable hillside. How wide the trench would have to be at that depth seems to costly since you would destroy the better part of the road which is new.

Canyon Road is the worst of all. The cost to the public are horrible in that the canal company would have to relocate upwards of 1000 people in the middle of the school year for at least a month if not more. How do you drain saturated ground in that area? How do we maintain whatever drain system that is installed to keep large pipe from becoming buoyant? What are the consequences of digging at the foot of an unstable hill? The Costs of completely demolishing Sewer, water, electrical, and fiber optic in that area just to rebuild it all over seems wasteful at best and negligent to the people who live in that area. An agreement with Logan city is eminent and will mitigate the power generation issues.

The do nothing alternative is terrible. These canals bring millions of dollars annually to this economy. The loss of water delivery has been and will be devastating to the property taxes of the county and we will see the immediate drop in property values throughout the valley if the water is not restored. Multi generation farms are on the verge of failure even as we speak due to the minimal water they are receiving in a tuff economy. I beg you to restore this water as soon as possible for the sake of our homes and families as well as for the future of this area. Every day we loose means the loss of some families farm and lives.

Keith Meikle


Comment S-58

From: [Albert Wiebe](#)
To: [LNC-EIS](#)
Subject: Canal Project - Comment
Date: Friday, August 27, 2010 9:50:22 AM

Dear Sue Lee,

I'm writing you today in reference to the Logan Northern Canal reconstruction project. I would like to address some concerns, which I feel should be taken in consideration in the general scoping of this project. I am a resident with my family at 701 Canyon road, which is located right below the university's southwest overflow parking lot. We are now one of the people without canal water, due to the recent collapse, but the loss of irrigation water in the whole scope, this isn't a major issue to our family. The big issue for my family is the stability of the hillside in general.

In a recent hydrological study it shows that we are in a *relatively* more stable area of the hillside, but even with the issue of a future canal flooding currently now removed, I see this step hillside losing its earth and the structures in place to stabilize the hill now need reanalyzing and likely updating. The hillside collapsed twice above the canal due to saturated layers in the hill and this issue is still present even though the canal is empty.

Whether this was due to the university's watering practices, runoff issues from hwy 89, or another issues, these potential landslide triggers need to be addressed. There are also old, now beyond maturity trees and plants, which in the past have aided in the hill stability, but are now dying. New hydrological diversions, landscaping and terracing should now be considered as part of the reconstruction project, for the whole length of the hillside to help prevent the issue of ongoing collapses.

thank you for your time and attention to this issue.

Albert Wiebe


Comment S-59

Comment S-60

Logan Northern Canal Reconstruction Project

Public Scoping Comments

1. Alternatives 1, 2, and 4 do not provide any detail as to how existing canal share holders south of the proposed improvements are able to use their water shares. For instance, in alternative 4, the proposed pipe stops at 1400 North in Logan and no indication is given that water will make it back to the share holders south of 400 North. No indication is given as to how share holders east of the landslide area will receive water as well.
2. The City of Logan is working with the canal company regarding impacts to our hydropower generation facilities. The City of Logan has met with the Logan Northern Canal and believes that we can work through these issues, however, any alternative that combines the Logan Northern diversion with the Logan Hyde Park Smithfield Canal needs to address the peak power generation impacts to the Logan Light & Power Generation Facilities.
3. The aesthetics of the existing canal provides a beautiful water feature through many backyards in Logan. It is unclear what the restoration will consist of when the pipelines are completed. Most people are expecting that a typical construction revegetation will leave nothing but weeds. The City of Logan would hope that the restored construction zone would provide access for maintenance by the canal as well as beautification for the home owners such as irrigated shrubs, grass, etc.
4. The City of Logan can see that there are many advantages to the valley of combining the Logan Northern Canal with the Logan Hyde Park Smithfield diversion. These advantages are long-term and not immediate in regards to canal share holders and the cities. No accounting of these long-term advantages such as increased water potential for City Culinary sources have been considered based on the limited information available. I would hope that all advantages of these options would be considered in the evaluation and analysis of the best alternative for restoring water to the Logan Northern share holders.

To: Sue Lee -- HDR Engineering
 3949 South 700 East, Suite 500, Salt Lake City, UT 84107
 Phone: 801-743-7811; Email: LNC-EIS@hdrinc.com

Subject: Comments Related to the Logan Northern Canal Reconstruction Project, Cache County, Utah: Environmental Impact Statement

Submitted by: Jack Keller

I am a practicing licensed (in Utah and California) Agricultural and Irrigation Engineer and was the SCS (now NRCS) Work Unit Engineer for Teller and Park Counties in Colorado many years ago. I have college degrees in Civil, Irrigation, and Agricultural Engineering, have consulted on the engineering aspects of irrigated agriculture throughout the US for many years, and have taught irrigation and water resources engineering subjects at Utah and Colorado State Universities. Thus I have accumulated considerable working knowledge and experience with small irrigation canal systems as well as with Environmental Assessments and Environmental Impact Studies.

Comments

The Logan Northern Canal (LNC) and Logan, Hyde Park, and Smithfield Canal (LHP&SC) companies, Utah office of the Natural Resources Conservation Service (NRCS), and the local Sponsor are attempting to use the Emergency Watershed Protection Program (EWP) 75 percent cost share funds to subsidize improvements that are unrelated to the July 11, 2009 Logan Northern Canal failure.

The guidelines for obtaining 75 percent EWP cost sharing require using environmentally sound least cost solutions for mitigating natural disasters. I believe the Utah NRCS office is misguided in believing that alternatives should be selected based on the highest Benefit/Cost (B/C) ratio. This is what leads to the mission creep we can see in the various renditions of the combined canal alternatives. For example, upgrading the diversion structure and Logan Canyon section of the LHP&SC are the most costly items, and the highest potential B/C is probably obtained by extending the project to 3100 North. This is because the higher incremental B/C of bringing in additional benefits by extending the project to 3100 North increases the overall B/C of NRCS's Alternative #4.

It is difficult to believe that fixing, bridging, or bypassing the broken section of the LHC cannot be done at a much lower cost than NRCS Alternate #4. But the benefits, other than possibly some reduced maintenance cost along the reconstructed section would be minimal, so the B/C would be very low. That is unless one compared the restoration of the LHC to abandoning it. With the EWP cost sharing, like for private insurance, covering the cost of fixing what is broke is the objective. Thus based on the EWP guidelines, the preferred alternative for obtaining the 75 percent cost share should be one that restores the LHC with the lowest cost and least environmental impact.

I doubt that the Sponsor is in a position to commit 100 percent of the funding for the amount that NRCS Alternate #4 exceeds the lowest cost alternate for reconstructing the LNC (as required by the EWP guidelines). Also I fear that the Environmental Impact Statement (EIS) required for addressing Alternate #4 will take much longer and be more costly than anticipated. Thus for the good of the Citizens of Cache Valley and the shareholders of the LHC in particular, I am hopeful that the Sponsor will request amending the Cooperative Agreement in accordance with the last part of Comment 4 (see below). I am confident

Comment S-60 (continued)

that by focusing the alternatives on only restoring the LHC, the NRCS will find an Environmental Assessment or a much simpler EIS will suffice and not be required to continue with the very complicated EIS that is required for their Alternate #4. If this is the case, a final design could be developed and reconstruction could probably be completed in 2011.

The following comments provide the background for the above statements. The comments are numbered for ease of reference and a list of the background materials I reviewed to prepare these comments along with excerpts from many of the documents are presented in the Appendix.

1. The landslide ruptured the Logan Northern Canal (LNC), which served 3,430 acres or less. Only 10 days later in an article in the Salt Lake Tribune (see Appendix Excerpt from Document A), the Utah NRCS's State Engineer was already suggesting the following:
 "The Logan Northern Canal, which broke July 11 in a mudslide that killed three people, would be rerouted or eliminated under two plans drafted by federal engineers.
 One proposal would eliminate the canal and re-route water north to the Logan, Hyde Park, Smithfield Canal Co.
 The second option would keep the Logan Northern Canal largely intact, but bypass the treacherous hillsides that gave way earlier this month by installing pipes under Canyon Road in the Island Neighborhood in Logan."

One has to wonder how such a decision could have been reached so quickly. There is even a sketch provided by the U.S. Department of Agriculture showing the two routes. Perhaps this can be explained by the fact that an effort to obtain government funding to combine the two canals was undertaken 40 years ago (see Appendix, Excerpt from Document D, last paragraph). A person who was on the LHP&SC Board at that time, told me they were informed that they could not obtain government funding unless there was a canal break, so the plan was dropped.

2. The NRCS is currently considering four design alternates for restoring service to the Logan Northern Canal (LNC) users. Three of them require combining the two canals. A long inverted siphon under Canyon Road is the only alternative that would not combine the canals and put the LNC back in operation. The NRCS engineers have not presented any other alternates for restoring its service.

Practically all discussion concerning potential reconstruction efforts are centered on restoring service to 7,000 acres of irrigated agricultural land. The combined irrigated agricultural acreage served by both the LNC, which was ruptured by the landslide on July 11, 2009, and the LHP&SC (the upper or higher canal), which was unaffected by the landslide is not even 7,000 acres. The agricultural land irrigated by the roughly 60 cfs of LNC water diverted from the Logan River during high river flows (divided into 3279 shares) could supply irrigation water to 3430 acres agricultural land at most. Stating that it is 7,000 acres is misleading to the general public. It also supports the Utah NRCS, the canal companies' beneficiaries, and our local public officials in their effort to obtain Emergency Watershed Protection (EWP) program funds to subsidize reconstruction options that fall outside of the published guidelines for use of these funds (see Appendix Excerpt from Documents G and H).

The obvious reason for combining the acreages of the ruptured LNC with the unaffected upper LHP&SC to form the Cash Highline Water Association on December 2, 2009 was to provide a vehicle for acquiring significant subsidized benefits. Many years of deferred maintenance has left both canals, especially the upper canal, in serious need of repair. The Alternate #4 option will

Comment S-60 (continued)

require enlarging, rebuilding, or decommissioning the sections most in need of repair, thus effectively solving this problem (see Appendix Excerpts from Documents C and D).

3. It is apparent that the presidents and shareholders of the two canals and our local elected officials have been lead to believe that NRCS Alternate #4, which combines the canals and delivers the water through lined channels or pipes along the LHP&SC right-of-way to 3100 North St. is already selected as the preferred alternative. Thus EWP support with up to 75 percent government funding is already assumed as a given. For example, see Appendix Excerpt from Document C where the President of the LHP&SC, the upper canal, informed the Logan City Council that:
 ---"Due to the failure of the canal, federal engineers have a plan to resolve the problem. No water will ever go in the Canyon Road canal again and they will continue to work with the public works department. This will be the largest water project that Northern Utah has seen in 20-30 years. It will benefit Logan City, all of the municipalities to the North and for the future of the entire valley." ---

The Cache County Council also assures Alternate #4 is the preferred alternate. The Cooperative Agreement with the Sponsor, Cache County, dated April 2, 2010, for the "Emergency Watershed Protection: Logan Northern Canal Reconstruction Project" states that: "The Logan Highline Canal system delivers water to over 7,000 acres of irrigated land and communities in Cache County". (See Appendix Excerpt from Document E.)

The Cache Highline Water Association presented a pre-approved (on 12/10/09) feasibility study to the Utah Board of Water Resources (UBWR) at their May 27, 2010 meeting. The feasibility study, which states that the LNC provided irrigation water to 4,800 acres of irrigated land, is part of the process for applying for a low-interest loan from the State's Revolving Construction Fund to cover the Sponsor's share of the construction costs of the NRCS Alternate #4 (see Appendix Excerpt from Document F).

How can the above confusion be legitimately explained? The EWP Funded NRCS proposal and the submission for the State's Revolving Construction Fund have different names and irrigated acreage for the same proposed project NRCA Alternative #4. The NRCS has repeatedly informed the Citizens of Cache County that there are several alternate proposals and is asking for Public Comment as they proceed to carry out the EIS. On the other hand the UBWR is being asked to provide additional low cost loans (subsidies) for one of the alternatives that the NRCS is considering.

4. The feasibility study submitted to the UBWR for the State's Revolving Construction funds states that: "The Cache Highline Water Association was organized to find a solution beneficial to both companies." It gives the location of the project as: "The proposed project extends from approximately 1.6 miles up Logan Canyon to 3100 North Street in North Logan in Cache County", i.e. NRCS Alternate #4. The feasibility study was submitted to the UBWR on 11/12/09 prior to the formation of the Cache Highline Water Association.

It is also interesting that at the UBWR Meeting on March 17, 2010 they approved a low-cost loan from the State's Revolving Construction Fund for a pipeline project applied for by the Logan Northern Canal Co. It appears this proposed pipeline project was based on the assumption that NRCS Alternate #4 or something similar has already been selected.

Based on the above along with Comments 1, 2, and 3 it would appear appropriate to amend the Cooperative Agreement by:

Comment S-60 (continued)

- a. Changing the second sentence in the first paragraph of Clause II PURPOSE, from: "The Logan Highline Canal system delivers water to over 7,000 acres of irrigated land and communities in Cache County." to: "The Logan Highline Canal system delivers sufficient water to irrigate between 2,500 and 3,500 acres of agricultural land and to communities in Cache County"
- b. Changing the sentence in Clause III BENEFITS, from: "Relocation of the Logan Northern Canal will restore delivery of irrigation water to over 7,000 acres of agricultural land --", to: "Relocation or restoration of the Logan Northern Canal will restore delivery of sufficient water to irrigate between 2,500 and 3,500 acres of agricultural land --".

Here is the rationale for the amendments:

- a. Maybe the LNC canal can deliver or has delivered some water to 7,000 acres of irrigated land, but this is misleading. In view of the LHC's 60 cfs diversion, estimated 30 percent seepage losses, and 24 percent delivered to M&I, there is only enough water to irrigate between 2,500 and 3,500 acres of agricultural land during a given growing season, depending on the efficiency of the irrigation application systems used.
 - b. Adding the word "restoration" at the beginning of Clause III, keeps alternatives based on the restoration of the LNC in play. Then I think it would be prudent to ask the NRCS to focus more on alternatives that clearly are in line with the EWP 75 percent cost share guidelines, which I believe are the ones that would mainly only restore service to the LNC stakeholders.
5. The NRCS's Alternate #3 would use the existing Logan Northern Canal (LNC) diversion and provide an inverted siphon (pipeline) under Canyon Road and then up 600 East to the open section of the LNC at 400 North and 600 East. This is the only NRCS alternative that keeps the LNC in operation and focuses on a potential least cost solution for reconstructing the LNC. However, even if they would require condemning and removing some additional homes, there are additional alternatives that should be carefully studied, such as:
- Considering different locations for the inlet and outlet of an inverted siphon (like the NRCS's Alternate #3) that would bypass the landslide hazard area and reconnect the LNC through a pipeline under or on the uphill side of Canyon Road.
 - Considering connecting the inlet to the inverted siphon directly to the pool at First Dam to take advantage of the additional pressure head and reduce costs.
 - Consider bridging across the landslide hazard area using piling to support a box flume.
 - Consider building a ramp across the landslide hazard area using stabilized gravel fill and retaining walls to support a box flume. Also put a cover over the flume in areas where there may be potential for derbies to slough into the waterway, and provide sufficient drainage tiles stabilize the slide area and fill.

The above alternatives are based on discussions with other engineers, visiting the site of the slide area where the LNC was ruptured, having observed the landslide area almost daily for over 30 years, and personal experience. However, I have no knowledge of any analytical studies having been carried out for any of them.

Comment S-60 (continued)

- 6. In studying the Guidelines in the Final Rule document for use of Emergency Watershed Protection Program funds, it seems clear the purpose of the EWP funds it to restore services to the stakeholders dependent on the services that were disrupted due to a natural disaster. There is no evidence that the NRCS, who is the administrating agency for the EWP, is authorized to provide the 75 percent government costs share based on Benefit/Cost analysis that expand the impact area beyond what is necessary to restore the impacted services (see Appendix Excerpts from Document G and H).

In accordance with Section 624.6 (b) (4) of the Final rule guidelines (see Appendix, Excerpt from Document H):

"... if the sponsor desires to increase the level of protection that would be provided by the EWP practice, the sponsor will be responsible for paying 100 percent of the costs of the upgrade or additional work."

The Preferred Alternative from the Final EWP PEIS was essentially adopted in the Final Rule for the revised EWP. Fortunately Element 12 allowed the EWP funds to be applied to reconstructing the damaged LNC. However, in accordance with Element 13, going beyond reconstructing this damaged LNC should be regarded as an Improved Alternative Recovery Solution. Thus the additional costs of any selected alternative that incorporate the undamaged Logan Hyde Park Smithfield Canal above the cost of reconstructing the LNC would require the sponsor to pay 100 percent of the addition work.

This does not rule out the viability of the 3100 North Alternative #4, but 100 percent of the difference in cost between it and a simpler, lower cost, alternatives for restoring the LNC should be borne by the Sponsor. However, the EWP guidelines do provide for the NRCS to design and assist with this upgraded alternative.

In other words, the current guidelines for using EWP funds provide for the NRCS to manage the planning for a combined canal option. But they clearly state that the Sponsor is responsible for covering 100 percent of any additional construction costs in excess of the cost of the reconstruction work necessary to restore service to the LNC's shareholders.

- 7. An Environmental Assessment would suffice for most any of the alternates mentioned in Comment 5 for bringing the LNC back into service, because any new associated environmental consequences would be minimal. Furthermore, the study of alternatives should be focused on reducing: costs, the level of public inconvenience, and the environmental damage associated with the repairs.

The combined canal option, NRCS Alternative #4, requires a more expensive and time consuming Environmental Impact Study because it:

- a. Changes the Logan River flow below the high canal's diversion, which in turn significantly reduces Logan City's and USU's hydro power generation, and affects fisheries habitat and the USU Water Laboratory's research operations. (It is interesting to note in the feasibility study presented in Appendix Excerpt from Document F that Logan City's hydro power loss is only estimated to be \$30,000/year, while the gain to the agricultural users due to reduced pumping costs is estimated to be \$48,600/year.)
- b. Has the potential to significantly reduce canal seepages losses, which will reduce aquifer recharge, spring flows, wetlands, and may jeopardize dependent water rights. (The feasibility study presented in the Appendix Excerpt from Document F also assumes there will be

Comment S-60 (continued)

- significant (8,000 Acre-feet) water savings from Alternate #4 that can be marketed. It is doubtful that the Utah Division of Water Rights would allow this water to be transferred because much of the water flows back to the Logan River. Furthermore, in view of the significance of return flows, the Division will use the historic consumptive use of the canal companies' diverted water as their perfected water right, rather than the volume diverted.)
- c. Will significantly affect the cultural heritage afforded by the two open canal systems, which are of historic significance to the Citizens of Cache Valley. Thus it will require an ACHP Section 106 Review in accordance with the NHPA, as well as a review by the Utah SHPO.
 - d. Is neither the least-cost nor most environmentally friendly option for restoring the service of the LNC.

Appendix

In preparation for developing the above comments the following documents/materials were reviewed:

- A. The Salt Lake Tribune article: Feds: Eliminate or re-route canal. July 21, 2009. By Nate Carlisle
- B. Proposed EWP funded Logan Northern Canal reconstruction schematic insert dated 9/22/09 provided to community leaders.
- C. Minutes of the meeting of the Logan Municipal Council dated Tuesday, October 6, 2009.
- D. Herald Journal Article: Companies mull joining two canals. Posted: November 6, 2009 12:00 am Updated: Feb 24, 2010. By Kim Burgess.
- E. The approved minutes of the Special Cache County Council Minutes, dated March 30, 2010.
- F. Utah Board of Water Resources Meeting on May 27, 2010 Agenda item: IV. Feasibility Report E269 Cache Highline Water Association (which was formed Dec 2, 2009 to find a solution to the Logan Northern Canal breach that would also benefit the Logan Hyde Park Smithfield Canal) (Presentation of Feasibility Report for the NRCS Alternate that pipes water to 3100 North (# 4) Submitted 11/12/09; Approved 12/10/09.)
- G. Emergency Watershed Protection Program Final Programmatic Environmental Impact Statement. December 2004
- H. 7 CFR Part 624 Emergency Watershed Protection Program. AGENCY: Natural Resources Conservation Service, USDA; ACTION: Final rule. Federal Register / Vol. 70, No. 63 / Monday, April 4, 2005 / Rules and Regulations
- I. Utah Board of Water Resources Meeting on March 17, 2010 Agenda item: VI. Special Items E272 Logan & Northern Irr. Co. (Pipeline project Submitted 2/23/10, Approved 3/17/10.)
- J. Video on KUTA-TV: "Logan City Council Meeting - 03 August 2010".
- K. Emergency Watershed Protection: Logan Northern Canal Reconstruction Project: Scoping Meeting Power Point Presentation given in Logan on August 11, 2010.
- L. The Advisory Council on Historic Protection (ACHP) Publication: Protecting Historic Properties: A Citizen's Guide to Section 106 Review; and other National Historic Preservation Act (NHPA) and State Historical Protection Office (SHPO) guidelines.
- M. Herald Journal Article: Canal company: Logan Northern acreage not inflated. Posted: August 24, 2010 By Jay Patrick

Following are excerpts that were copied from some of the reviewed documents. These excerpts are included to provide ready access to important information used in developing the comments.

Excerpt from Document A

Only 10 day after the catastrophic Logan Northern Canal on July 11, 2009 there was an article the Salt Lake tribune titled: Feds: Eliminate or re-route canal. - Saying the current location isn't viable, federal

Comment S-60 (continued)

engineers propose two alternatives. Here are the alternatives presented therein (the quote taken directly from this document is indented and in the smaller [9 instead of 11] font size):

One proposal would eliminate the canal and re-route water north to the Logan, Hyde Park, Smithfield Canal Co. The second option would keep the Logan Northern Canal largely intact, but to pass the treacherous hillsides that gave way earlier this month by installing pipes under Canyon Road in The Island neighborhood of Logan. Shareholders, cities and engineers must reach a consensus on which plan to pursue, said Bronson Smart, an engineer for the U.S. Department of Agriculture [USDA]. Either would have steep costs. Jon Wells, who sits on the board of the Smithfield Canal, said that waterway would have to be improved if it were to accept water from the Logan Northern Canal. He said it is estimated to cost \$17.2 million just for the construction in Logan Canyon and through part of the city of Logan. "It just depends on funding whether or not it can be done," Wells said. It's unclear who would pay the costs of any change. Wells said the two canal companies could not pay the costs alone and would seek money from the USDA. Cities along the canals' routes rely on them to help with storm runoff and might be asked to help pay, too, Smart said. Smart said it is not an option to repair and restore the Logan Northern Canal as it was. "It really shouldn't have water in it just due to the high groundwater in the area and the history of landslides," Smart said. The USDA analysis was funded with a \$400,000 earmark secured last week by Sen. Bob Bennett, R-Utah.

Alternatives for restoring canal water

- 1 Re-route water to the Logan, Hyde Park, Smithfield Canal, widen the head gate and install a pipe to divert water.
- 2 Keep the Logan Northern Canal but bypass the hillsides that gave way by installing pipes under Canyon Road.



Document B

Proposed Logan Northern Canal reconstruction schematic insert dated 9/22/09.



Comment S-60 (continued)

Excerpt from Document C

During the Period for Questions and Comments for Mayor and Council at the regular Logan City Council meeting on October 6, 2009, Citizen Keith Meikel addressed the Council. His remarks as they are recorded in the meeting minutes are as follows (the quote taken directly from this document is indented and in the smaller [9 instead of 11] font size):

"Mr. Meikel represents the Logan, Hyde Park and Smithfield Canal Company. He is also here in behalf of his father John Meikel who is the President of the Logan and Northern Canal Company.

Mr. Meikel publicly thanked Logan City and the administration for their help with the Canyon Road landslide. The Canal Company realized very quickly this would not be an easy fix and Logan City was there to help from day one. Help was also given with Logan City allowing a pipe to go through Lundstrom Park.

Councilmember Olsen asked if an analysis has been done to see if there is something the Canal Company recommends that Logan City enact to assist them in their operation, inspection and delivery of water.

Mr. Meikel responded they will be doing a large construction project and would ask that Logan City assist when doing this construction which will cross City property. Due to the failure of the canal, federal engineers have a plan to resolve the problem. No water will ever go in the Canyon Road canal again and they will continue to work with the public works department. This will be the largest water project that Northern Utah has seen in 20-30 years. It will benefit Logan City, all of the municipalities to the North and for the future of the entire valley. Their hope is it will provide secondary water for the citizens and take pressure of the culinary water system."

Excerpt from Document D

Taken from HJ Article: Companies mull joining two canals:

"A \$25 million proposal to join two major canals — including the waterway that ruptured this summer — generated more than an hour of questions Wednesday from shareholders concerned about the project's cost and feasibility.

During a special meeting, which drew several hundred people to North Park Elementary, board members from the Logan, Hyde Park and Smithfield Canal Company stressed that they have an unusual opportunity to move forward with the plan.

After the Logan and Northern Canal broke in July, the disaster was ruled an "act of God," opening up federal dollars for rebuilding. An engineering study suggested connecting the Logan and Northern (middle canal) with the Logan, Hyde Park and Smithfield (upper canal) at 3100 North. The upper canal would be piped or lined to that point. A company composed of the boards of both canals would govern the new waterway.

The estimated price tag is about \$25 million; at least 75 percent would be provided by the government. Upper canal board members said they don't yet have enough information to say how much the work would cost individual shareholders each year.

"We'd get a gold-plated canal at a real discount price," said Keith Meikle, president of the upper canal. "It does not get any better than the situation we have."

However, some in the audience were not convinced. One man said he is worried about small producers who are already struggling with higher property taxes. Another mentioned that a similar plan was voted down in 1969 over concerns about placing debt on the shareholders."

Excerpt from Document E

Copy of Clauses II and III on page 2 of the 16 page Cooperative Agreement signed by the Cache County Executive on April 2, 2010 and the Utah NRCS State Conservationist.

Comment S-60 (continued)

II. PURPOSE

A. On July 11, 2009, a landslide occurred that caused loss of life, property damage, and damage to the Logan Northern Canal System. The Logan Northern Canal System delivers irrigation water to over 7,000 acres of agricultural land and communities in Cache County. The purpose of this agreement is to establish the terms, conditions, and responsibilities of both parties in the planning, design, and implementation of a safe functioning project that restores the Logan Northern Canal System to its end function: delivery of irrigation water to every irrigation company shareholder affected by the landslide.

B. This agreement 88-8D43-10-14, is the second of two agreements awarded for the Cache County EWP Project. The first agreement, # 88-8D43-10-13, encompasses technical assistance for the design and specifications, construction administration, inspection services, etc.

C. This second agreement (88-8D43-10-14) describes the terms and conditions governing the NRCS funding (up to 75 percent of allowable construction cost within the established timeframe) for the actual construction phase of the project. The terms of the second agreement require the County to contribute a minimum 25 percent cash-share of total project on-the-ground construction costs, comprised of each and/or the value of in-kind labor, materials, and/or equipment. To simplify financial accounting for differing cash-share requirements of technical and construction activities, NRCS determined the award of two agreements was the most efficient approach.

III. BENEFITS

Relocation of the Logan Canal will restore delivery of irrigation water to over 7,000 acres of agricultural land and communities in Cache County, directly benefiting residents of the area and beyond by successful production of agricultural crops.

IV. ATTACHMENTS TO AGREEMENT

Excerpt from Document F

Excerpts from the Utah Board of Water Resources (UBWR) Meeting on May 27, 2010 report for Agenda item: IV. Feasibility Report E269 Cache Highline Water Association, is quite interesting. Unlike for using EWP funds, which are focused on the least cost alternatives, the State's Revolving Construction requires a positive Benefit to Costs Ratio of greater than 1.0. To achieve a B/C of 1.22 the feasibility submitters took some interesting liberties with the data, for example to balance the estimated total cost of \$28,575,000 for the combined canals piped to 3100 North (NRCS Alternative #4) the following analysis was presented to the UBWR (Quotes copied directly from this document (and reformatted) are in the smaller [9 instead of 11] font size.):

"ECONOMIC: Economic feasibility is determined by comparing the cost of the project with the benefits derived from the project. Benefits to canal water users include: 1) The difference between income from nearly 4,800 acres of LN served land (which is anticipated to revert to dry land farming without the project), and the pre-canal breach level of crop production on the same acreage with the proposed project; 2) Energy cost savings resulting from providing gravity pressurized water on the piped portion of the LN Canal, eliminating users' need to pump; 3) Reduced seepage from piping the canals. Logan, North Logan, Hyde Park, and Smithfield cities will benefit by using the canals to carry an increased amount of storm water. Because of early priority water rights held by the canal companies, moving the LN Canal diversion upstream could reduce diversions to Logan Hydro Plant #2, possibly impacting negatively the amount of power produced.

When the project's benefits are compared to all project costs and discounted to a present value over 50 years, the benefit/cost ratio is 1.21. When approached from the perspective of the state and local area, where the federal grant of \$21,685,000 is subtracted from the total project cost, the benefit/cost ratio is 5.02.

FINANCIAL FEASIBILITY: Benefits of the project include those to agricultural and M&I use shareholders in the two companies as well as the cities for increased capacities to their storm water systems. Based on the board's water affordability guideline, area residents could pay \$34.33 per month for all water (based on a weighted average for Logan, North Logan, Hyde Park, and Smithfield). The cost of water with the proposed project, based on 885 M&I shareholders, is as follows:

	Annual Cost	Cost/Conn/Mo
Average Culinary Water Bill	\$191,000	\$18.00
Water Share Assessment	88,500	8.33
Reduced O&M	-14,950	-1.41
Logan Hydro Electric Impact	7,650	0.72
BWR Loan Payment	92,300	8.69
Total	\$364,500	\$34.33

Comment S-60 (continued)

Agricultural benefits of the project are anticipated to be from leasing saved water, reduced O&M costs, and eliminating pumping costs for users on the LN Canal, as follows:

	Annual Benefit
Leased Water Income	\$44,200
Reduction of O&M	15,000
Eliminated Pumping	48,600
Logan Hydro Electric Impact	-30,000
Total Net Annual Ag Benefit	\$77,800

With the proposed board and grant share of the project being 96.5%, it is suggested the sponsor's agriculture payment be calculated as 96.5% of the net annual benefit, or approximately \$75,100 per year. A J-U-B Engineers study has determined that about 39% of the project's benefits can be attributed to the cities' increased storm water system capacity; therefore, it is anticipated the cities will bear approximately 39% of project costs.

Total payment has been calculated as follows:

Shareholder: M&I Use	\$92,300
Shareholder: Ag Use	75,100
City Storm Water	107,100
Total	274,500

BENEFITS: The proposed project will restore water to the LN Canal and take a potentially dangerous stretch of canal out of service. It is estimated to save over 8,800 acre-feet annually, to be used by current shareholders or leased by area water users. With the proposed pipeline, LN water users will be able to take advantage of a gravity pressurized system by abandoning their pumps or converting from flood to sprinkle irrigation. The cities along the canals will have an increased capacity in their storm drain systems."

Excerpts from Document G
http://www.nrcs.usda.gov/programs/env_assess/EWP_FINALPEIS/EWP_Final_PEIS.pdf
Emergency Watershed Protection Program Final Programmatic Environmental Impact Statement
 (Quotes taken directly from Chapter 3 are indented and in the smaller [9 instead of 11] font size.)

Chapter 3
EWP PROGRAM ALTERNATIVES

This chapter describes how NRCS identified the alternatives evaluated in the Draft EWP PEIS and selected the Preferred Alternative for this Final EWP PEIS.

3.2.2.1 Elements of the Draft PEIS Proposed Action

In the Draft EWP PEIS, NRCS proposed to implement changes in the 15 program areas to improve and expand the EWP Program. The first 11 Draft PEIS proposed changes were in how the EWP Program is conducted. Under four additional changes, NRCS had considered incorporating new types of disaster recovery work that were currently covered to some extent by other USDA programs or State or local authorities, or that were not covered at all. The details of these Draft PEIS proposed changes are described here. ---

Element 12 - Eligibility of Repairs to Enduring Conservation Practices

Draft PEIS Proposed Action: Allow repairs of enduring (structural or long-life) conservation practices.

Currently the EWP Program does not repair structural conservation practices, such as irrigation systems. The Program only repairs NRCS-assisted structures, such as dams, under a blanket exception. This change would incorporate both types of work into the Program.

Conservation practices

Under the Draft PEIS Proposed Action, NRCS would make enduring conservation practices that are damaged during disaster events eligible for EWP Program cost-share assistance. Nonstructural management practices such as conservation tillage would not be eligible. This provision would include repair of such conservation practices as waterways, terraces, embankment ponds, diversions, irrigation systems, and animal waste systems. ---

EWP Element 12 - Eligibility of Repairs to Enduring Conservation Practices.

Preferred Alternative: Repair enduring (structural or long-life) conservation practices.

Comment S-60 (continued)

Under the Preferred Alternative, NRCS would fully implement the Program changes described under Element 12 of the Draft PEIS Proposed Action. NRCS would make enduring conservation practices that are damaged during disaster events eligible for EWP Program cost-share assistance. Nonstructural management practices such as conservation tillage would not be eligible. This provision would include repair of such conservation practices as waterways, terraces, embankment ponds, diversions, irrigation systems, and animal waste systems. However, practices that are eligible for emergency assistance for such disaster recovery under the Emergency Conservation Program (ECP) would not be eligible under EWP. EWP differs significantly from ECP because a sponsor is required for EWP recovery work but not for ECP. EWP recovery assistance does not provide financial assistance directly to individuals but rather to eligible sponsors.

Element 13 - Eligibility of Improved Alternative Recovery Solutions

Draft PEIS Proposed Action: Partially fund improved alternative solutions.

There are some situations where the necessary and sufficient EWP restoration solution proposed by NRCS could be less than the sponsor would like. Under the proposed Program change, if a sponsor would want to increase the level of protection provided by a proposed EWP practice or extend the protection afforded by the practice beyond what is justified under EWP policy and guidelines, the sponsor would have to pay 100 percent of the upgrade or additional work (in addition to the required 25 percent of basic EWP cost). NRCS would do the environmental evaluation and design work as part of the total package, but any necessary additional permits and/or mitigation would be the sponsor's responsibility. For example, NRCS might consider a 200-foot structural practice sufficient to meet the streambank restoration need at an EWP site but a sponsor might want greater protection with a 300-foot design. In this case, NRCS would assist in the design and defensibility evaluation of a 300-foot structural practice but would fund only 75 percent of the cost of the 200-foot design. The sponsor would pay their 25 percent share of the 200-foot installation plus 100 percent of the cost of the extra 100-feet. NRCS would assist with the design and their limited share of the funding of this larger installation so long as the increased-size work was otherwise environmentally and socially defensible.

Substitution of one practice for another would be allowed if the benefits of the practice were not reduced, the sponsor paid additional costs associated with the change, and the new practice was environmentally and technically sound and compatible with local zoning and environmental or historic preservation ordinances. NRCS would determine if the proposed change is acceptable. Changes that appreciably increase the time NRCS would have put into the original planning, design, or installation may require reimbursement of NRCS by the sponsor for additional time spent.

This policy change would make the Program more locally-led by giving sponsors and landowners more opportunity to determine what is in their best interests but would ensure that Federal funds would be used only for public benefit. This added element also would allow more work to be carried out under NRCS supervision, rather than a sponsor deciding to do the work on their own without EWP assistance. This is not expected to cause much change in Program operation because requests in the past have not been numerous and the sponsor will be required to pay for additional costs. However, it is possible that the number of requests was low because sponsors knew substitution was not permitted. ---

EWP Element 13 - Eligibility of Improved Alternative Recovery Solutions

Preferred Alternative: Partially fund improved alternative solutions.

Under the Preferred Alternative, NRCS would fully implement the Program changes described under Element 13 of the Draft PEIS Proposed Action. If a sponsor desires to increase the level of protection that would be provided by an EWP practice, NRCS would require the sponsor to pay 100 percent of the upgrade or additional work unless the upgrade is the result of permit requirements necessary to implement the recovery. NRCS can provide EWP assistance toward upgrading damaged or undersized practices for structural, enduring, and long-life conservation practices when technology advances or construction techniques warrant. Such modifications will be cost shared in accordance with Section 624.7. All structural, enduring, and long-life conservation practices for which the sponsor is required to obtain a permit issued by a Federal, State, or local entity shall be designed and installed to meet the permit requirements or NRCS standards, whichever is greater. If a structure has to be upgraded to meet Federal permitting or other requirements, such modifications will be cost shared in accordance with Section 624.7.

Effects of the Preferred Alternative Changes on Execution of EWP Recovery Practices

Partially funding expanded or improved alternative solutions (Preferred Alternative Element #13) would yield environmental benefits in terms of improved water quality and aquatic habitat where the improved projects are intended to provide such benefits and because NRCS would oversee the work and would ensure adequate environmental review as well. The substitution of one practice for another could also give rise to significant environmental benefits in cases where the sponsor wishes to employ more natural restoration methods. Where local entities wish to install more

Comment S-60 (continued)

expansive or different measures to address community social values, NRCS funding and technical oversight would ensure the environmental defensibility of the measure.

Excerpt from Document H

<http://www.nrcs.usda.gov/programs/ewp/ewpfinalrule4405.pdf>

7 CFR Part 624: Emergency Watershed Protection Program (AGENCY: Natural Resources Conservation Service, USDA: ACTION: Final rule).

(Quotes taken directly from this document are indented and in the smaller [8 instead of 11] font size.)

PART 624—EMERGENCY WATERSHED PROTECTION

Sections: 624.1 Purpose; 624.2 Objective; 624.3 Scope; 624.4 Definitions; 624.5 Coordination; 624.6 Program administration; 624.7 Cost-sharing; 624.8 Assistance; 624.9 Time limits; 624.10 Floodplain easements; and 624.11 Waivers.

§ 624.2 Objective.

The objective of the EWP Program is to assist sponsors, landowners, and operators in implementing emergency recovery measures for runoff retardation and erosion prevention to relieve imminent hazards to life and property created by a natural disaster that causes a sudden impairment of a watershed.

§ 624.3 Scope.

EWP Program technical and financial assistance may be made available to a qualified sponsor, or landowners when a floodplain easement is the selected alternative by the Secretary of Agriculture, upon a qualified sponsor or landowner's request when a Federal emergency is declared by the President or when a local emergency is declared by the NRCS State Conservationist. The EWP Program is designed for emergency recovery work, including the purchase of floodplain easements. Emergency watershed protection is authorized in the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and American Samoa.

§ 624.4 Definitions.

(a) *Defensibility* means the extent to which an action is:

- (1) More beneficial than adverse in the extent and intensity of its environmental and economic effects;
- (2) In compliance with Federal, State, and local laws;
- (3) Acceptable to affected individuals and communities;
- (4) Effective in restoring or protecting the natural resources;
- (5) Complete with all necessary components included; and
- (6) Efficient in achieving the desired outcome.

(b) *Exigency* means those situations that demand immediate action to avoid potential loss of life or property, including situations where a second event may occur shortly thereafter that could compound the impairment, cause new damages or the potential loss of life if action to remedy the situation is not taken immediately.

(f) *Natural occurrence includes*, but is not limited to, floods, fires, windstorms, ice storms, hurricanes, typhoons, tornadoes, earthquakes, volcanic actions, slides, and drought.

(g) *Project sponsor* means a State government or a State agency or a legal subdivision thereof, local unit of government, or any Native American tribe or tribal organization as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b), with a legal interest in or responsibility for the values threatened by a watershed emergency; is capable of obtaining necessary land rights; and is capable of carrying out any operation and maintenance responsibilities that may be required.

(h) *Watershed emergency* means adverse impacts to resources exist when a natural occurrence causes a sudden impairment of a watershed and creates an imminent threat to life or property in the watershed.

§ 624.6 Program administration.

(a)(2) Sponsors must:

(iii) Agree to provide for any required operation and maintenance of the completed emergency measures.

(b) *Eligibility.* NRCS will provide assistance based upon the NRCS State Conservationist's determination that the current condition of the land or watershed impairment poses a threat to health, life, or property. This assistance includes EWP practices associated with the removal of public health and safety threats, and restoration of the natural environment after disasters, including acquisition of floodplain easements.

(1) Priority EWP assistance is available to alleviate exigency situations. NRCS may approve assistance for temporary correction practices to relieve an exigency situation until a more acceptable solution can be designed and implemented.

(2) *Limitations.* (i) In cases where the same type of natural event occurs within a 10-year period and a structural measure has been installed or repaired twice within that period using EWP assistance, then EWP assistance is limited to those sites eligible for the purchase of a floodplain easement as described in § 624.10 of this part.

(ii) EWP assistance will not be used to perform operation or maintenance, such as the periodic work that is necessary to maintain the efficiency and effectiveness of a measure to perform as originally designed and installed.

Comment S-60 (continued)

(iii) EWP assistance will not be used to repair, rebuild, or maintain private or public transportation facilities, public utilities, or similar facilities.

(iv) EWP assistance, funded by NRCS will not be provided on any Federal lands if such assistance is found to augment the appropriations of other Federal agencies.

(v) EWP assistance is not available for repair or rehabilitation of nonstructural management practices, such as conservation tillage and other similar practices.

(3) Repair of structural, enduring, and long-life conservation practices.

(i) Sponsors may receive EWP assistance for structural, enduring, and long-life conservation practices including, but not limited to, grassed waterways, terraces, embankment ponds, diversions, and water conservation systems, except where the recovery measures are eligible for assistance under the Emergency Conservation Program administered by the Farm Service Agency.

(ii) EWP assistance may be available for the repair of certain structural practices (i.e., dams and channels) originally constructed under Public Law 83-566, Public Law 78-534, Subtitle H of Title XV of the Agriculture and Food Act of 1981 (16 U.S.C. 345 et seq., commonly known as the Resource Conservation and Development Program), and the Pilot Watershed Program of the Department of Agriculture Appropriation Act of 1954 (Pub. L. 83-156, 67 Stat. 214). EWP assistance may not be used to perform operation and maintenance activities specified in the agreement for the covered structure project entered into with the eligible local organization responsible for the works of improvement.

(iii) NRCS may authorize EWP assistance for modifying damaged practices when technology advances or construction techniques warrant modifications, including when modifications are the result of federal permitting or other requirements necessary to implement the recovery measure, and will be cost-shared as described in § 624.7.

(iv) EWP assistance is only available when public or private landowners, land managers, land users, or others document they have exhausted or have insufficient funding or other resources available to provide adequate relief from applicable hazards.

(4) Increased level of protection. In cases other than those described in paragraph (b)(3)(iii) of this section, if the sponsor desires to increase the level of protection that would be provided by the EWP practice, the sponsor will be responsible for paying 100 percent of the costs of the upgrade or additional work.

(c) Eligible practices. NRCS will only provide assistance for measures that:

- (1) Provide protection from additional flooding or soil erosion; and,
- (2) Reduce threats to life or property from a watershed impairment, including sediment and debris removal in floodplains and uplands; and
- (3) Restore the hydraulic capacity to the natural environment to the maximum extent practical, and
- (4) Are economically and environmentally defensible and technically sound.

(d) Documentation. NRCS will document the economic rationale of proposed practices in appropriate detail before the allocation of emergency funding, including projects under consideration for floodplain easements in § 624.10.

Generally, the expected value of the property restored should exceed the cost of emergency measures, including taking into consideration environmental benefits. Documentation will include, but is not limited to:

- (1) Number of locations and extent of damage, including environmental and cultural resources at risk, because of the watershed impairment;
- (2) Estimated damages to the values at risk if the threat is imminent but not yet realized;
- (3) Events that must occur for any imminent threat to be realized and the estimated probability of their occurrence both individually and collectively;
- (4) Estimates of the nature, extent, and costs of the emergency practices to be constructed to recover from an actual threat or relieve an imminent threat;
- (5) Thorough description of the beneficial and adverse effects on environmental resources, including fish and wildlife habitat;
- (6) Description of water quality and water conservation impacts, as appropriate;
- (7) Analysis of effects on downstream water rights; and
- (8) Other information deemed appropriate by NRCS to describe adequately the environmental impacts to comply with the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, and related requirements.

(e) *Implementation.* When planning emergency recovery practices, NRCS will emphasize measures that are the most economical and are to be accomplished by using the least damaging practical construction techniques and equipment that retain as much of the existing characteristics of the landscape and habitat as possible. Construction of emergency practices may include, but are not limited to, timing of the construction to avoid impacting fish spawning, clearing of right-of-ways, reshaping spoil, debris removal, use of bioengineering techniques, and revegetation of disturbed areas.

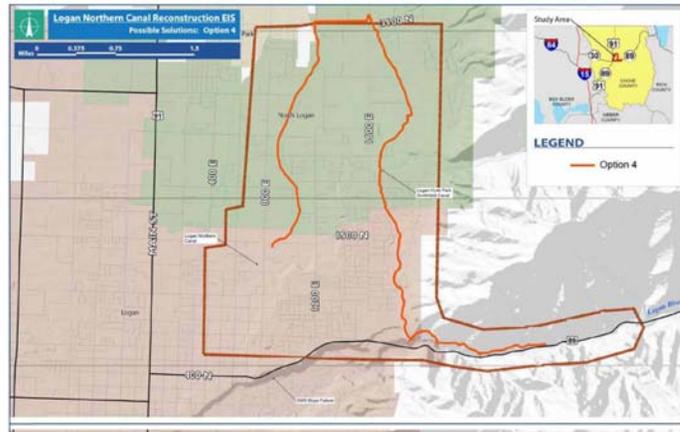
Mitigation actions needed to offset potential adverse impacts of the EWP Program practices should be planned for installation before, or concurrent with, the installation of the EWP Program practices. In rare occurrences where mitigation cannot be installed concurrently, plans will require mitigation to be accomplished as soon as practical.

(f) NRCS may determine that a measure is not eligible for assistance for any reason, including economic and environmental factors or technical feasibility.

Comment S-60 (continued)

Comment S-61

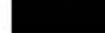
Excerpt from Document K: Map showing location of NRCS Alternate #4 from Power Point slide presented at from the Emergency Watershed Protection: Logan Northern Canal Reconstruction Project: Scoping Meeting Power Point Presentation given in Logan on August 11, 2010.



From: whitney.matson
 To: [LNC-EIS](#)
 Subject: Logan Canal
 Date: Friday, August 27, 2010 11:25:13 PM

When considering the redesign of the canal, please also look at repairing the gaping hole visible from Canyon Rd. Please also look into repairing the trail that extended along the canal and making it available for public use.

Sincerely,
 Whitney Matson



Comment S-62

From: [Rick](#)
To: [LNC-EIS](#)
Subject: Logan Canal
Date: Saturday, August 28, 2010 3:38:00 PM

Hello,

I am not a shareholder, but a very interested party. I live on [REDACTED] Aspen Dr. just above the canal.

The open canal was an important reason we decided to purchase this house. It is teeming with wildlife and makes our residence very pleasant. Right after we moved here I watched as a mother duck and six babies walked from a planting area at the front of the house to the canal. The value of the open waterway cannot be underestimated. Animal habitat thrives, I have seen raccoons along the sides of the canal. I hope your analysis takes this into consideration.

There are many (google uncovering waterways) long term reasons for not making the mistake of outing the canal in a pipe. The trees gone are enough. Please be environmentally friendly.

Thank You,
 Rick Major

Comment S-63

From: [Doris Rusch](#)
To: [LNC-EIS](#)
Subject: Logan, Hyde Park and Smithfield Canal
Date: Sunday, August 29, 2010 11:11:36 AM

Doris Peterson Rusch



August 29, 2010

Sue Lee
 HDR Engineering
 3949 South 700 East, Suite 550
 Salt Lake City, UT. 84107

I am a shareholder in the Logan, Hyde Park, Smithfield Canal and wish to comment on the proposed canal project.

Repair the breach and maintain the current system. I believe Alternative 3a (piping a minimal distance) best represents my view, but stabilizing the hillside and just repairing the breach should also be considered.

Destroying the current canal system and miles of open water habitat would be a travesty. The current system provides a green corridor that supports an ecological system, allowing movement of wildlife and sustaining aquatic organisms. It serves some important ecological and hydrological functions in an arid landscape.

Beware of unintended consequences of any grandiose plan to disrupt and disturb the current system. As a biologist I object to the destruction of the current open water system, and as a tax-payer I object to spending millions of dollars on a wasteful, back-assed project.

Do the common sense thing: repair and maintain the existing system.

Doris Peterson Rusch,
 Land Manager,
 Dane County Department of Land & Water Conservation

Comment S-63 (continued)

Madison, Wi 53718
 [Redacted]

CC. Cache County Council, 199 North Main Street, Logan, Utah 84321

Comment S-64

From: [Redacted]
To: [LNC-EIS](#)
Cc: [Thad Erickson; Paul Riley](#)
Subject: EIS study of alternatives for Logan Northern Canal
Date: Sunday, August 29, 2010 5:19:08 PM
Attachments: [CanyonRoadLandslideEISStatement.082710.doc](#)

Mr. Bronson Smart and Ms. Sue Lee
 HDR Engineering
 3949 South 700 East, Suite 500
 Salt Lake City UT 84107
 LNC-EIS@hdrinc.com

Dear Mr. Smart and Ms. Lee:

I am emeritus Professor of Geology [33 years] at Utah State University [U.S.U]. I have been interested in the unstable slope along the north side of "The Island" in Logan since 1966, including the October 1981 slope failure there that filled the Logan Northern Canal and caused a washout between the area of the 7-11-09 slope failure and Logan City's Crockett Street well on Canyon Road. After that event, I showed photos and then took students on field trips each Fall along that canal while I taught Surficial Geology at U.S.U. I also have photos of the 2005 slope failure [east of the 2009 failure], and photos of the 2009 event. I will attach the annotated 2009 photos to several following e-mails.

In addition, I have constructed two geologic sections through this area based on drillers' logs of water wells [for an aquifer storage-and-recovery report in preparation for Cache County, through the Utah Geological Survey]. The upper and lower confining layers of Robinson [1999 M.S. thesis in Geology at U.S.U.; cf. Bjorklund and McGreevy, 1971] both continue beneath this area, so that water entering the ground will tend to collect above them while moving laterally toward unconfined slopes such as those facing The Island. Further, about 30 feet below the Provo-level delta surface of Lake Bonneville here, there is a thin confining layer that I have identified along the north edge of the Logan River delta [at the south edge of the old gravel pit, just north of married-student housing and NE of the U.S.U. Romney football stadium], and which Thad Erickson also has identified near the slope in question above Canyon Road [when the pedestrian tunnels were constructed from the parking lots under U.S. Hwy. 89]. When that or another shallow confining layer was penetrated during construction of the U.S.U. Romney football stadium, confined water under pressure there required 36-inch tile drains to be installed to divert the considerable flow. Slightly southwest of the stadium, a similar strong confined flow was encountered at an apartment building. Thus, I believe that the oversteep erosional hillside escarpment along the north side of The Island, even without any future contributions from leakage from the canal there, will continue to be saturated periodically [usually in September or October], between the thin confining layer near 30 feet depth [and possibly other thin layers below that] and the 30' to 60' thick upper confining layer of Robinson, which lies at a depth of about 20 feet beneath The Island.

Comment S-64 (continued)

It is my professional opinion that construction of an alternative canal route near the top of the steep escarpment, beneath U.S. Hwy 89, would be a hazardous choice, and thus undesirable. The East Cache fault zone, studied in a trench across the Logan Country Club golf course and elsewhere in Cache Valley [McCalpin, 1994], is overdue for rupture based on past recurrence intervals throughout the extent of the Wasatch fault zone [Machette and others, 1991]. Offset, or even shaking and settlement of the unconsolidated deposits of Lake Bonneville and of the earlier Little Valley Lake could easily rupture a pipeline that lies atop the steep escarpment. Any slippage there likely would rupture the piped canal. If flowing, the water in the piped canal would be added rapidly to the pore water already in the steep slope just south. The effect would be analogous to that of the Palos Verdes landslide near Los Angeles in the late 1950s, where ruptured water lines and sewer lines [and swimming pools] led to catastrophic property losses when the steep hillsides there failed spectacularly. I have photos from there as well, from 1966.

Not only would emplacement of the canal beneath U.S. Hwy 89 further endanger those still living at the base of that slope, it would jeopardize U.S. Hwy 89 itself, and perhaps also the adjacent Family Life Building of the U.S.U. campus. Children participating in the Child Development program play outdoors there, just above the highway. Please do not adopt this alternative.

Attached are notes that I have made related to the 7-11-09 slope failure on East Canyon Road. They refer to some of the individual photos by the photo number. I am available to meet with you to discuss my findings in greater detail.

With regard to the four other alternatives, please note that a major difficulty arose for the Logan, Hyde Park, and Smithfield Canal Company when the State Engineer of Utah a few years ago decided that measurements of discharge had to be taken at the point of diversion up Logan Canyon rather than where it had been measured for many years before, at the Logan Country Club golf course where the canal turned north. The considerable amount of water lost by leakage along the Logan Canyon portion of that canal flows downhill directly into Logan River, from whence it originated. This decision by the State Engineer created a difficult hardship for that canal company because it essentially requires that the canal will need to be confined from its intake at least to the mouth of Logan Canyon to assure receipt of the full allotment of water. If the final decision regarding the Logan Northern Canal is to place the pipeline beneath Canyon Road, or to do nothing, then a return to measurement of the allotment at the golf course for the Logan, Hyde Park, and Smithfield Canal would be both desirable and reasonable.

Disclosure: My wife has an office and teaches in the Family Life Building. She owns one share in the Logan, Hyde Park, and Smithfield Canal Company, currently used by Erin Milligan for a cost equal to the annual assessment. I always drive in the northernmost uphill lane of U. S. Hwy 89, and have advised all students who took my classes to do so, 1966 to 1999.

Comment S-64 (continued)

Yours sincerely,

Dr. Robert Q. Oaks, Jr. [Bob Oaks]
 Professor Emeritus, Geology Department, Utah State University
 Classic Geological Consulting Corporation
 Utah Licensed Professional Geologist 5212865-2250



Comment S-64 (continued)

8-26-10 Comments and clarification by Thad Erickson

Maybe you would want to include in your list of slope failures the 1983/4 wet period, eye witness account of Mike Lowe when he and [a friend] watched the landslide cause a tsunami on the Logan Northern Canal....this showed the close cause/effect relationship between rainfall and slope failure along Canyon Road.

Plant growth tells a great story to those who know plants. Maybe a horticulturist should be consulted. For example Siberian elms have very deep roots, while maples do not. The species is as important as the density in inferring what the depth of ground water is. The vegetation issue is important.

My experience with chlorination of water comes from the Utah Wildlife Resources. Ron Goede directed chlorination of our trout farm. Trout are very sensitive to chlorine. I think chlorine is not persistent in natural water, because it is so reactive. It just quickly uses itself up when the water in which it is dissolved comes in contact with almost any natural water body, especially that containing organic matter.

Thad

9-08-09 Observations near canal break by Bob Oaks, with Paul Riley, Fred Kiefer, and Erin Blisser

We climbed up the stairway just east of the Crockett well, and proceeded east along the canal toward the break. A new sandbag dam had been built, probably to prevent eastward backflow when water from the Crockett well was pumped uphill into the canal through a new 12-inch pipe there. Just east of the sandbag dam, about 4 feet high, there was a hole broken through the floor of the canal to inset a sump pump to remove inflow water from the north hillside to the east. The pump moved that water over the sandbag dam through a flexible pipe and thus to the west. Rebar about 1/4 inch in diameter and in a 6-inch-square configuration, was visible in the floor at the hole. Eastward, below cribbing in the north wall, near the slope failure in October 1981, the wall on the north leaned inward despite numerous braces [photo 1200]. Just east of the cribbing, small trees above the north side of the canal are green and healthy, but there is little undergrowth. There was noticeable inflow of sand and gravel into the canal since cessation of flow 7-15-09 [photos 1201, 1202].

Farther east there was a cistern [culvert] slightly above the north side of the canal, with strong outflow just below, and with dense undergrowth above [photo 1204]. Just east was a second sandbag dam, ~4.5 feet high [photo 1204]. The western edge of the canal break was at a joint at form lines in the canal wall, where the rebar was straight-cut [photos 1205, 1206]. Possibly the canal section to the west is older than that which failed. From the western break, an end view of the eastern canal break showed that the western end of the south canal wall was no longer on top of the canal floor [photo 1208].

We returned to Canyon Road at the Crockett well and drove east, past the landslide and canal break, to the canal access road, then walked west along the canal toward the break. Here there was much undergrowth uphill north of the canal, and considerable inflow from that side, including a small waterfall uphill. Water in the canal flowed slowly east here. North of and above the Bachmann home [975 Canyon Road] is the site of a slope failure in 2005. Structures to enhance slope stability [photo 1135] and a cistern [culvert] with a flowing drain below [photos 1130, 1134] were installed there as a result. Farther west was noticeable inflow from the north side [photo 1133].

Just east of the east canal break, a form line has opened [photos 1213, 1214], and inflow water from the east [west of a sandbag dam, photo 1131] was seeping downward through that linear crack. As a result, the canal floor was dry west of that crack. There was a pipe about 6 to 8 inches in diameter parallel to the canal and beneath it. The pipe was dry, but the seeping water was running downhill beneath it. There was an old patch in the form line on the north wall [photo 1214; cf. 1201]. Above the canal break, exposed gravel had new blades of grass between.

An end view of the western canal break showed the original darker soil zone continuing beneath the embankment and road that formed the south abutment of the canal, along the original slope of the hillside prior to construction of the canal. This zone intersected the top of the north canal wall and the base of the south canal wall, so might have provided a surface for failure of the canal. Leakage from the pipe running beneath the canal might have contributed to saturation of the hillside beneath the canal.

Bob Oaks

9-03-09 Letter from Bob Oaks to Rachael Wentz

Comment S-64 (continued)

Dear Rachael,

By chance, I happened to talk on 25 July 2009 with Gil and Ilone Long, who rented at the base of the scarp when they first moved to Logan, between 1971 and 1973. According to them, their neighbor to the west had a lovely iris garden, and she complained to the canal company when a "spring" began gushing between the two properties and threatened to undermine her iris beds. The "spring" flow was strong from Spring through Summer, either in 1972 or 1973. Logan City employees came on at least two occasions and told them that they were not permitted to let their spring water flow into the street, but they responded that it was not their spring, but a leak from the canal, so it was the responsibility of the canal company. So the canal company introduced green dye [probably fluorescein dye] into the canal just above the home where Gil and Ilone lived. However, there was insufficient distance for mixing before the dye passed the area of the spring several feet downflow, and thus no green dye came out in the "spring." So the lady threatened a lawsuit, and the canal company then introduced orange dye [the other fluorescein dye color] some distance upstream, and the spring flowed orange. At that point, the canal company shut down the canal and repaired that sector of the canal. This caused a cessation in flow to farmers, etc. downstream during late summer. Gil and Ilone noted that the leakage was apparent early in the Springtime, so that if the canal company had repaired it then, the flow needed by the farmers, etc., in late Summer would have been available.

Johann Covington works with cement and concrete. He pointed out that the vertical canal sides probably were poured separately, and likely later than the flat base. He thought that pressure from the hillside to the north probably pushes the top of the north canal wall inward a bit [This is consistent with the geologic process of hillside creep, wherein the upper sediment moves downhill faster than the lower parts, and with the numerous metal bars placed between opposite canal walls in many places]. This tilting of the northern vertical canal wall would make it difficult for the base seam along the north margin not to leak, at least locally. On 15 July 2009, I also noted that there are at least two culverts above the canal, one upstream and one downstream of the break. Both are full, and the overflow goes downslope directly into the canal [through a pipe upstream belonging to the Wayne Bachmann family, and as small rivulets that must partly soak into the scarp, downflow from the break].

Wayne Bachmann [his mother's home is at ■■■ East Canyon Road, just east of the damaged homes, with a space between] said that he served on a "hillside" committee after there was a slope failure above his home that led to the USU research by Dr. Lauren Anderson's student[s] a couple of years ago [2005], and then to the repair of the hillside there with interlocked revetment bars. You probably have seen the hillside-risk assessment from the USU student's research, which has been published in the Logan Herald Journal at least twice recently in regard to the recent failure. My recollection is that Wayne said he kept telling the others on the committee [He could tell you if the (Logan Northern) canal company, UDOT, and USU were represented on that committee] that the hillside was unstable and that the sector that subsequently failed was in need of immediate repair. He says that he has "before" photos of the damage apparent in the sector that recently failed, which he may have shown to the committee [prior to the failure].

Bob Hoth [lives on SE corner, across the intersection just east of the failure] told me that when the U.S. highway above the scarp was "improved" years ago, the isolated parking lots for USU were constructed on the south side of the highway. Don Carol Smith, on Canyon Road across the street from Wayne Bachmann, told me that he thought this was done by UDOT. The runoff from those lots was directed into large drain pipes that emptied directly into the canal. The remnant of one such pipe was hanging in the air when I first saw the area on 15 July 2009. Bob Hoth said that kids liked to roll rocks down that particular pipe to hear the thunderous noise, and the rocks came out in the canal. Don Carol Smith said that runoff from the parking lot above had filled the canal with mud on at least one occasion in the 1970s. I believe that he told me that this blocked the canal and caused some local flooding at least once. I suspect that the runoff from the intense rainstorm about a week ago went down the sheared-off pipe and straight into the hillside that failed and that you now say is moving again.

I wish you well in your search for the truth, and hope that this helps. Thanks for your phone number and e-mail address. I'll be in touch when I get to work on my opinion piece.

Bob Oaks

----- Original Message -----

From: "Rachael Wentz" <[REDACTED]>

To: [REDACTED]

Sent: Thursday, September 3, 2009 6:11:22 PM GMT -07:00 US/Canada Mountain

Subject: Landslide Information

Dear Bob,

Comment S-64 (continued)

It has been a while since I have spoken with you, and I hope you are doing well. As you can imagine, this landslide ordeal is a never-ending battle. It is so consuming. I am currently still trying to gather information, and hopefully push some of our State/City Representatives and Officials to not let this situation just get brushed under the carpet. I hate to bother you, you have been the best source of information and concern since this entire ordeal began. I was wondering if you could tell where I could obtain copies of information that has been used in the past as proof of the Canal and Bluff problems. I have tried to search online, and certain organizations, but I am ignorant in the process, and have ran into the sad fact that "some people" make it hard to obtain proof that there has been a problem for so long.

There is not a day that I don't fear for our neighbors left behind on Canyon Road, and wonder what will happen. I go down there almost everyday just hoping that I may hear some good news from the neighbors, or some see some stability in the hillside enough to get the area cleaned up so the neighbors don't have to look at that gaping reminder day in and day out, but to no avail. Currently the hillside is still shifting and the areas under the broken part of the canal get bigger and bigger. If it is quiet you can hear rocks falling all the time. It's scary! I was wondering, as you had mentioned once before, do you know anything about houses condemned on the top of 400 North before the road was built? Do you know if the USU parking lots are a problem, and does the water from USU really drain down towards the Bluff? It's okay if you don't want to answer this e-mail. I am sure you have been pestered a lot on this issue. I just don't want this to happen to someone else, and it saddens me that the loss of someone's children has not caused more action. I don't want anyone else to perish in such a horrid way. Thank-you for your time!

Rachael Wentz


Subject: Salt Lake Tribune: Logan canal collapse: No criminal probe on horizon
 By Nate Carlisle and Matthew D. LaPlante

The Salt Lake Tribune

"Neighbors who want an explanation of what caused a July 11 mudslide and canal collapse that killed three people in Logan may need to hire attorneys. Logan's public works director said Friday that engineers are focused on the future of the canal and how to deliver water to farmers, not...." [View Full Story](#)

7-18-09

Rachel Wentz called me after supper tonight. From what she told me, I tentatively conclude: [1] Logan City removed the sandbag dam 4 feet high west of the canal rupture, but left another dam 1 foot high farther east near the rupture area; [2] The city hooked up the city's well, at Crockett Avenue and Canyon Road, and began pumping water uphill into the canal [I presume to supply water downflow for the farmers with imperilled crops]; [3] water backed up the canal to the low dam; [4] The spring on Rachel's property, immediately east of the city's well, began to flow profusely again; [5] water also appeared at the site of the canal failure, some distance east; [6] After the residents called in, emergency personnel appeared, and pumping from the well was stopped; [7] Sometime after the well was stopped, and water drained from the canal west of the canal rupture, the spring on Rachel's property ceased to flow. Her lower slope is very mushy and soggy, and she is concerned that the slope will fail there too. She [and Johann Covington] indicate that her home already had sustained structural damage, including obvious cracks in the bricks, shifted cabinets and door frames [such that doors would not close], pictures dropped off the walls, etc. The newest experiment of pumping water into the canal and renewing the spring flow, they think could have exacerbated the damage already done. Emergency personnel will not allow them close inspection, but Rachel is documenting as much as she can with a video camera.

These observations put a new possibility into play. Up until now, I was sceptical of the idea that leakage from the canal was the main cause rather than an effect of the landsliding. Now I am not so sure. I think that it would be worthwhile to establish sandbag dams 100 feet apart along the canal, and successively [say two days apart] fill the space between each pair with water, perhaps 2 or 3 feet deep, then introduce fluorescein dye, and see if [and where] the color appears outside the canal. The dye comes in red and in green, and perhaps other colors as well, so a staggered application of colors could provide more definitive determination of leakage sites, provided that the canal does leak. If the canal does not leak, that would be clear as well.

Bob Oaks

Comment S-64 (continued)

7-17-09 Thad Erickson

Bob,

I looked at all [of your] photos. I learned to rotate as needed and all of the rotation served to emphasize the contrast in the vegetation on the north versus south banks of the canal. The north side vegetation is of the water loving variety and these photos document that nicely. This illustrates the saturated north canal bank better than anything else, but there is other evidence such as the drainage pipes entering the north walls and the moss splash pattern on the concrete walls at the old water level in the canal. My guess is that there will still be plenty of springing up water under the canal between now and when they turn the water back in the canal. There should be a chance during this interim to get an idea of how much the canal was contributing to the saturation of the rightaway in relative terms at least.

Thad

7-17-09

Johann Covington dropped by today, and we talked for some two hours about the Canyon Road landslide. He wondered if the hillside might have moved downslope into the north wall of the canal, and thereby rotated it forward enough for a lot of water to leak northward from the canal, to add to the water already in the hillside, and also to erode out an area just north and steepen/weaken the hillside above. The presence of ground support remaining under the northern part of the canal at both ends of the rupture suggests to me that this method of failure may be less likely. Still, undercutting caused by piping beneath the check dam to the south caused failure at the Quail Creek reservoir near St George UT, so Johann's idea of creation of a cavity may have merit.

It seems to me that leakage from the canal as a cause of the saturation of the lower part of the hillside, prior to the slide and perhaps ongoing, is unlikely, based on the absence of numerous cracks in the floor and in the sides of the canal where the canal is still intact, plus absence of air bubbles or vortices along those cracks. If fluorescein dye were introduced where the water is held between the two sandbag dams west of the rupture, where the ground below is reportedly still wet and springs are/were present, the present integrity of that part of the canal against leakage could be tested. [Note later observations with Paul Riley, Fred Kiefer, and Erin Blissner, on 9-18-09, where we observed leakage both into and out of the canal.]

Bob Oaks

7-17-09 Implications and a Possible Solution for the Canyon Road Landslide by Bob Oaks

Rachel Wentz called me this morning. Her family bought and live in the home on Canyon Road immediately east of the Crockett Avenue well house. They are west of the October 1981 slope failure and even farther west of the most recent landslide. They have been evacuated from their home by Logan City officials, and have not been permitted to return. She said that they have a spring on their property that flowed strongly this year until the canal failed, but which is now dry.

Rachel also said: [1] the hillside behind their home is the steepest in that area; [2] the lower part of this hillside was mushy and spongelike while the spring was flowing [note that I found only a few linear seams in the floor of the canal above their home, and noticeable water entering the canal from the north side]; [3] one or more small slips had occurred on the hillside above them since they moved in; [4] there was a slip there the year before they bought, which was not revealed to them when they bought the property, despite a question about that possibility to their realtor; [5] there had been a forward motion of the base of the slope after they bought that pushed a concrete retaining wall, which they had emplaced, against the back of their garage, so that they had to use sledgehammers to break and remove the concrete and clear the area behind so that the back wall of the garage was not pushed in.

I started thinking about the thesis in the book, "You Can Negotiate Anything." The gist was to figure out what the other party NEEDS [not what they say they WANT, because what they think they want often is counterproductive relative to what they really need], and also figure out what you need, and negotiate from there. If the present landslide aftermath goes forward as it has in many other places, people will be at each others' throats, community cohesiveness [and individual careers] could be destroyed, lawsuits and a final resolution could take years [and be decided by a jury and then appeal judges, rather than be negotiated by the parties involved], and everyone [except the lawyers] could lose. I wonder if there might be a

Comment S-64 (continued)

better solution through negotiation of the needs of all parties involved. For example, the canal company would like to repair the canal and get water to the farmers' crops downflow. It is likely that the canal company, Logan City, UDOT, insurance companies [and personal-liability re-insurers for individuals], realtors, previous owners who failed to make full disclosure, etc., would like to avoid messy lawsuits. The homeowners would like to be back in their homes quickly, be recompensed for their damages, and know that they are less endangered than before.

A proposal based on these considerations came to me while talking with Rachel Wentz. Why not say this is tragic, and the powers that be have decided to ensure that this does not continue to happen, and that the people who are impacted will be made whole to the fullest degree possible.... Then the city, UDOT, the canal company, maybe Sen Bennett's \$400,000 grant, etc., could pony up the money [rather than pay lawyers much, much more in multiple lawsuits] to buy land nearby and move the endangered homes to several new sites. For example, there is a park west of Wilson School in that area, 400 East I think, where a classic old LDS church was removed some years back. Could that land be used to move some of the homes to, with the old homesites below the canal as the location of a new park? Eminent domain could be used to move recalcitrant homeowners who wish to stay. Alternatively, the owners could be permitted to stay if everyone who stays signs an indemnification to protect all other parties [Logan City, UDOT, canal company, etc.] against loss of property and of life, agree that their home cannot be sold in its present location, and agree that they are liable for all future costs, including moving the home to another site later or demolition of the home if it is made unlivable by future landslides and canal failures....

It seems to me that an approach like the above, which creates a win-win situation for all [except the lawyers] would make sense. The impacted people on Canyon Road [and many others in the community] would favorably view their local governments [Logan City, Cache County] as proactive and user-friendly, the canal company and UDOT as part of the solution rather than as part of the problem, and themselves and the farmers downflow as people who were well taken care of at a time of great need.

Bob Oaks

7-16-09 Observations of 11 July 2009 Landslide on Canyon Road, Logan, Utah, Made 15 July 2009

Dr. Robert Q. [Bob] Oaks, Jr.
Utah Licensed Professional Geologist 5212865-2250

A landslide severely affected a home at 913 East Canyon Road [water line about 3 feet high in the lower apartment], demolished the home immediately east [wherein three perished], and severely affected the home immediately east of that. I was told that the two homes not destroyed have been condemned by Logan City. The landslide took out about 100 feet of irrigation canal sited about 1/3 of the way up the steep escarpment that rises northward to U.S. Highway 91. The tear-away scar is above the canal, about halfway up the slope, and is irregular in outline and lower in the east than in the west. Upright trees and exposed roots below indicate that the upper part of the landslide remained intact as it subsided to the south, and rotated back to a slight slope toward the headscarp, and thus did not flow. Close approach was not permitted, but it appears that there now are two steps within the remains of the upper part of the landslide, both now about 10 to 20 feet, respectively, vertically below the base of the canal. An eyewitness, Johann Covington, helped extract the occupants of the lower apartment at 913 East Canyon Road during the landslide, and reported that the flow of water and gravel from behind was so great that it slammed the front door shut and blocked it, so they had to break the door down to get the two occupants out.

Johann told me that the upper part of the landslide originally obscured the now-bare headscarp. I conclude that the removal of the home and muddy lower mass has caused the upper part of the landslide to settle to its present lower level, and thus to more fully expose the headscarp. Sediments exposed in the headscarp, 4 days after the slope failure, appear dry. From a distance, they appear to be mainly gravels with about 3 feet of grayish soil development superimposed upon the uppermost part. A pipe that slopes about 28 degrees south protrudes from the upper one foot of the headscarp toward the east side, and is parallel to the upper slope. There is no flow from the pipe. That upper slope appears to lack a topographic step [which might indicate an incipient failure higher up, if present]. Still, the pipe might be ruptured higher up. A neighbor, Bob Hoth [with whom I have worked in Boy Scouts], told me that the pipe collects runoff from the USU parking lot above, and drains directly into the canal, based on the rolling of stones down the pipe at the top, followed by their appearance in the canal immediately below the pipe. If the pipe had separated higher and allowed water to enter the slope above the headscarp, I would expect that there should still be a wet aureole in the vicinity of the pipe. There is none visible.

The intact canal remnant [horizontal floor and vertical walls] to the west has attached, downward-curved slabs of concrete, in broken segments, eastward. Thus, there may be an internal stiffener. No rebar was visible from the road. Johann Covington,

Comment S-64 (continued)

who does general contractor work that includes cement, suggested that something as old as the canal might have had chickenwire inserted as a stiffener that might allow the slabs to remain attached as well as being curved. [A later visit with Paul Riley, Fred Kiefer, and Erin Blissner on 9-08-09 showed the presence of 1/4-inch rebar with spacing of 6 inches square in the canal floor and 1/4-inch rebar in the walls. The west edge of the canal break was at a section end/form line, where the rebar was straight-cut.] There was also at least one large, separated slab of concrete visible lower. There was no support remaining under the south edge of the intact canal floor for about 10 feet west. The visible canal remnant to the east also has curved slabs as well as one or more separated slabs below, and also has a southern portion of the floor that is unsupported. Johann suggested that the canal walls and the floor likely were poured separately, perhaps with the floor poured first.

Johann was not able to observe the upper headscarp immediately after the failure, and did not recall if the upper headscarp was wet [or possibly saturated] when it became visible later. He did observe that the lower part of the ground surface, below the canal, was very wet and mushy several days before the failure. The lowest part of the upper slump surface, at the east side and below the canal level, now has about 3 feet of dry materials at the top overlying about 4 feet [exposed, down to the backhoe-affected area to the south] of wet to saturated sediment that appears to be fine-grained material mixed with gravel. However, Johann did not know if this now-wet material was wet when it slid down, or became wet since, while in contact with the saturated muddy deposits immediately south, now removed by the backhoe.

Johann said that there was a loud crash when the concrete slabs from the failed canal crashed into the home and demolished it. [Johann said that he was at the front door of the home that was demolished, trying to rouse the occupants, when the failure occurred, and that he immediately turned and ran southwest, then helped the occupants escape next door.] He thought that there perhaps was a forward movement southward as the slump began, which may have severed the canal slightly and set into motion spillage of copious amounts of water from the canal that then fluidized sediment in the toe of the slump and thereby quickly led to the more catastrophic failure. Conversely, Wayne Bachmann, whose mother lives in the second home east of the condemned homes [975 East Canyon Road], and whose property was affected by a smaller slope failure upslope "...three years ago" [2005], said that he has photos that show many breaks in the part of the canal that failed, including the floor, which he believes leaked considerable water into the hillslope below the canal and led to the failure.

After my inspection of the canal, I concur with the hypothesis of Johann Covington. From the Crockett Avenue stairs up to the canal, east to the canal break, there are very few breaks along the bottom [floor] of the canal. All but one are straight lines, such as would mark the edges of forms when successive sections were poured, with the adjacent section tightly abutted when poured after the forms were removed. There are several irregular fractures in the north wall of the canal, at many of the straight lines across the canal and also elsewhere, most of which enlarge upward. These commonly have algal growths on the inside face of the canal, which would suggest that considerable leakage occurs inward into the canal along the north side. In at least one instance, water is flowing into the canal through one of these fractures. Weed overhang and near-vertical slopes made observation of the south wall difficult, but it appeared to have fewer fractures. There is a road along the top of an earth embankment about 10 to 12 feet wide that rises 1 to 2 feet above the south canal wall and buttresses the south wall of the canal.

A dam of sandbags about 4 feet high has been built across the canal, perhaps 300 feet west of the failure. According to Johann, this was to stop backflow eastward into the working area. Water was still entering the canal on the north side from at least one cistern [culvert] overflow pipe and one fracture to the east of the dam, so up to 2 feet of water [deepening westward to the dam] had accumulated between the failed area farther east and that sandbag dam. An operating pump with a flexible, small-diameter pipe westward across the dam appeared to have no water flowing through it. Thus, the canal floor held the water east of the dam, and at the straight lines across the canal floor, beneath this water, there were no air bubbles arising. There was no apparent seepage out despite the continuous cover of quiet water. East of the canal break there is another sandbag dam, about 1 foot high, which has ponded water upstream eastward. The overflow pipe of the Bachmann cistern [culvert] was providing water on the north side, which had backed up to near the top of the sandbag dam. Again, I saw no air bubbles in this water at any of the predominantly straight seams across the floor of the canal. [On 9-08-09, noted the separation of a form line just west of the eastern canal break, with complete leakage of water from the east.]

Both east and west of the canal failure there are a number of metal beams or pipes, some round, others square in cross section, that form braces from the top of the north wall to the top of the south wall of the canal. These replace older pipes that I observed after a similar failure of the north escarpment in 1981 a short distance farther west, but east of the Crockett Avenue well and stairs. Several of those older pipes had been bent upward at that time, probably by pressure along the north wall, likely caused by the geological process of soil creep, wherein the upper part of surface material moves downslope faster than the lower part, down several feet to a point where there is no motion downslope.

USU police chief Doug Johnson told me that a Logan employee has tested the water coming from the muddy landslide material at the base, and that it contained chlorine. If this is correct, and if USU uses canal water to irrigate campus, the

Comment S-64 (continued)

source of the water that caused the saturated lower slope might include at least some municipal water from irrigated lawns. Unless water carried by the failed canal contained chlorinated water, the canal might be exonerated by this observation. The thin aquitard about 30 feet below the top of the Provo-level delta, which Thad Erickson and I have documented in two places along the delta perimeter, could shield the slope to the south from some or much of the irrigation water used by USU. That aquitard likely pinches out eastward toward the mountains, so chlorinated municipal water from irrigated lawns there could get below the aquitard as it flowed westward. There is also the possibility that local water lines carrying culinary water may have been ruptured at the site involved here, and could be the source of the chlorine measured. A gas line was ruptured, and gas was shut off in the immediate neighborhood, according to Johann Covington, so water lines may have been affected as well. [Thad Erickson later researched this, and pointed out that chlorination "burns off" after a few hours, so that any chlorination present likely was from Logan City water introduced at the site, possibly through rupture of water pipes.]

Bob Oaks

Comment 65

From: [Bruce and Judy Godfrey](#)
To: [LNC-EIS](#)
Subject: Logan north canal project
Date: Monday, August 30, 2010 9:28:20 AM

I have also sent the following via "snail" mail.

Comments on the
Logan Northern Canal Reconstruction Project (EIS)

By:
 E. Bruce Godfrey



I recognize that NRCS is restricted in terms of procedures to be followed in an environmental Impact Statement. As a result, much of the information I wanted was not available at the time of the scoping meeting that was held in Logan Utah on Wednesday (10 August 2010). Five alternatives were briefly presented. I have noted these as: (a) do nothing, (b) 3100 North pipeline, (c) Lundstrom Park, (d) Highway 89 and (e) Island route. We were given the opportunity to ask questions but most of the specifics I wanted were "not available". I realize that answers to questions such as the following are not available at this time and will probably be addressed in the EIS. But, answers to these and similar questions are needed before I can reasonably choose an alternative.

1. What action, if any, will be needed to stabilize the hill below highway 89 where the Logan Northern Canal (LNC) failed irrespective of any action that might be taken to restore water to the users of the LNC? Can actions taken to stabilize the hill be combined to allow the LNC to use all or part of the old right of way?
2. What action, if any, will be needed to maintain the safety of the Logan Hyde Park Smithfield Canal (LHSC) if water for the LNC is not combined with the LHSC? Are there additional risks associated with the combined canals as the water is brought around the hill and before it passes through the Logan Golf Course?
3. Alternatives b and c, appear to result in the highest risk associated with getting water "around the hill" east of the golf course. It also has the largest impact on power generation for Logan City and work at the USU water lab. How might these losses be mitigated?
4. What are the expenditures associated with each alternative (b-e)
5. Will the alternatives noted above (all but the "do nothing") restore the water to the users of the LNC so the water rights are not diminished? If not, which one(s) will result in a change in water rights by who own shares in the LNC?
6. Will changing the diversion point alter the water right for the LNC users? This will be important in years when water is "short" for the Lundstrom, 3100 North and Highway 89 alternatives (I assume the old diversion point will be used for the Island alternative).
7. If seepage is reduced by piping the water for the canals (alternatives b, c, and d)
 - a. who will be able to use the "water savings"? Will current water users be the primary (only?) beneficiaries?

Comment S-65 (continued)

- b. what impact will the reduction in seepage have on lands that currently obtain this water seepage?
8. I do have unanswered questions concerning the amount of seepage "loss" that is or may occur with some of the alternatives. This "loss" may not be "lost" when a wider view is taken. For example, to what degree is this "loss" basically captured in lower parts of the valley (underground springs, etc)?
 9. Will both canals have to be "piped" in the longer run? If so, one of the "piping" alternatives (3100 North or Lundstrom park) may have an advantage at this point in time?

The following are brief reactions to each the alternatives noted above. The reader should note that additional information concerning all of these alternatives may alter all of my comments.

No Action Alternative

This is by far my least desired alternative. We have water shares in the LNC canal. It is also the east boundary of our property. One of the primary reasons why we purchased our home was that it allowed us to use secondary (canal water) instead of using culinary water for outside watering (lawn, garden, pasture) as we had when we lived in North Logan. The failure of the canal has had a major impact on how we use our property. We have essentially given up trying to water the south third of our property. The reduction in the amount of water in the LNC does diminish the value of our property and may make our water rights worthless if no action is taken.

While the above are personal concerns, there are some consequences that are more general with the "no action alternative" that need to be addressed because they affect more than just those having shares of water in the LNC. If use of this "secondary" (Canal) water is permanently lost the value of water rights in the LNC will be lost or diminished. This will also likely diminish the value of lands that previously used this water from the LNC. Those that have shares in the LNC will then have an incentive to "develop" these lands for other uses---this will primarily be farmers and homeowners that have depended on canal water to water these lands. As a result, these and future homeowners will be forced to use culinary water for lands that are converted to housing and "green space" will be lost. This will put additional pressure on existing city water systems, particularly Hyde Park and North Logan. This will raise the cost of water to others in these communities as additional capacity will have to be developed in the affected communities.

I should also note that tension between neighbors for what water is available in the LNC has become an issue. This is a social issue that may or may not be quantifiable.

3100 North

This alternative apparently results in the greatest "water savings" but, it is the least understood by those I have talked to. There seems to be significant differences of opinion concerning the need for "pumping" water south of 3100 north. This alternative also reduces the most number of miles/feet of "free flowing" canal water. This alternative would have the largest impact on those who view "free flowing" canals as an aesthetic reason for being near to one of the canals.

I do have some unanswered questions concerning this alternative in terms of getting water to those having shares of water and live south of 3100 North. Will those who have shares south

Comment S-65 (continued)

of 3100 North be able to receive water from piped water? Answers to these questions (e.g., will piping a large portion of the LHSC "dry up" springs in other parts of the valley) could alter my view of this alternative.

Lundstrom Park

This alternative has many of the purported benefits of the 3100 North alternative in terms of upgrading the canal structure east of the Golf course. In addition, a larger portion of both canals remain "free flowing" as opposed to being in a pipe. This is a positive aspect but, it probably does not yield some of the benefits in terms of capturing water "losses".

Highway 89

It is my understanding that this alternative like the Lundstrom Park and 3100 North alternatives changes the diversion point for the LNC to the current point of the LHSC and pipes water essentially down the highway. As a result, it does not address the apparent need to upgrade the LHSC east of the golf course. This alternative appears to be the most disruptive alternative presented in terms of the short run impact on transportation associated with the highway.

Island

It is my understanding that this alternative would involve piping water at the original diversion point for the LNC "around the hill" and putting it back in the original canal west of Utah State University. This alternative would be disruptive to people living in the area where the pipe would be installed during the construction period. It would however, maintain the original diversion point and probably the water rights associated with this diversion point. It would also maintain the flow of Logan River from the point of diversion of the LHSC to the LNC diversion point. This would not alter the impacts on the USU water lab of the Logan Power generation plant. It would likely involve considerable alteration of public services in the area of construction (sewer, water, communications, etc). What path will be followed for this alternative? Will all or most of the existing canal right of way be used? If not, I would favor an alternative that uses the old right of way to the degree possible.

Preferences

I have expressed some tentative preferences below as requested in the scoping meeting but, more information is needed before I can choose a "best" alternative.

My preferences in rank order (most preferred is listed first) are as follows.

1. My first preference is not one of the alternatives presented at the scoping meeting. If the hill south of the USU campus can be stabilized (e.g., drainage pipe or ?), I would favor construction of a canal, pipe or other means of conveyance that would restore water in the LNC using the original canal right of way with diversion at the original point west of the USU water lab. This alternative appears to have the smallest impact and will probably deliver water to the LNC water users in the shortest amount of time. If the hill cannot be stabilized, this alternative should not be considered.
2. My initial second choice is the Island pipe alternative that was briefly outlined during the scoping meeting. If there is need to improve the upper canal and there are "economies" in doing the work for both canals at one time, I may want to

Comment S-65 (continued)

- support my third alternative. But, I do not have the information needed to make a choice at this point in time.
3. My third choice is the Lundstrom Park alternative.
 4. 3100 North pipe
 5. Highway 89
 6. No action. The "no action" alternative is not a viable alternative unless the cost of taking some action is prohibitive/not cost effective.

Comment 66

From: [Nichols, Karen](#)
To: [Lance Houser](#)
Cc: [Lee, Susan](#)
Subject: RE: Canal Comments
Date: Friday, August 27, 2010 4:41:17 PM

Lance,

Please confirm that these comments are your personal comments...then we will log them in as from you, Mr. private citizen.

Thanks

Karen Nichols, PE, CPSWQ
HDR ONE COMPANY | Many Solutions
 3949 South 700 East, Suite 500 | Salt Lake City, UT | 84107
www.hdrinc.com

From: Lance Houser
Sent: Wednesday, August 25, 2010 1:43 PM
To: Nichols, Karen
Subject: Canal Comments

Karen,

While Logan City will have their own specific comments, I have the following about the scoping meeting.

- 1) Moving the diversion of the canal effects numerous water rights owners along the Logan River, particularly Logan Light and Power. This is a major socio-economic impact on the residents of Logan City that must be incorporated in the EIS. Possible solutions on these impacts are possible, but must be dealt with during this process as part of the EIS and before any permanent solutions can be met.
- 2) The canals involved has been collecting storm water from the time they were built. They were built during the late 1800s across the slopes and natural drainages. The canal companies and their share holders backfilled the drainages and brought them into agricultural production forever eliminating the natural drainage forever. Since that time, all drainage and irrigation take water above the canals became part of the regular operations. This responsibility existed before the cities even began to deal with storm water. The four cities involved with these two canals have already implemented storm water design criteria that will hold development and re-development to pre-development (defined as agricultural or native conditions). Within Logan City, these requirements are being strictly implemented. However, these criteria will not eliminate the impacts.
- 3) During this analysis for storm water impacts, alternate solutions such as the detention basins for overflowing the storm water flow and providing for emergency dump locations of the

Comment S-66 (continued)

canal if required in an emergency.

4) Maintain water delivery to all of the existing and potential users. This water use is part of of the economic heart of the entire valley, let alone Logan Utah.

--
Sincerely,

Lance E. Houser, P.E.
Assistant City Engineer



This space is intentionally blank.

Comment S-67

Comment S-67 (continued)

From: [Smart, Bronson - Salt Lake City, UT](#)
To: [Lee, Susan](#); [Warner, Terry](#); [Boyer, Jason - Salt Lake City, UT](#)
Subject: Fw: Logan Northern Canal Reconstruction Project
Date: Monday, August 30, 2010 7:05:30 AM

From: Shirley Joffs [REDACTED]
To: Smart, Bronson - Salt Lake City, UT
Sent: Sun Aug 29 23:59:29 2010
Subject: Fw: Logan Northern Canal Reconstruction Project

I sent this twice to Sue Lee at the address suggested and it has come back both times. b
 ----- Original Message -----

From: [Shirley Joffs](#)
To: LCN-EIS@hdrinc.com
Sent: Friday, August 27, 2010 12:43 PM
Subject: Logan Northern Canal Reconstruction Project

Sue Lee, Project Manager
 HDR, Inc.
LCN-EIS@hdrinc.com

As a taxpaying member of the public and citizen of Cache Valley, I want to thank those who are putting careful thought into handling the recent canal failure. I do have concerns that I appreciate the opportunity to voice:

First, since public funds are being used for this project, the money spent both now and later must be carefully targeted at the specific problem, i.e. the failure of the lower canal. While the canal company does need to maintain the entire canal system properly, these funds were not targeted for that. The option that encloses the Logan Hyde Park 'Upper' canal, is, it seems to me and many others, expensive overkill and misuse of these funds.

Next, no decisions should be made until the responsibility for the deaths caused by the canal failure is determined. I cannot understand how a leak that was known about, discussed and ignored can be deemed an "Act of God". The final ruling would help to determine, who, indeed, is responsible for repair. At any rate, should public funds be used, they would be for "Emergency and Protective" repair and not for totally revamping the canal system and making what could become major changes for the environment and ambience in Cache Valley.

Third, our property backs onto the canal, sans water rights, and the location comes with a responsibility to maintain our 'half' of the canal bank and its environs. We spent over \$7,000 building an extensive rock wall and fence 3 years ago. While we had to have approval from the canal company, no one offered to help us with the expensive project of maintaining the integrity of the canal. We enjoy the water and wildlife that live on and near it and were willing to take care of our portion of it. I am concerned that we will have no say in how any changes are made to the canal and how it will affect our property value and our everyday enjoyment of our yard and home. The price we paid for our home was partly based on its being "on the canal."

Fourth, our neighborhood, Green Canyon Cove, was built with an agreement, as I understand it, that storm drainage would be allowed to run toward the canal. In the past few years much growth and additional drainage has taken place east of the canal and east of where we live on 1700 East. A large part of the drainage in this area comes directly to the canal in a drain on the side of our property. What assurance will we have that water would be allowed to drain from our streets and waterways and not overflow our streets and flood our basements? It seems like it would be an expensive process to hook drainage to the canal if it is encased and covered. How will the area around where the canal is now be maintained if it is enclosed?

Fifth, quoting Thad Box in the Herald Journal on Aug 15, 2010, I agree "the general public has a cultural 'right' documented by well over a hundred years of peaceful use of the canals...and the lifestyle enhancement" ...that it provides. While it is the opinion of some people that the trees and life along the canal "use up" or waste the water, I feel that it is essential to this valley to share the water with wild life and air-cleaning foliage. We will be saddened in the future when the larger trees along the canal route from the Golf Course to 3100 North Street die from lack of water. Ecologically it is a time to plant trees, not dehydrate and lose them. We have the dirtiest air in the nation now. Let's not make it worse. I fear that losing trees and the canal will be a serious environmental loss to the valley. Trying to squeeze every drop of canal water out to the end user is a serious mistake. I hope we will have the foresight to consider all of the people in this valley, not just the people with water rights, and take care of the problem in the least costly, least invasive way.

And finally, the clean power source that Logan would be losing with some of the plans will likely have to be made up by burning more polluting coal. In addition, I wonder if we won't all have to pay more taxes to defray the peripheral costs that will inevitably come up if the expensive option of enclosing and lining the upper canal and is taken.

I ask that those in decision making positions have an open mind and take the time to study the entire issue of water in Cache Valley. The University is a rich source of information to be pondered and considered. Many experts there know the valley and they know water. Bring their expertise to bear and don't make decisions that we will regret. A big part of the uniqueness and beauty of this area is the open canal system. Repair it, protect it, maintain it, but don't destroy it. If you walk the Bonneville Trail, beginning in Green Canyon, it is easy to see the trees and foliage that the canal has spawned. It would truly be a loss to have them no longer.

Sincerely,

Shirley Joffs
 [REDACTED]

Comment S-68

From: [Smart, Bronson - Salt Lake City, UT](#)
To: [Lee, Susan](#); [Warner, Terry](#); [Rooper, Jason - Salt Lake City, UT](#)
Subject: Fw: ER-10/0635 -- Logan Northern Canal Reconstruction -- no comments
Date: Monday, August 30, 2010 9:40:36 AM

----- Original Message -----

From: [REDACTED]
To: Smart, Bronson - Salt Lake City, UT
Cc: [REDACTED]
Sent: Mon Aug 30 10:34:50 2010
Subject: ER-10/0635 -- Logan Northern Canal Reconstruction -- no comments

The National Park Service has reviewed this project (ER-10/0635), and determined that no parks will be affected; therefore, we have no comments.

Thank you!
 Julie

~~~~~  
 Julie Sharp  
 Planning Tech/Environmental Protection Assistant  
 National Park Service - Intermountain Regional Office  
 Denver, CO  
 [REDACTED]

**Comment S-69**

**From:** [Kevin Connors](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal, Public Comment  
**Date:** Monday, August 30, 2010 10:18:16 AM

Dear Sue,  
 Hi. Thank you for talking to me at the public hearing in Logan about the Logan Northern Canal Reconstruction Project. I live at [REDACTED] Canyon Road in Logan. I have (had?) water rights in the canal behind my house and used the water to irrigate my yard. I was glad to hear that the water users along Canyon Road were not being ignored and that canal water may be restored. I was told about a pipe underneath Canyon Road that would be accessed by current water right holders might be installed. The old canal above my house had gravity flow pressure that was very good and I was told that a pipe in front of my house, but under Canyon Road, would also have pressure enough to irrigate my property. With my limited knowledge, any option that restores water to my water rights is good, whether it be a pipe under Canyon Road or a pipe in the canal above my house.

I am not an irrigation engineer, but I wonder if water is piped under Canyon Road, would there be enough pressure to push it up the Dugway and into the existing canal thus restoring normal flow from that point down the canal? I assume that with a pipe under Canyon Road and restoration of water into the canal at 400 N and 600 E, then no other modifications or improvements to the canal would be necessary, thus the only costs and impact would be along Canyon Road and the Dugway.

Thank you again,  
 Kevin Connors  
 [REDACTED]

Comment S-70

Comment S-71



United States Department of Agriculture  
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project  
Public Scoping Comment Form**

Name: Bob Wilhelm  
Address: [REDACTED]



REG: AUG 30 2010  
PROJ: \_\_\_\_\_  
FILE: \_\_\_\_\_  
DIST: \_\_\_\_\_

Comments can be submitted to:  
Sue Lee, Project Manager  
HDR, Inc.  
3949 So. 700 E., Suite 500  
Salt Lake City, UT 84107  
Fax: (801) 743-7878  
E-mail: LNC-EIS@hdrinc.com

**Deadline: August 31, 2010**

What environmental issues and impacts are you concerned about?  
Please be as specific as possible.

*Having worked on the Logan, Hyde Park, Smithfield canal for many years, doing cleanup & maintenance, I have a few thoughts and facts to share. I have also had a lot to do with the Logan Northern as my family has owned shares in both canals for many years - I worked most on the canyon portion of the L, HP & S canal, and can honestly say that the deterioration of the canal walls & maintain steps above and below show only one solution - the canal must be piped! Tubers & others have and continue to roll rocks into the canal & it's only a matter of time before the walls give way & there will be no canal. Yes I love the open water & all it does for surroundings, but a pipe is a necessity. We worked hard all these years trying to slow leaks & prevent breakage - it is obvious it must be piped securely. As for the canal serving wildlife & preserving such things - remember the canals only have water in them about 5 months of the year. I work with wildlife professionally - the deer will go to the river to drink. Drinkers could even be installed for areas where needed. Wildlife will continue to thrive & will obtain water from irrigated areas & many species here now that didn't come down this far until the suburbs created islands & corridors now irrigated.*

Public comment re: EIS in connection with alternative plans to join the Northern canal and the Smithfield, Hyde Park & Logan canal.

There should be only one plan and that is to re-connect the broken section of the middle canal and get water flowing as soon as possible. This should have been done last year. Instead, the governors of the Middle and Upper Canal saw an opportunity to build a greater canal system, called the "preferred plan" using almost 20 million dollars of federal money and local matching dollars for a total of 27 million. There is yet to be any accurate costs and now an EIS is underway which could take years to complete before any approval for any plan and the 27 million dollar estimated cost will surely continue to increase. Meanwhile, the middle canal is being supplied by water diverted by the upper canal. This canal is carrying more water than it can reasonably handle and leaks are now flowing across the Logan Country Club fairway next to the canal. It's possible that a break could occur; if it does, everyone will be without irrigation water. This could be a far greater disaster than the initial loss caused by the middle canal break last summer.

The are significant impacts of rebuilding and expanding the upper canal. One is the impact upon private properties and property values bordering both sides of the canal. There are also impacts with the potential loss of wildlife habitats that have developed along the canal for over one hundred years. These impacts don't exist if the middle canal is re-connect and flowing again.

Re-connect the Logan Northern Canal as soon as practicable and get water flowing independent of the upper canal.

Dean Candland  
Logan Ut



REG: AUG 30 2010  
PROJ: \_\_\_\_\_  
FILE: \_\_\_\_\_  
DIST: \_\_\_\_\_

1

Comment S-72

Comment S-73

August 28, 2010

**HDR**

REC: AUG 30 2010  
PROJ:

TO Natural Resources Conservation Services HDR ENGINEERING  
U. S. DEPARTMENT OF AGRICULTURE and 3949 South 700 East Suite 500  
125 South State Street Room 4402 Salt Lake City UT 84107  
Salt Lake City UT 84138

Attn Bronson Smart Sue Lee / Alana Spendlove  
State Conservation Engineer

FR Lydia Eby mail to [REDACTED]

RE Logan-Northern Canal Reconstruction Project (Caché County, Utah)

These statements are submitted as public comment to the EIS for this project. I represent one percent (1.0%) of the shares of LOGAN, HYDE PARK AND SMITHFIELD CANAL COMPANY (LHPS Canal), the canal which has supplied irrigation water to our land for more than 50 years. \*\*\*Please assure that we receive copies of all information on this Project until it is complete.\*\*\*

Our family joins in shock and sympathy for the slope failure in July 2009 which caused such damage – to the Logan-Northern Canal (L-N Canal), to Canyon Road and particularly to all who lost life, loved ones, property and service.

We supported the temporary use of LHPS Canal to carry water to L-N Canal users; however we are concerned that it is targeted (touted, even loaded) as the solution, a permanent arrangement. Should diverting L-N Canal water into LHPS Canal be identified as the more viable alternative:

- we support modifications to Reach 1 so long as water allocated for irrigation is delivered to all shareholders on each canal -- uninterrupted, annually, consistently, safely.
- we favor Alt. 4 (all our headgates are in North Logan) but we need more information -- on the project, its statement of solution, its scope, its engineering, its continuous delivery of water to all users on both canals, its complete, done, delivered date, -- on the costs, estimate of total & per-share, allocation, payment schedule, before we can make the decision on participation.

We have no direct interest in the L-N Canal, only its historical place in the community, but we do not support Alt. 1 because of delays & disruptions to U.S. 89 (which is of course higher but still follows the slope which failed). Alts. 1 and 2 each return water to L-N Canal but there is no info on whether service on the Island (both Alts.1 & 2) or south of 1400 N (Alt.2) will be restored.

History and use information on both L-N Canal and LHPS Canal is in their Minutes and from current/past officers, in documents at USU (Special Collections, Water Lab, theses, other research), at Cache Historical Society and at city(s) and County published histories. Logan Light & Power has recent experience piping river flow from Second Dam.

NOTE There are factual errors in the noticed EIS Intent: BACKGROUND The slope failure was above Canyon Road which is not "south" Logan. REACH 2 is all within the City of Logan. REACH 3 Lundstrom Park is in Logan, 3100 North is in North Logan at LHPS Canal and in... ah, turns out I don't know if it's in North Logan, Hyde Park or the County at L-N Canal.

LE/bh

Name: Polly Richman  
Address: [REDACTED]

Attn.: Sue Lee, Project Manager

I am submitting this form by email rather than on the paper form that my neighbors brought to me after they attended the public meeting. I hope this is acceptable.

The form asks what environmental issues and impacts I am concerned about.

I am aware that three people were killed by the failure of the Logan Northern (lower) Canal last summer. I live on the Logan Hyde Park Smithfield (upper) Canal. (For purposes of clarity and brevity, I shall refer to the two canals as lower and upper in the rest of my response.) I live on the uphill side of the upper canal and wonder what would happen if "my" canal broke. Regarding the lower canal, it seems to be a foregone conclusion that the money from the government cannot or should not be used to repair it. But no reason has been given for this assumption. Instead, the further assumption seems to be that the only solution is to dump the lower canal into the upper at some point and then split them again at a further point. The various solutions seem to vary mostly about where those points should be. I am also concerned about breakage possibilities on the upper canal. I have noticed that there has been more water in the canal this year than last. This has made "my" canal not only deeper but also wider. Is it safe for the upper canal to carry so much water? Will piping make it safer, less safe, or about the same? Since answers to these questions have not been forthcoming, perhaps the environmental impact statement (EIS) required for public funding will provide them.

Meanwhile, I have a suggestion for dealing with the safety issue that would preclude having to bury and pipe any part of the canals and that would also provide some much-needed permanent jobs for this community. I suggest that all of the canals would benefit from proper monitoring and maintenance on a regular, ongoing basis. If the canal company cannot or will not provide this, and since public money will fund the greatest share of whatever solution is adopted, perhaps it is time to involve the public to a greater extent in the management and maintenance of the canals. There are several good reasons for considering a greater role for parks and recreation in managing, maintaining, and improving the canals for the public good.

1. Recreation. I have seen many families float past my yard on the canal, laughing and having a great time. It seems to me that the recreational use of the canal is a really great public service. I doubt that people would have near as much fun in a cement-lined, public swimming pool, or even in one of those elaborate, expensive, man-made slide-waterfall-river water parks that have made their appearance in the Salt Lake Valley in recent decades. One of my neighbors recently commented about the canal proposals that "[Floating the canal] is the last free, fun thing for people to do in Logan. Now they want to take that away from us." I thought about what it must cost for a large Utah family to go to one of those fancy private water parks and agree that the canals are a much better deal. Of course, I'm sure that there are those "entrepreneurs" among us who can be counted on to cry "foul" and "unfair competition" at anything which interferes with their holy, God-given right to make a buck. There is a walking path along the edge of "my" canal. I love to see couples, families, friends, dogs, etc. out walking the canal, enjoying the cool, refreshing presence of running water as they get some exercise. It's a pity the path doesn't go

**Comment S-73 (continued)**

the full length of the canal. How nice it would be to be able to walk all the way to Smithfield beside the waters of the upper canal! For that matter, how nice it would be if there were walking paths along all of the canals. Maybe all of us would be motivated to get more exercise.

2. Flora and fauna. No doubt about it. The canal attracts its share of both. Some of them are an asset; some are a problem. But with a little cooperation between the community, the experts, and the canal company, I see no reason why the flora and fauna issues couldn't be managed for the mutual benefit of all. For example, as a person whose yard is bordered by the canal, I have to deal with landscaping issues that are sometimes overwhelming. Frankly, we canal-livers could use some help. We'd like to help out the farmers and the canal company by reducing the high water-use plants that take too much water from the canal. There needs to be more information available about landscaping possibilities for canal-livers. Perhaps the university's horticulture/agriculture experts could lend a hand and fulfill their public service obligation by offering advice. Likewise, farmers should be encouraged to plant less thirsty crops whenever possible, thus reducing water loss from their end. This is a capable, well educated community. We ought to be able to come up with workable solutions that keep the canals a multi-use community asset.

3. Water in a dry land. I moved to Logan two years ago from West Texas--flat as a pancake, not a mountain, not a tree, very little water. Our drinking water came from a shrinking mud puddle of a lake and tasted so bad we had to buy bottled water. Water in a dry land is a blessing, a gift. These canals were given to us by the early pioneers, who came to this valley that was already blessed with three rivers, took one of them and split it up and sent it flowing through the valley so as many farms as possible could benefit. The emphasis was on sharing. That's our heritage. We ought to want to preserve it. It's a visual lesson for our kids. Look what we can do when we work together as a community!

4. Aesthetic values. As I implied before, there's something about water flowing through a city that makes it a more pleasant place to be, to walk, to shop, to gather. Look what the River Walk did for San Antonio! City Creek, which has been buried beneath Salt Lake City for as long as I've been alive, is being resurrected! Why? Because somebody figured out what open waterways can do for a dying city. When I was in Amsterdam, I paid more for a room on a canal. Same in Venice. People just naturally want to be near water. It cools the hot summer air and offers relief from the relentless heat of all that concrete. The sound of running water is like magic. You can even hear voices in it if you listen hard enough. How cool is that?!

I could go on. But you can probably guess what my preferred solution is: I'm for whatever leaves the canals open and flowing freely through this community. Whatever solution is found, it will be paid for by all of us. It shouldn't just benefit the canal company and its private customers. How many cities in America have canals running through them? The canals have made Logan what it is. Let's keep it that way.

**Comment S-74**

Sue Lee  
 HDR Engineering  
 3949 South 700 East, Suite 500  
 Salt Lake City, UT 84107  
 801-743-7811

Sue Lee,

My name is Marta DeBerard and I am a citizen of North Logan, Utah. We have owned our home in North Logan for over 9 years and we are shareholders in the Green Canyon Sprinkler Company which draws it's water from the upper Logan Northern Canal Company. I also served as the Vice Chair of the North Logan Park and Recreation Board and as Chairperson of the North Logan Trails Committee from 2007 to 2010. I see North Logan as a community greatly impacted by the proposed Logan Northern Reconstruction Project and appreciate the opportunity to voice my environmental, cultural and financial impact concerns for each of the proposed options.

I have comments below regarding options 1-3 and recommend an additional option as well. My strongest opposition is to option 4. I find the idea that the Cache County Council and the Canal Board favor this option deeply disturbing as it completely removes the environmental and cultural values of the upper canal for North Logan citizens, is fraught with ethical issues on the interpretation of the EWP program, has a high economical cost for taxpayers and shareholders, and does nothing to restore water to shareholders along Canyon Road in Logan.

**Option 1:**

The benefit of this option is that it seems to stay within the intent of the EWP program. It offers repairs on the section of the canal that had sudden impairment. It offers personal safety and property protection for those who live on Canyon Road below the middle canal hillside. It leaves the majority of the upper canal, which has had no "sudden impairment," alone which I feel is consistent with the mission of the EWP program.

The concerns of this option include the effects on the hydro-electric production capabilities for the City of Logan, effects of water flow for the USU water research lab and the disruption that the occur along heavily traveled highway 89. Other concerns of this option are that shareholders along the upper Canyon road do not get their irrigation source renewed under this plan and it still repairs portions of the upper canal which do not seem to meet the "sudden impairment" qualification to use public funds for repair. I question whether the cost and traffic disruption of this option is necessary.

It seems that a different option (not currently offered) of repairing the current middle canal without burying a line under highway 89 would provide water to all those who had it before, could still provide a safe option and would maintain the environmental habitat and keep in tact the non-motorized trail that has been a cultural amenity for Cache Valley residents for decades. Residents have long used this popular trail as non-motorized access to Logan Canyon and Utah

**Comment S-74 (continued)**

State University. What happens to this trail under option #1? What happens to shareholders who will not have their water source repaired under this option? What is the environmental and financial cost of removing low-impact hydro-electric power and replacing it with power from coal powered plants?

**Option 2:**

The benefit of this option is that canal water is restored to much of the middle canal. I favor this option over option 4 as it does not disrupt the entire earthen canal through North Logan. The section piped here is already lined with concrete and the effects of enclosing it in pipe may not be as devastating as in option 4. However I see many concerns with this option as well.

This option eliminates water access to shareholders below the middle canal hillside on Canyon Road. This does not seem to follow the intent of the EWP program as it would certainly cause drought like conditions for properties who had previously irrigated with the canal. This option also does not address what will happen to this same section of historically used trail. Would the middle canal area along the hillside be left as is, would it be sold to the city as a public trail? Option 2 leaves residents along the upper canal with a cement pipe box in their backyard or along their trail instead of an open waterway. The trees in the backyards of these residents and along sections of the golf course would lose their water source and most likely die. What would this cement pipe box look like? Would it be buried or left open for maintenance? Would there be storm water drainage issues that would be addressed and how? This summer the governing board of the upper canal company and the middle canal were linked as a way to apply for and receive these funds, but this is troubling as when the disaster occurred these canal companies were separate. The upper canal did not have a "sudden impairment" in this disaster and yet this option has the federal government paying for upgrades to the upper canal. These upgrades should fall to the canal company and as I shareholder in one of it's sprinkler companies I would like to know how much this option would cost me. This option also changes the diversion point of the middle canal to that of the upper canal. Taking more water higher up in the river will impact Logan's hydro-electric plant which is an important sustainable energy option for the City of Logan. This is a significant environmental impact as residents of Logan will be forced to purchase more coal burning electricity sourcing to compensate for the lost output from the hydroelectric dam. The Logan City Council recently approved a resolution that would avoid purchasing power from coal plants and this would be an option that would go against this policy and against the public will.

**Option 3:**

The benefit of this option is that it does follow the published intent of the EWP program funding as it deals directly with the section that had sudden impairment. It leaves the same diversion point which keeps the hydro-electric plant at the same output. It leaves the upper canal in its original form with trail ways present and future intact. Of the options presented, I find it the most ethical. I do however, feel that a different option of fixing the portion of the canal that is along the Canyon Road hillside would be an even more preferred option that is truer to the published intent of the EWP funds. Repairing the existing canal would not disturb heavily used Canyon Road, it would stay within the published guidelines of EWP and would be the most cost-effective option for public funds.

**Comment S-74 (continued)**
**Option 4:**

As a citizen of North Logan I am strongly against option 4 because it would completely alter our community. North Logan City's vision statement reads as follows, "The citizens of North Logan are dedicated to providing a safe clean environment, conserving our resources, preserving the beauty of our scenic areas, maintaining open space, and keeping a small town rural feel." The canal system is at the heart of that vision. In North Logan we value the canal system for multiple reasons: Economically it provides us with low cost water for our garden and lawn. Environmentally the century old canal system is like a series of streams running through North Logan. The earthen canal creates a scenic corridor of wildlife and plant life, it provides important cooling in the hot summer months with the larger trees that can survive by its banks. Culturally it is a critical aspect of what a 2005 community survey found North Logan residents value most about their community; the rural feel. In North Logan the canal is a welcomed feature to the backyard of many residents, including the home of my parents where ducks fly in to float and feed, a marmot hides in tall reeds and frogs croak on a summer evening. It is a place where kids float down on a tube on a hot summer day. In the almost 20 years that we have lived in Cache Valley, there has not been a single incidence of a child drowning in the canal.

The canal runs through private property but the canal company's maintenance easement has historically created a 12 foot wide public trail system where horseback riders ride, citizens walk, run, bike and cross-country ski. Many North Logan residents would like to see this historical public trail system enhanced in the future. The 2005 North Logan Community survey found that 87% wanted walking/jogging paths developed or expanded, 81% wanted bicycle trails developed or expanded. The most likely and cost effective option for expanding trails in North Logan is through the canal system. The inter-local meetings I have attended in the past few years point to the upper canal as the most likely to support a trail system that would connect from Logan through North Logan, Hyde Park and into Smithfield. This would be a pleasant walking trail along trees and water that could connect from Logan Canyon to Smithfield and a critical public amenity. To that end, all three North Logan canals are listed as present and future trails on our North Logan and Cache County trail system master plans. Already putting that plan into action, our city has an ordinance that requires a trail easement along the canal when any property that borders the canal is developed. Much of the property bordering the upper canal will be developed in the next 10 years. As the population of North Logan is predicted to double by the year 2020, there will be increased need for citizens to have walking and biking paths that are not along increasingly congested roads. Numerous studies from the USU planning departments and Envision Utah have recommended that any future trail system be based on the canal system. Studies show that trail systems enhance the surrounding property values. Option 4 puts cement pipe box right down the middle of those rural trails, kills the trees surrounding the canal and damages property values to residents along the canal. Any option that is chosen for the canal restoration project needs to answer to the public need for these corridors to remain available and usable as the trails that they have historically been.

Option 4 does not follow the intent of EWP. The funds would be providing an upgraded canal for farmers on a canal that did not experience a "sudden impairment." This has been publicized to be the Canal Company's favored option. We have been told by the canal company president, that this option gives us a "gold-plated canal" on the government's dollar. That seems to be an unethical use of public funds that is not in line with the EWP mission. If the Canal Company

**Comment S-74 (continued)**

wants these upgrades to the upper canal, they should be paying for it on their dollar. I would like to know exactly how much money each individual shareholder, like myself would need to pay for this option.

This option does not provide water use for shareholders along Canyon Road below the canal hillside. This option affects the hydro-electric power capabilities of Logan residents adding cost and environmental impact to each resident and shareholder. If there is a increased pressure to the water in the middle canal will it not also need to be piped? This has been an unclear aspect to the proposed option and residents deserve to know what the full plan would entail.

I have heard the argument that option #4 provides the safety of a covered canal. This argument of safety is an interesting one. I am sure that statistics would support that a non-motorized pathway by water is still significantly safer for children than streets. A covered cement pipe box is a water project that belongs in an area of farms not the residential area that North Logan is and plans to be.

Ultimately the canal is a critical characteristic that gives a growing, residential North Logan a rural feel, that sense of place that makes North Logan feel like home. How would option 4 affect these environmental, economic and cultural values? Would the rural nature of North Logan be forever taken away by the greed of several end users who want more pressure to enhance property values? What would the finished cement piped system look like? Where would storm water drain in neighborhoods like Green Canyon Cove where the canal is the only storm water detention option? What type of damage to personal property would occur? Would the reconstruction include finishing with landscaping or would residents be forced to look out onto a concrete box pipe and a pile of dirt where before they looked out on trees and ducks? Would the pipe system be buried or would it be open? Would storm water pool in open ditches to form issues with mosquito abatement?

The true cost of this option to North Logan citizens seems enormously high. The benefits of this option seem unfairly skewed to those shareholders in Smithfield and farther north who would get to keep their open canal and get increased water pressure to boot. Our Cache County Council has strong representation from the larger irrigation users. But as the NRCS states in it's overview of the project, it is "several shareholders" who have been affected through the non-delivery of irrigation water. These several shareholders should not be viewed to have greater import than the Cache Valley community at large.

I hope that you will review these comments and hear that it is not just the voice of a few but the cultural, social and environmental benefit of many that are at stake in this reconstruction project. I hope that you will choose the option that honors the ethical use of public funds. Public funds that should protect the amenities of the many and not the interests of a few. Using EWP funds to repair the canal segments that suffered "sudden impairment" seems the best option.

**Comment S-75**

**From:** [Sales](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal reconstruction project  
**Date:** Monday, August 30, 2010 4:46:11 PM

Attn: Sue Lee, Project Manager

Hi Sue,

My name is Clyde Anderson and I have lived on Canyon Road, in Logan, below the Canal for 81 years – basically my whole life. In that time, I have seen many changes in the irrigation canal. When I was a teen, before it was improved with concrete, it was just built of wood and soil. All along the canal there were wooded flumes that collected and carried the water from the natural springs from the north side of the canal into the canal itself. Over the years, with new property owners moving in all up and down the Canyon Road section of the canal, many of the flumes fell into disrepair and disuse. But the water from the springs has remained fairly consistent. That water draining into the canal has been there long before the houses or the USU expansion. When USU was just Old Main and a few other buildings, there was nothing else up there on that bench, and the water flowed just as freely back then. Now, in many spots, the water collects behind the concrete canal and eventually spills over, or comes under the concrete slab. Both of these situations are less than desirable as this is most likely the cause of the canal breach last July.

Having participated in the discussion and debate over what to do with the existing canal, and how to deliver water to the shareholders (I am a shareholder), I find it disturbing that no one has addressed this issue of what to do with all the water that flows into the canal from these springs. Believe it or not, my son and I (and also our neighbor to the east) were able to water our property twice per week last year after the canal breach from all the excess water that drained into the canal from these springs. At any given time last August, we had anywhere from 6-10 inches of water in the bottom of the canal behind our homes. That water needs somewhere to go. With all that standing water last season, we dealt with mosquitos, moss, and swamp stink for most of the summer, but at least we could use the water! As the plans are discussed now, a pipe down Canyon Road or down the existing canal will do nothing to alleviate the problem that caused the canal breach in the first place. We will be stuck with water collecting behind the canal wall or coming underneath, possibly creating another situation for a slide if we have a very wet season like we experienced last year. We feel that this is potentially our biggest concern, (aside from delivering water to all the other shareholders) and my son feels the same way (he and his wife are also shareholders). What will be done about the spring water if the irrigation water is pressurized in a pipe, either down the canal or down Canyon Road? Stagnant water, mosquitos, and stink and more landslides are not welcome in our neighborhood.

Despite what all the engineers involved in this project believe about the dangers of this canal, in our opinion, if the canal were put back, shored up, and lined to decrease seepage, and all the multitude of springs were captured and diverted into the canal itself, then we would have a system in place that will cost less money, solve most of our current problems, and prevent a recurrence of the horrible catastrophe that we experienced last spring. In all the time I have lived in the "shadow" of the canal, I have never felt fear of it breaking. Every time that there has ever been an

**Comment S-75 (continued)**

issue with the canal, the water it carries, and surrounding property, it has always been as a result of these natural springs building up over time and causing a slide that has filled the canal, or washed it out. The problem lies with the springs, not the canal. Fix the springs, put the canal back, in an improved form, and we will have a system that will carry our water without incident for another 100 years.

Thanks for your time and consideration. Please call or email with any questions or concerns you might have.

Clyde M. Anderson



Mark A. Anderson & Ronnette F. Anderson



**Comment S-76**

08/30/2010 17:01 FAX [REDACTED]

Cache County Corp.

002/003



P.O. Box 3501 Logan, Utah 84323-3501  
<http://www.bridgerlandaudubon.org>

29 August 2010

To Whom It May Concern:

Bridgerland Audubon Society offers our assistance to decision makers regarding the Environmental Impact Statement on the proposed canal system to replace the North Logan Canal that recently ruptured and seeks further participation as an interested stakeholder.

Bridgerland Audubon represents some 300 community members in southern Idaho and northern Utah with an interest in conserving habitats of all kinds, including protecting agricultural lands from development. We have a good history of working with private landowners on issues of shared concern. Our stated mission is: "To conserve, enhance, and enjoy the natural environment with special emphasis on birds and their habitats for the benefit and education of humanity and for the biological diversity of the Earth." We are a chapter of the National Audubon Society.

We are concerned with dewatering the abandoned canal and the loss of trees and shrubs on both the new and old waterways. We are also concerned with diverting water from the Logan River into the upper canal and dewatering the river below Second Dam in order to supply water to acreage whose extent apparently has not been determined--3500 acres or 7000 acres? This diversion will also decrease hydro-power to the citizens of Logan, as well as affect the function of the Water Research Laboratory. We formally ask to be included in the decision-making process. We formally ask for notices of stakeholder meetings, public forums and any other relevant meetings and/or information. We do so as an interested party.

We can provide you with data concerning plants and wildlife along the proposed routes, data that we believe will help all involved arrive at an acceptable solution.

As well, some of our members have years of experience in National Environmental Policy Act (NEPA) documentation and process, a process that, in regards to proposed changes in the Logan Canal, appears to have been, at the least, flawed.

There appear to be many facets of the current NEPA process that are subject to legal action. We raise this as a concern not a threat. The most obvious is not allowing comments that disagree with a predetermined outcome as occurred at the last Scoping Meeting. The only way disagreement was voiced was talking to a Recorder who wrote down the complaint. Since these

Received Time Aug. 30. 2010 5:06PM No. 1672

**Comment S-76 (continued)**

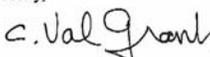
**Comment S-77**

08/30/2010 17:02 FAX [REDACTED] Cache County Corp. 003/003

complaints were not permitted a public voice (there was no allowance for public discourse), the process has already violated legal NEPA precedents. There is a distinct taint of "the old boy" network being in play; for example, there is still water (a few cfs) running in the ruptured canal to a location above some newly constructed garages on Canyon Road where the water then flows under Canyon Road into a recently built residence. There may be some problem with this use, and it speaks to the need to strongly consider repairing the canal and continue to supply long-time users with their water while at the same time taking conservation matters into serious consideration. It appears for all intents and purposes that the conclusion to the process was made some time ago, and that, for some, public input is merely a nuisance, causing untimely delays to a goal not everyone in the community accepts. NEPA requires public input and does so in very particular ways. While this may be an irritation to some in the public and private community, this law must be respected, and we trust that the appropriate actions to rectify a flawed process will be undertaken swiftly and with a sense of civic engagement rather than expressions of irritation or even hostility.

We request formal written notification of the receipt of this letter as well as written acknowledgment that this letter will be placed in the public record for the ongoing NEPA process.

We look forward to working with all stakeholders in a congenial fashion in order to both follow the law and arrive at a mutually satisfactory solution.

Sincerely,  
  
 C. Val Grant, President  
 Bridgerland Audubon  
 P.O. Box 3501  
 Logan, UT 84323-3701

Received Time Aug. 30. 2010 5:06PM No. 1672

**From:** [Robert Schmidt](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal Reconstruction Project comments  
**Date:** Monday, August 30, 2010 7:01:33 PM

---

Sue Lee:

Thank you for accepting comments regarding the Logan Northern Canal Reconstruction Project. This is a major investment of federal funds --- OUR money -- and thus is worthy of the greatest scrutiny.

I am particularly concerned about the loss of riparian habitat from a number of the canal project alternatives. To use these public funds to permanently alter and destroy existing habitat for wildlife and plants bordering the exposed canal is problematic. Society benefits from these riparian areas, so society should be compensated if they are lost due because of the use of federal funds for the benefit of a small number of shareholders in the canals. In other words, the use of these funds should be dependent on a conservation plan that mitigates any habitat loss.

In addition, the current proximity of the exposed canals to residents of Logan, North Logan, and other communities means that generations of residents have benefited from access to the canals, for hiking with family and friends, for cycling, for wildlife watching, for tubing, and for escape from the heat of the summer. If these canals are enclosed underground, then I strongly recommend that any plan require a public easement for the use of the area above the canal, and that the funds be used in part to develop a walking and cycling trail in combination with the restoration of appropriate habitat. In fact, I recommend that if these federal funds are approved, then the canals, both enclosed and open, should develop a permanent public easement with a trail system connecting to other county and city trails.

Thanks for considering these remarks.

--  
 Robert H. Schmidt  
 [REDACTED]

**Comment S-78**

**Comment S-78 (continued)**

**From:** [John Eastmond](#)  
**To:** [LNC-EIS](#)  
**Subject:** Canal project suggestions  
**Date:** Monday, August 30, 2010 7:03:47 PM

Sirs,

My suggestion as already put forth was to do an immediate repair were the collapse occurred and then have this conversation after the shareholders were taken care of. As I understand it the point behind this agency is to take care of people and property first and fast as in an emergency? But being that we have already gone far past the emergency stage let's talk final repair.

My suggestion is this: Repair the original canal. Or, pipe so as to use the original head gate and run a course that follows the original course as closely as possible. This meets the following concerns as simply and directly as anything else I can think of.

1. Seniority of the headgate.
2. Power plant use
3. Easement/right-of-way
4. All share holders are served
5. Fire fighting concerns
6. Community trails network
7. Water research lab losing capacity for experiments
8. Storm water handling
9. riparian forest

Anytime one builds something new in place of something old, he has the work of building the new thing AND the work of dealing with the old thing. If one were to repair or rework the old thing then the resources are used to (of course) build the new thing AND by due process the old is taken care of. So now one comes to light with a new thing with out all the work to answer the question of; What to do with this old thing?

So what are we going to do with the old canal? It; has seniority, has easement/right-of-way, has riparian forest, has many community trails, has storm water handling infrastructure, serves all share holders, does not impede water research or power plant.

Doing nothing with the old canal is not an option! In the project cost calculations you must deal with the cost of dealing with the "old thing"! In the year since the collapse the following problems have been encountered with the abandoned canal;

1. Trees dying. I've personally dealt with most the trees on the mile stretch along Canyon road. I won't be able to keep up with a die off this large.
2. Fire danger is getting real bad. Next year is looking extreme!
3. Vehicular access lost-making my job even harder.
4. mesquite breeding habitat being created
5. abandonment of right away means property owners that border abandoned right-of-way just picked up a nightmare! Who's going to help me take care of this? Do I set up my own utility jurisdiction?
6. Storm water. U.D.O.T. sends storm water to nothing! Now what?
7. Community trails. My father and I have done more to maintain and build more trails than anyone else. Access to collage students who rent on the Island and walk to the university does more to prevent farther traffic and parking problems on campus than anyone cares to think about. We talk about exercise and clean air, well this trail network's got bang for buck!
8. Power plant. This thing was engineered with the assumption that water will flow the same way. If you change it, you're going to have to account for that.
9. Loss of riparian forest. Bird watching magazines listed this stretch many times over as a great birdwatching area.
10. Vandalism. Logan street department barricades and many other things dumped into canal. Tagging on canal walls and barricades.

This has got to be a part of the project cost and legal calculations. If a new and separate project is built then it's benefit must be of such value that they overcome the losses incurred. I see piping an entire

new purple irrigation utility that would serve a vast majority of the East valley population as being worth the money and losses. That bluff section has got a lot tied to it. If it stays abandoned then all kinds of stuff has got to be revamped.

I'm honored to have worked on the canal and other irrigation systems in this area and am glad to have you contact me about my work on this facility. I want the best for my community and the agricultural industry.

John Eastmond  
 [Redacted] (1 block West of collapse)

**Comment S-79**

**Comment S-79 (continued)**

Sue Lee  
 HDR Engineering  
 3949 South 700 East, Suite 500  
 Salt Lake City, UT 84107  
 801-743-7811

August 20, 2009

Dear Ms. Lee,

My name is Jordy Guth, and I have lived and worked in Logan for 9 years. I live in the direct vicinity of the landslide along the Logan Northern Canal, and currently work for the University as an architect and planner. I have been involved in many aspects of community planning in Cache Valley. I am writing to present my input for consideration during the scoping phase of the Environmental Impact Statement for the reconstruction project of the Logan Northern Canal following the tragic landslide of 2009. My concerns are multi-faceted, but with this letter I primarily wish to give some input on the significance of the historic canal for the quality of life and sense of place of the community in Cache Valley.

Quality of life characteristics of communities have often been difficult to understand and quantify during planning. Although these elements are often acknowledged, they are at risk of being lost as communities change and evolve, due to their intangible, qualitative nature. The canal is one such element that has contributed significantly to the unique character of Cache Valley. Historically, when the Mormon pioneers settled in Utah in the mid 1800s, they developed an astonishingly sophisticated planning model. The water distribution system developed was very complex, and necessary to develop this arid region into flourishing farmland. Life in Utah was planned around these life-giving waterways. The planning model developed was called The Plat of the City of Zion, and was incorporated broadly in Mormon settlements across the state of Utah. The elements of the plan created very unique, consistent, and recognizable physical patterns within this landscape that have distinguished settlements in Utah from other, more haphazard settlements in the west. In fact, the design for these communities was so successful that Brigham Young was posthumously awarded a distinguished planning award by the American Institutes of Planners in 1996. In short, the design of historic Mormon communities is deeply imbedded in the culture and heritage of this place, and alteration of this pattern will significantly impact how people relate to and live in this place.

The harmony of life in this valley is rooted in our ties to this landscape, formulated upon the ecological and natural systems which sustain us, and the historical, cultural, and social values which have been

built up around this dependence. The canals are a physical expression of our historic and current ties to the landscape, deeply imbedded in the psyche of the community. They are characterized by open flowing waterways, informal trails, and swaths of lush green space. They provide important social and cultural benefits. They transport water for agriculture and homes, but also add to the quality of the life for citizens. The community interacts with the canals on many different levels day to day. People enjoy the vegetation, wildlife, and natural setting the canal corridors provide, not only to citizens living alongside the canals, but to those who seek out the canals for opportunities to recreate or by those who enjoy the beauty of their views and vistas. The canal corridors represent an important visible piece of our living heritage, still functional today. Even those who may not profess to seek out the canal areas directly would notice if they disappeared from the community.

New plans to change the canal structure, its path, and surrounding landscape need to be carefully considered in terms of visual, cultural and historical impacts. Plans to encase the water in pipes and bury them will cause the vegetation to die, and the wildlife to disappear. Loss of this element may improve the efficiency of the irrigation system, but should not do so at the expense of the identity and heritage of the community. Options for the canal restoration need to consider these important and complex relationships of people to the land, and hopefully maximize efficiency without the loss of this important amenity.

I have several concerns regarding the current assumptions about what the best solution will be for reconstructing the canal. I have viewed the map and preliminary alternatives presented on the website. I am concerned that the map does not even incorporate the section of the Logan Northern Canal that was destroyed. This section must be at the forefront of future plans, whether it is deemed suitable to carry water or not. Also, it seems preliminary to present alternatives. From what I understand about the NEPA process, there should be no pre-conceived notions about the alternatives prior to the scoping process. The alternatives should be presented after scoping, during the draft phase of the EIS.

Ultimately, the plans must consider that we are not only reconstructing an irrigation supply system, but a place that has been destroyed by landslide. Hopefully the EIS will not automatically assume that the Logan Northern Canal must be abandoned, and seek to creatively consider some options for restoring it in place, even partially. And if it is determined that the lower canal must be abandoned functionally, the study should address how it could be restored in a way that is sensitive to these issues. Additionally, the upper Logan Hyde Park Smithfield Canal enhancement should also be carefully designed in these terms,

**Comment S-79 (continued)**

even if it is tasked with carrying more water. We must be careful not to destroy two of these important amenities while trying to deal with the destruction of one.

Recently, the state of Utah, Cache Valley, and the city of Logan have recognized the need for better planning to identify, quantify, and protect the unique historical, cultural, and regional features within communities that together define the unique character of a place. I recently conducted a research study, titled "A rural character planning tool: modeling components of settlement pattern", which was funded by the state to help accomplish these goals. In this study, canals and other waterways were identified as important components of rural character. Additionally, I have been involved in several other comprehensive studies/plans for Cache Valley in the past 5 years which have addressed similar issues. These were the Sustainable Design Assessment Team (SDAT) for Cache Valley, a regional report titled "Cache Valley: The Future Explored", and most recently the comprehensive regional plan Envision Cache Valley. These are all studies which need to be carefully considered and incorporated into the EIS document.

Thank you for consideration of these issues while determining the alternatives to present to the community. We will all benefit from a carefully considered and well researched study to help our community move forward.

Sincerely,

Jordy Guth



**Comment S-80**

**From:** [Leila Odell](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal Reconstruction Project  
**Date:** Monday, August 30, 2010 10:45:07 PM

The canal should be repaired at the site of the break. The existing trees and vegetation have supported the structure of the canal for 150 years. Ducks live and reproduce on the banks of the canal. Many other animals live there as well. People walk and bike along the side. This open waterway is a great asset to our rural way of life. Trees could die if the canal is enclosed.

If one of the four options must be chosen, I prefer option 2, as it involves the least amount of piping. There will be unforeseen consequences to the listed options, as well as those that are obvious. Extensive changes are not necessary in order to restore water to the users.

In late March of 2007, the board of the upper canal gave their permission and instruction to Dennis Smith, (DKS Construction), and me to place large rocks on the East bank of the canal to secure my property. If these rocks are disturbed, buried or removed in any way, I expect the \$8000.00 investment in my property to be reimbursed to me by the upper canal company.

Leila C. O'Dell

**Comment S-81**

**From:** [Kerry Jordan](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal Reconstructions Project  
**Date:** Tuesday, August 31, 2010 8:43:09 AM

---

Hi,

I saw you were looking for public comment on this project. I live in Logan near the canal, and wanted to express our deep interest in repairing access to the running/walking trail along the canal.

Thanks!

Kerry Jordan

**Comment S-82**

**From:** [Anne Diekema](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal Reconstruction Project, Cache County, Utah  
**Date:** Tuesday, August 31, 2010 9:46:13 AM

---

To whom it may concern,

having grown up in a country of canals (The Netherlands) and having lived in Syracuse, NY (one of the cities on the Erie Canal) I am very much aware of the value canals for both the community and wild life alike.

Cities where canals are kept rather than filled in (or put underground) are much more pleasant to live in and to visit. People very much enjoy biking and walking along canals. Typically, canals are level, making canal paths usable for a wide range of people including folks that might never go out on a strenuous hike. It is also a great place to see wild life and interact with nature without having to go out of your way. Canals are great places for wild life to live in otherwise urbanized areas. It would be a shame to get rid of the canal as it is today.

I've walked the Logan canal paths many a time and found that a lot of other people do to. Runners, walkers, parents with strollers, kids, dog walkers, bird watchers all share the canal paths. Canals also have historical significance and throwing that away would be getting rid of an important part of Logan's past.

If you have not walked a canal path - go out and give it a try. It is a place where you'll meet your neighbors and enjoy a peaceful time along the canal's edge.

Rather than seeing the canal as a problem I encourage you to look at it as an important asset to the community and our quality of life. Something of historical value that should be preserved for the sake of the people and all the animals that use the canal as their habitat.

Thank you for your time.  
 anne.

Anne Diekema  
 Logan, UT.

**Comment S-83**

**From:** [REDACTED]  
**To:** [LNC-EIS](#)  
**Subject:** Logan canal project  
**Date:** Tuesday, August 31, 2010 11:53:26 AM

I wanted to make known a personal concern as you consider the proposed canal re-construction project here in Logan, Utah. I understand how important it is to restore the volume of water needed to irrigate. I also understand that safety is an issue whenever there is open water around where people reside. I understand how transporting water in buried pipes and lined canals saves the flow from evaporation and leakage. But would it be absolutely necessary to do this to the canal where it runs thru the Logan Golf & Country Club?

I have been playing golf at the club since 1962 when my father joined as a member. As a young man I joined myself and over the last 48 years have played thousands of rounds of golf at LG &CC. I am also a past president of the club. The water feature of the course is not only very important to the challenge of the golf experience, but to the human outdoor enjoyment experience. The beauty of the open water, trees, vegetation and wildlife is refreshing to the spirit and spectacular to the eye. A price cannot be put on the value of open water on the course, not only to the game of golf, but to humans and wildlife. The loss of an open waterway thru the golf course would in general, lessen the value of the golf course and diminish the quality of life for the thousands who take advantage of this type of recreation experience.

Please consider leaving this short section an open waterway with only safety and beautification issues addressed.

Sincerely,

Steven Hicken  
 Logan, Utah

**Comment S-84**

**From:** [Richard Clement](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan canals  
**Date:** Tuesday, August 31, 2010 12:31:58 PM

Dear Sir, I am writing regarding the plan to enclose the upper canal in Logan. My wife and I live just above the canal. We do not use any of the canal's water, but we benefit from having an open waterway in our neighborhood. To enclose the canal would remove an incalculable environmental asset to the community. We greatly value the flowing water, the plants and trees, and the wildlife the open canal supports. To enclose the canal would diminish the value of our homes and the value of life in our neighborhood.

As you can see, I strongly oppose enclosing the canal.

Richard W. Clement



**Comment S-85**

**Comment S-86**

From: [Kevin Connors](#)  
 To: [LNC-EIS](#)  
 Subject: Second letter  
 Date: Tuesday, August 31, 2010 1:01:01 PM

Hi. I sent the following letter yesterday, but I would like to add a couple of other ideas. First, if a pipe is sent under Canyon Road, it may not have to start at Logan River, but it could originate from the canal at about 1100 E (assuming that the canal is safe to that point). This would be less than half of the total length from the river to the Dugway, thus reducing cost, minimizing road closures, maintaining water pressure and allowing canal access to water share holders in the 1420 E area. The second additional idea (not related to the first idea) is; if the canal is to be an underground pipe then move the beginning-starting location of the canal to gain greater pressure. Currently the canal begins below first-dam, but if extra pressure is needed (possibly to push water up the canal at the Dugway), then move the starting location up to the dam (about 150 yards from current location) to gain extra elevation and creating more pressure. Thank you again. Kevin

Dear Sue,  
 Hi. Thank you for talking to me at the public hearing in Logan about the Logan Northern Canal Reconstruction Project. I live at 687 Canyon Road in Logan. I have (had?) water rights in the canal behind my house and used the water to irrigate my yard. I was glad to hear that the water users along Canyon Road were not being ignored and that canal water may be restored. I was told about a pipe underneath Canyon Road that would be accessed by current water right holders might be installed. The old canal above my house had gravity flow pressure that was very good and I was told that a pipe in front of my house, but under Canyon Road, would also have pressure enough to irrigate my property. With my limited knowledge, any option that restores water to my water rights is good, whether it be a pipe under Canyon Road or a pipe in the canal above my house.

I am not an irrigation engineer, but I wonder if water is piped under Canyon Road, would there be enough pressure to push it up the Dugway and into the existing canal thus restoring normal flow from that point down the canal? I assume that with a pipe under Canyon Road and restoration of water into the canal at 400 N and 600 E, then no other modifications or improvements to the canal would be necessary, thus the only costs and impact would be along Canyon Road and the Dugway.

Thank you again,  
 Kevin Connors

**Logan Northern Canal Reconstruction Project  
 Public Scoping Comments**

Submitted by:  
 Eric H. Joffs



**Comment S-86 (continued)**

Submitted to:  
Sue Lee, Project Manager  
HDR, Inc.  
3949 So. 700 E. Suite 500  
Salt Lake City, Utah 84107  
E-mail: [LNC-EIS@hdrinc.com](mailto:LNC-EIS@hdrinc.com)

The Logan, Hyde Park, and Smithfield Canal (LHPS) flows north along our west property line. Option 4 of the USDA/NRCS website document calls for diverting LNC water into the existing LHPS Canal from the Logan River to 3100 North. This has been described as a buried pipe or lined channel with barbwire fences in the backyards of high end residential property over a distance of 2 to 3 miles.

I see the impacts of this Option 4 as:

1. Loss of the beauty of a grass lined high mountain clear cold stream.
  2. Loss of the ecosystem it supports such as trees, plants, animals and birds.
  3. Loss of a valued amenity affecting residential property values.
  4. Loss of Storm Water Drainage which flows from 1700 East into the open canal.
  5. Increased property taxes to residents of Logan, North Logan, Hyde Park and Smithfield to retire the 25% of the project costs plus ALL cost overruns.
  6. Replaces clean hydro electric power to Logan with dirty and more costly coal generated power which contributes to more air pollution problems.
  7. Reduced water flows to the USU Water Lab.
  8. Destruction of a City and State Historical Structure in the form of the over 100 year old irrigation system.
  9. Public Tax money used to fund a Private Company Capital Improvement Project.
  10. Potential for costly lawsuits and time delays to complete.
- In summary, the Option chosen should be the most cost effective which addresses public safety and provides the least environmental impact.

Two options were not presented at the Scoping Meeting. One is to Do Nothing and the other is to Restore the LNC at the point of breakage in July 2009.

**Comment S-86 (continued)**

I vote for restoration of the damaged section in place. Surely there is existing civil and structural expertise to do so in a safe manner. It has the least environmental impact at the lowest cost and can be delivered in a much shorter timeframe.

Should the Canal Company desire to go beyond restoration and have a "gold plated" irrigation system, then as a private company, they should fund it and not use government tax money. There are numerous places to spend Emergency Funds in this country as a result of floods, tornados and oils spills. It is imperative that our local officials exercise proper fiscal responsibility and reduce government overspending.

**Comment S-87**

**Comment S-87 (continued)**

August 31, 2010

Sue Lee, Project Manager  
 HDR, Inc.  
 3949 So. 700 E. Ste. 500  
 SLC, UT 84107

[LNC-EIS@hdrinc.com](mailto:LNC-EIS@hdrinc.com)

Dear Ms. Lee,

This letter is in response to the request for public input concerning the options, concerns, studies, variables and perspectives associated with resolving the canal system problems in Cache Valley, Utah – particularly in light of the tragic circumstances of July 2009 of which you are well aware. Since that time I have tried to keep up with the press coverage, editorial commentary, and to the best extent possible, the facts concerning the decision tree that has resulted in an agreement between the Federal government, NCRS, Logan City, Cache County, canal companies, and a host of other vested players. In essence I believe the decision tree is flawed, and the results of the process have been a rush to judgment in an effort to assuage public opinion over the landslide tragedy.

The complexity of the problem, and the very real need to address it, warrant a thorough EIS which apparently is being undertaken – but without a predetermined outcome – as suggested by much of what I’ve read and observed. The most expensive option may not be the best, but will almost certainly be the most intrusive to the environment, property rights, and the community as a whole. The projected upsides of this option have been seriously questioned by experts closer to the hydro-engineering facts and understandings than I.

A lower impact, smaller footprint, less expensive option should be given full consideration. Best practices in environmental and green development alone would dictate this course. Simply reconnecting the historic canals (Upper and Middle) with the best in materials, engineering, technology and other attention to excellence may very well represent the best alternative. Let’s give it full consideration.

I also question a potential conflict of interest with HDR Inc. both performing the EIS and likely positioning itself to perform much of the actual canal repair/reconstruction project with a possible value of the “preferred” alternative reaching as high as \$30 million or more. Unless HDR Inc. is, or has been, precluded from bidding on any actual engineering or other work on the canal system in the future, this concern would be raised to an even higher level.

Thank you for your consideration of the points and questions that have been raised herein. We all look forward to a safe and highly functional water system that will serve Cache Valley well into the future.

Sincerely,

Ernest E. Bleinberger  
 Smithfield, UT

## Comment S-88

From: [REDACTED]  
 To: [LNC-EIS](#)  
 Subject: LNC EIS  
 Date: Tuesday, August 31, 2010 3:42:20 PM

To: Sue Lee  
 HDR Engineering  
[LNC-EIS@hdrinc.com](mailto:LNC-EIS@hdrinc.com)

From: Trevor Hughes  
 [REDACTED]

I am a retired Civil Engineer who has designed several irrigation systems, including both pressure pipe and canals. My previous comments were limited to the Logan city hydropower problem related to moving LNC's diversion point upstream. I am now convinced that the alternatives you presented did not include the best alternative. I think that a new alternative should be simply repairing the canal in the failed area in place. This would involve designing a structural section (anchored by pilings) which would pass any future debris flow over the top of the covered section. This would eliminate Logan's hydropower problem, reduce the project cost by an order of magnitude, and eliminate the need for an EIS.

## Comment S-89

From: [Barbara Middleton](#)  
 To: [LNC-EIS](#)  
 Subject: Public input to NRCS for Canal project in North Logan  
 Date: Tuesday, August 31, 2010 3:58:40 PM

Dear NRCS,

I am writing to express my concern over the alternatives that have been presented for repairing and reestablishing the canal that broke last summer (2009) in Logan.

First, I do not believe all alternatives have been explored to best repair and upgrade the canal. Those alternatives on the table are not addressing the immediate concerns of getting the water flowing to farmers expecting the water for summer crops and fall growth. Repairing the problem should be a top priority not building the Taj Majal because Federal funds are available. If you want a real shock, look closely at the cost/benefit analysis of the alternatives then tell our citizens that this is a good deal! You must be smoking something if you can do that because so far there are only a few people that will gain from these alternatives and it is not the general population. Funneling money into private citizens pockets when the money should be spent on the best designed repair and renovation will be a tough question to answer with the alternatives on the table. You must come up with a sixth alternative that fixes the problem not support some private citizens down the line.

Second, one of the proposed alternatives completely obliterates many of the benefits of having open water canals. Many of us who live in North Logan enjoy the tree-lined canal paths that traverse our landscape. We ski them in winter, walk them in summer and bird the many hedgerows and edges that provide important habitat along this ecotone. There are many folks who specifically purchased their homes to be either adjacent to the canals or close and within walking distance. These canals also provide places for migratory birds to gather and refuel on their stopovers in Cache Valley while traveling north or south. They feed on leftover fall seeds remaining in fields and along the canal, they protect themselves from predators when they are resting, and they find safe places to hold out during storms encountered in these annual movements. To say they can simply find other places makes me wonder if you have seen how many wetlands and corridors have been cut off from these corridors or simply disappeared. Imagine if we said that to our children who want to return and live here, "Oh just find another place to build your house and raise your family!"

Third, having open water canals also preserves a part of our heritage. These canals are rich with history. We hear it from the older folks in our town when they talk about how they grew up, how things have changed and how important the canals were to daily life. Sure we no longer fill pails and walk our water to our kitchens; but we do walk the canals and remember what it was like, how we have made improvements

**Comment S-89 (continued)**

and how we have tried to keep our heritage alive with many of our landscape decisions. Those same people enjoy the many amenities of being around those canals such as wildlife, scenic quality and a quality of life based upon an open canal system.

I have been surprised at the continual lack of diversity in the alternatives presented, how certain citizens have been alienated from the input process such as professionals in water engineering and natural resource specialists from USU, and how some citizens have been berated at County Council meetings. A recent one where a certain North Logan woman was penalized via public comment from elected officials was totally out of line yet these same individuals are making the decisions? Good for her for exercising her voice granted to all of us through the constitution and Bill of Rights. Maybe those Cache County officials should remember that they are elected officials, that they seek our vote when they want to once again return to sit in those chairs, and they should also seek our input because it is much needed and our right to speak up. Based on what they have shared, they are not fit to make the final decision on anything remotely connected with the canal. So far this process has been quite a whitewash. I will be interested to see where our comments end up and how they are used. So far, the majority of us participating are quite unimpressed with our county officials and the supporting folks that are 'contributing' to the information. Key people that are specialist in this area and have historical information on past breaches of this very same canal area are not being included in the discussion.

If you want to make a difference, stop listening to the rhetoric and talk to the scientists and engineers who have realistic alternatives to getting the water flowing and the canal system repaired for now and the future.

Thank you for allowing these comments,  
Barbara Middleton

--  
Barbara Middleton, interpretive specialist  
Dept of Environment & Society  
College of Natural Resources  
Utah State University



Please consider the environment before printing this email.

**Comment S-90**

**From:** [Jon Brunn](#)  
**To:** [LNC-EIS](#)  
**Cc:** [brobson.smart@ut.usda.gov](mailto:brobson.smart@ut.usda.gov)  
**Subject:** Emergency Watershed Protection: Logan Northern Canal Reconstruction Project  
**Date:** Tuesday, August 31, 2010 4:06:24 PM

As a resident of Logan, and specifically "The Island" neighborhood near the collapsed canal, my wife and I always enjoyed walking and running on the trail along the canal. Not only was the trail used for recreation including walking, running and biking, but Logan residents routinely used it as a pedestrian transportation corridor. Anyone who walked or biked the trail can attest that it was especially well used before the canal collapse. The trail was used for transportation between different parts of "The Island" neighborhood, the University, and even as a connection to Logan canyon. Students, faculty and other university staff could be routinely seen walking it, and it was especially busy in "rush hour" times as people moved to and from work. It was an important public space for the Island community, as evidenced by some of the community service projects which built bridges across the canal. The canal collapse pushed some of this foot traffic onto the already crowded 600 East "dugway" that is not at all safe for foot traffic, having a very steep and narrow pedestrian path, and onto Logan streets in "The Island" neighborhood, which do not uniformly have sidewalks, can be dangerous in winter and do not serve areas north of the island.

A wide trail along the canal will undoubtedly be necessary for service and maintenance - making this trail a public space will be in the best interests of the community and help garner public support for watershed projects. While some irrigation shareholders benefit from a restored canal, everyone can benefit from more public spaces.

Public spaces were an important part of the decision in where we purchased our home. I support the inclusion of a public pedestrian foot/bike path along any reconstructed canal, and consider it a vital inclusion for the interests of everyone who will be impacted by construction and public costs.

Jon Brunn  
Logan, UT

**Comment S-91**

**Comment S-91 (continued)**

**Utah State  
UNIVERSITY**

Facilities  
6600 Old Main Hill  
Logan, UT 84322-6600

31 August 2010

Sue Lee, Project Manager  
HDR, Inc  
3949 South 700 East Suite 500  
Salt Lake City UT 84107

re: Logan Northern Canal Reconstruction Project

Ms. Lee;

As a Land Grant University, Utah State University (USU) has been involved in Irrigation Engineering and the development of methods to deliver irrigation water to improve agricultural production all around the globe. The Logan Northern Canal (LN) Reconstruction Project (Project) has an affect on the operations of the University. For over one-hundred years the Logan Northern Canal has provided irrigation water for crops research projects USU has been involved with on its North Farm facilities. USU owns 215 water shares in the LN canal and 304 shares in the Logan Hyde Park Smithfield Canal (LHPS).

In reviewing all the options for this project, USU has determined that the 3100 North option will best meet the present and future needs of the University and surrounding communities. The University through USU Extension Programs works closely with the farmers throughout this area including those affected by the loss of the LN Canal. Economic impacts of the loss of the canal have been great and will be even greater if the "do nothing option" is selected

Canyon Road Option; This project will cut culinary water, sewer and other services for a substantial time to residences adjacent to and close by the project. Costs will include new water and sewer lines and service connections that have not been fully addressed in present estimates. The water table is high in this area and will require additional structure to keep the proposed culvert from floating when empty. The option provides no additional benefits to the affected communities other than restoring irrigation water to shareholders. (EWP monies are to repair and improve water systems and protect water rights). This option also requires running a large drain line through an adjacent neighborhood to the Logan River affecting even more residences. This option does not allow for the communities along the LN Canal to use the channel for storm drainage which is a growing need faced in the Valley as development increases storm water runoff.

Highway 89 Option; This project would improve 2 miles of the LHPS Canal in Logan Canyon which would result in a 22% savings of water due to seepage loss in that 2 miles. Improvements would also replace an old and unstable structure with a new structure and construction that will make it less susceptible to structural failure in the future. However, the Highway 89 portion will disrupt traffic for a

8/31/2010

period of time. The four USU pedestrian tunnels under the highway will add significantly to the time it takes to complete the project. The tunnels are constructed of 8-foot square concrete box culvert sections and there is not a structure holding them together. Reinforcing the tunnels to be able to excavate under them will add time to the project and removing them during construction will add to the safety concerns for both pedestrians and vehicles. This option does not allow for the communities along the LN Canal to use the channel for storm drainage.

Lundstrom Park Option; This option does improve the Logan Canyon section of the LHPS Canal. However, the lines between the two canals will be going under residential roads and will disrupt services to a large number of homes. This option does not allow for the communities along the LN Canal to use the channel for storm drainage.

Some residents in the Lundstrom Park area have expressed a desire to keep the canal open, but to do so will present two major disadvantages. First of all the open waterway will promote the growth of algae that will adversely affect the pipe system downstream. Secondly, an open canal would be required by Federal regulations to have a six-foot tall fence on each side of the canal. If the canal is enclosed the surface can serve as a nature trail.

3100 North Option; This option not only helps with seepage losses in the canyon, but will reduce substantial losses in the Lundstrom Park area and through North Logan City. It also provides pressurized water from 3100 North south to 1400 North 800 East eliminating the need for 20 or more large pumps and the power costs to operate the pumps, including pumps used for USU Extension research. If this option is selected it allows the cities of Logan and North Logan the opportunity to use the LN canal channel for storm water conveyance through their communities and reduces the risk of flooding during the irrigation season if a heavy storm comes in. It provides for a covered canal through residential areas where the LHPS has experienced problems with property owners dumping their yard waste into the canal

By choosing the 3100 North Option seepage losses in both canals are reduced substantially. This reduction will help offset the power generation loss to Logan City because less water will need to be taken from the Logan River to provide adequate water for the shareholders needs. This will also help the Utah Water Research Lab, associated with USU, to continue to run high-flow tests and experiments by refilling First Dam Reservoir as quickly as possible. Also, by taking less water out of the river in the canyon means there will be more water available for other irrigators downstream, which will be particularly helpful in low water years.

In conclusion, the 3100 North Option offers the greatest benefit to USU and other shareholders in spite of the additional costs. The sooner the project can be designed and constructed the sooner delivery of irrigation water can be returned to normal conditions.

Respectfully submitted,  
  
James W. Huppi, LLA, ASLA  
Landscape Architect/Manager  
USU Facilities Operations

cc: David Cowley  
Vice President for Business and Finance  
Utah State University

8/31/2010

**Comment S-92**

**Comment S-93**

From: [Caroline Shuart](#)  
 To: LNC-EIS  
 Cc: [schmidt\\_roberth](#); [Paul Rogers](#); [Bob Rayn](#)  
 Subject: canal project cache valley  
 Date: Tuesday, August 31, 2010 4:43:20 PM

Dear Sue Lee,

Thank you so much for allowing the public to give you feedback regarding the canal project. Professionally, I am a dietitian and nurse, and wellness coordinator for a large university. I also serve on the sustainability council at the same university, and I am an avid bike rider and runner. I also serve as a volunteer on the parks and recreation board with the city of Logan.

I believe in walkable and biking communities, that have areas and routes that separate high speed and vehicle traffic from slower moving traffic - pedestrians, cyclist. We have had several terrible accidents and a couple deaths in Utah regarding the cycling community, and I long for the communities who have solved this problem by having a network and linkage of routes for cyclists and pedestrians.

As time goes by, our options are more and more limited. I am hopeful that the canal can be improved and changed into a wonderful area for bikers, birders, and walkers that expands and links with our current trail system. I would hate to see the loss of this opportunity - an eye sore, a covered canal of concrete, without wildlife, without water, without walkers. Federal money (our taxpayer money) should be spent on community projects that add to our quality of life - more green space, more trails, more water ways, more wildlife, more flowers, more trees.

Thanks again for your efforts.

Aloha & Be Well,  
 Caroline

Prepared Remarks Of Arthur Taylor, a shareholder in the Logan and Northern, for the Environmental Impact Study on the Logan and Northern Canal Expansion. Dated August 29, 2010

To Whom It May Concern:

I first became aware of the canal tragedy the day it was happening via news reports on 610 KGNU. I immediately phoned Justin Bennett of the Cache County Sheriff's Office to see if they needed any equipment on scene to help with the response. Officer Bennett, who also works part time for me at my company, Black Dog Manufacturing, informed that he was at the scene providing security and that an Emergency Response Team was handling all outside help from volunteers.

I asked him to describe the scene for me and he told me that it seemed there had been a landslide which took out the canal. He was very puzzled by the fact that the ground was still moving above the break in the canal and noted that a particular tree had moved significantly down slope in a very short time. I was on my way to Salt Lake City at the time and determined through subsequent conversations with Officer Bennett that I should turn around and go back to the scene to volunteer myself and my equipment to help with the cleanup.

When I arrived at the scene there were literally hundreds of volunteers and it was apparent that there was no need for my machinery. I did place my name on the volunteer list with Dave Hancey, one of the directors of the Emergency Response Team, and a member of my LDS Ward.

In the calls that I made to Officer Bennett that day, he updated me on the travel of the above mentioned tree, and he stated to me that he thought there must be much more involved than a simple break in the canal. He felt the whole hillside was moving and that it looked very bad for the occupants who may be trapped in the house (we later learned that a family from El Salvador perished in the slide).

This was my first knowledge of the canal disaster and it has greatly shaped my thinking ever since.

As weeks went by and the emergency crews left the scene, I drove by and looked at the damage from the roadside with a simple curiosity. One could see that there was a major undermining of the slope at that point and in my mind it was apparent that the canal was a bystander and not the cause of the disaster.

As time progressed, the news media were continuously pointing fingers at the canal as culprit for this tragedy. I believed these references were false accusations and I visited the sight in October to get a better understanding of the situation. At that time, there was a great deal of water flowing around the site, apparently from springs or flows coming from within the hillside. From what I saw, it was obvious that there had been a major force at work deep within the hillside and that the canal was probably blameless.

**Comment S-93 (continued)**

Arthur Taylor – Page 2

Soon thereafter, I learned of the canal company's plan to combine the two canals and enclose them in the upper canal. I was immediately opposed to this for admittedly selfish reasons. I regularly walk my dogs on the stretch of the upper canal between 21<sup>st</sup> North and 25<sup>th</sup> North in North Logan and happen to be in love with certain sections of the waterway there. So much so, that when my beloved dog Jett died, I commissioned Jerry Fuhrman, one of our great landscape artists, to paint a memorial piece depicting my best pal and I rounding the bend one last time on a walk we had taken every day for years.

My wife and I conducted almost our entire courtship on that same stretch of water. And if you asked what heaven is to me, I could take you right there on a perfect fall day and show you where the lord himself would be most content. Call me sentimental, but I couldn't bear to see such tranquil beauty lost forever.

Prior to the canal company's November 22<sup>nd</sup> meeting I submitted a letter to the Herald Journal and it appeared as follows on November 21<sup>st</sup>, 2009:

To The Editor:

Recently, the shareholders of the Logan Hyde Park Smithfield Canal Company (the upper canal) voted to merge with the Logan & Northern Irrigation Company (the middle canal) in order to combine the two waterways, place the canal in pipes and impermeably line those portions of the canal that are left open. On Nov. 22 the Logan & Northern Irrigation Company shareholders will meet to decide if they should ratify this decision.

The costs associated with this undertaking are purported to be \$25 million with the federal government expecting to pay 75 percent and canal shareholders the rest. Neither this particular plan nor any alternatives have been well publicized and it seems to be a very hasty decision on a matter of such tremendous importance to the quality of life of those living by and using water from the canals.

It should also be noted that this plan is in reaction to the loss of life that occurred above Canyon Road last summer and what happened there has not yet been thoroughly explained to us. In visiting the site as recently as a month ago, I observed a rather large flow of spring water emanating from the area directly beneath where the canal actually broke. I'm not an expert, but it is easy to see from the amount of land that has slid above the canal, that the canal was a victim of the geology above and beneath it, and I highly doubt the break was due to the canal at all.

**Comment S-93 (continued)**

Arthur Taylor – Page 3

If the canal did not cause the tragedy and loss of life on Canyon Road, we need to know the facts about what truly happened there. Our officials should be tasked with informing us as to whether or not the conditions responsible for the slide that undermined the canal can be mitigated, and if the canal can be replaced in that same corridor. If we have to buy the few houses that are directly in danger from slides that emanate from those mountainside springs, then that would surely be cheaper than spending \$25 million on an alternative that seems to be a rush to judgment and most likely a waste of our tax dollars and assessments.

These canals in their current form are a wonderful blessing to the valley. Percolation and evaporation losses flow into our valley's aquifer and our air. Trees, plants and wildlife radiate from their banks. Their picturesque and meandering flows are a part of our heritage and we should think long and hard before we bury this beautiful resource out of sight and away from all the collateral good it produces.

Arthur Taylor  
Hyde Park

I attended the November 22<sup>nd</sup> meeting with my friend, Arden Lauritzen, who is an attorney and who also spent a great deal of time on the same stretch of canal I spoke of earlier, as his family farm extended north from 21<sup>st</sup> North and covered approximately 150 acres on both sides of the canal. We both listened to John Meikel's presentation and during the question and answer portion, I asked Mr. Meikel if they had studied an alternative that involved piping the water down Canyon Road and what would that cost? Mr. Meikel response to my question was "You don't even want to know" and then he moved on to the next question. (Of course, I did want to know and even now, a year later, we still have not been told what that alternative would cost.)

At this meeting, and in the canal company's presentation; we were told that by encasing the canal, a great deal of water that is currently being lost to seepage would be recovered and that this water would accrue to the canal users in the form of more water. On the way home, Arden made the comment that either these guys (the canal leadership) were dumb or they were lying because the water would never be turned over to them and any savings would simply be turned back in the river for the benefit of those downstream, specifically Rocky Mountain Power due to the realities of water law.

This was a critical statement, because if true, the shareholders were not fully informed, and the votes cast were not on the basis of all the facts. At the August 11<sup>th</sup> 2010 scoping meeting, I asked Bronson Smart, the lead NRCS staffer, what would happen to the water that was saved and he said it would be turned downriver. I was surprised that he would

**Comment S-93 (continued)**

Arthur Taylor – Page 4

make this statement and I asked him the same question twice more and, twice more, in front of a half dozen people received the same answer.

It could be easily argued that the shareholders who voted for the canal company's original proposal would have thought much differently had they known they would have no chance of keeping the increased flow that would come from their soon to be raised assessments. But I will come back to this later.

After the November 22<sup>nd</sup> meeting the Salt lake Tribune published a very inflammatory article on the canal. I responded with the following letter, which appeared as on December 1<sup>st</sup>, 2009:

To The Editor:

The recent Tribune editorial "Killer Canal" 11/23/2009 is absolutely profane in it's dishonesty regarding the Logan and Northern Canal in Cache Valley. There is nowhere any professional opinion - other than the Salt Lake Tribune - which has laid blame for this tragedy on the canal structure.

What would be a more proper telling of the truth would be to say that a mudslide, probably caused by circular rotational failure within the hillside, destroyed the home of Jacqueline Leavey, killing all three occupants, in addition to undermining and destroying a section of the canal immediately above the home.

If the Tribune were to dispatch a reporter to the slide area today, that reporter would be able to see, first hand, the springs emanating from directly below the broken portion of the canal. If you look at the slide from a distance, it is easy to see that the rupture came from deep within the hill and that everything in front of it, including the home and the canal were washed away.

Even today, there is still a large flow of water coming from this area which could only be the result of natural springs - as there is neither culinary nor canal water currently at the site.

The tragedy which took place is more likely an act of God than man, and the Tribune should report these facts honestly.

Arthur Taylor  
Hyde Park

**Comment S-93 (continued)**

Arthur Taylor – Page 5

Shortly thereafter, I became aware of the fact that the new proposal would also take water away from Logan city's hydroelectric plant and that the canal board had been in negotiations to pay for the loss of revenue the decreased water would cost the city as it would have to buy the lost power on the open market. I was told that a figure of \$250,000 per year was the possible cost and I began to really doubt the wisdom of the canal company's board as it seemed not too bright to offer to pay, in perpetuity, for the lost power that could one day skyrocket in price given the uncertainties of energy pricing and demand.

I submitted another letter to the Herald Journal and it appeared as follows on April 6, 2010:

To The Editor:

One of the great negatives in combining the upper and middle canal is the fact that the new canal's diversion point is going to take all the available water from the Logan River and, in the process, dry up the water going to Logan city's hydroelectric plant during the summer months. In addition to the up-front costs, the canal company is going to have to pay Logan city between \$75,000 and \$250,000 per year - every year - for this clean, hydroelectric power to be replaced by coal-fired power that Logan city will have to buy on the open market.

If there are other alternatives, it makes little sense for Logan city to grant the canal company this dispensation given Logan's investment in its hydroelectric facility and the premium that will be placed on clean power in the future. Moreover, what will the rate go up to if Logan ever has to pay the free market rates it did during the power shortages in early the 2000's, when Logan lost all of their power reserve funds and had to spend more than \$10 million on the open market for electrical power in one summer?

Meanwhile, it has been suggested by irrigation and hydraulic engineers that by simply raising the diversion point of the middle canal to the level of First Dam, enough head pressure can be generated to operate the middle canal safely under Canyon Road and back up to 600 East through 1.6 miles of 48-inch pipe. This would seem to be a very feasible alternative due to the extraordinary costs and risks the "preferred" solution will entail. Moreover, a Canyon Road option could be installed very quickly and without the intensive environmental impact study that will be required of the other options. The historical diversions would remain intact, the costs would be half to a fourth of the current numbers, and the entire project could be finished much sooner.

**Comment S-93 (continued)**

Arthur Taylor – Page 6

As a shareholder in the Logan and Northern, I support working together to fix the Logan Canyon portion of the upper canal. As to the rest of it: If we had to do it ourselves without taking federal funds, I doubt we would. Given the economic hardship the federal government is under, given the fact that every federal dollar spent on this project will effectively be financed through deficit spending, we should be living within our means. When one steps back and looks at the total risks and costs of the "preferred" solution, it simply does not make fiscal sense and we should be wary of any non-essential spending at this point in our nation's history.

Arthur Taylor  
Hyde Park

This last letter laid out Dr. Trevor Hughes plan to fix the canal via Canyon Road. I have since read Thad Box's EIS submittal and agree that we should look at simply repairing the canal where it washed out. And recently I have heard an option that makes the most sense of all, which is to bypass the slide with an elevated pipe line that carries to the South, over the slide area in the vicinity of the homes that were destroyed for a few hundred yards and then back into it's historic route. In speaking with individuals who have walked the Canyon Road stretch of the canal for decades, the point where the landslide took place was the bad spot and the rest of the stretch along Canyon Road is sound.

By planting large concrete piers and suspending the canal over this area we could engineer our way around the slide and have this disaster behind us and our water would flow again as it has for more than a hundred years.

As to the massive and costly plan to enclose and pipe the canal: What a foolhardy, spendthrift scheme! If the shareholders, especially those in the Logan and Northern, were given a true sense of the costs and the alternatives by an impartial canal leadership, I do not believe they would ever have voted in favor of the current plan. If they knew that we would not be allowed to keep the water gained by fixing the leaks and that we would also lose the seepage that currently flows into our aquifers, they would never have voted for this plan. If they had had so much as an inkling of the fact that it would be many, many years before their water flows were restored, they would never have voted for this plan.

Instead, the leadership of the canals have undertaken to keep a great deal of important information from the shareholders. They've implied to the shareholders that we would

**Comment S-93 (continued)**

Arthur Taylor – Page 7

retain the extra water. They have withheld, or worse, never even studied lower cost alternatives along Canyon Road. The whole process appears rigged and the benefits, however meager, seem to accrue to a very few shareholders. This is exactly the kind of spending of taxpayer dollars that has energized the Tea Party movement and it is the kind of spending that appears, to all informed observers, profoundly suspect.

At the August 11<sup>th</sup> 2010 scoping meeting, John Meikel spoke with me at length as to the benefits of the "preferred plan." He told me of the needs to develop water for the

doubling in population that was predicted for the East side. He told me of the cities need for storm water management and that they would not contribute if another plan were pursued. He told me of the state of disrepair of the upper canal in Logan Canyon and that at one section it was virtually suspended.

However, I question why should the Logan and Northern shareholders be liable for all these issues? Why should we pay more than our share to develop water for the developer's subdivisions? Why should we pay more than our share to develop storm water plans for the cities? Why should the Northern and Logan shareholders, who need to merely replace a few hundred yards of their own canal, be forced to pay assessments on such a grandiose scheme to replace and encase almost the entire upper canal?

And while these issues are very important I worry as well about the practical issues. These canals are not simply a utility. Unlike a power or phone line, which merely delivers a commodity to an address, these canals are beloved by many and their loss is exciting great passion. Much of this passion will come from the well heeled on the East bench who want the canal left open and in the end they will almost certainly bring legal action against this project. Jack Keller and Lucy Watkins have pointed very specifically to the use of emergency funds being used to pay for improvements; in direct opposition to what would seem as the intent of Congress regarding such funds. Any shareholder would be well within their rights to request a hearing on the basis that we were told that the retained seepage would accrue to the shareholders yet, under recognized water law, it apparently will not. The potential for delays due to lawsuits are very real. And then there is the potential that the lawsuit might be successful. What if this happens? Then where will we be?

If this thing takes years to sort out, it will be too late for those farmers we have heard are suffering already because of lack of water. How will they even last the next three years? They'll have to sell their land for development and then we'll really wonder what all this is for.

The "preferred solution" is nothing more than a massive public works/welfare project that

**Comment S-93 (continued)**

Arthur Taylor – Page 8

takes something beautiful and literally buries it from sight. It erases one of the great benefits of living where we live and gives us nothing in return. It unfairly shifts the burden of water development onto the shareholders and it opens us up to tremendous liability or loss should something go wrong. After having studied it from every angle, I can't believe we are even talking about it, as the idea has so little merit yet comes at such great cost.

The Canyon Road options are sensible and should be studied in good faith. We should have an opportunity to look at these options, with their costs, risks and benefits. To do so would clean up the current process and remove the appearance of impropriety that now exists.

Sincerely,



Arthur Taylor



**Comment S-94**

**From:** [Nick Eastmond](#)  
**To:** [LNC-EIS](#)  
**Subject:** Logan Northern Canal Reconstruction Project  
**Date:** Tuesday, August 31, 2010 6:00:12 PM

To whom it may concern:

As a person whose property backs onto the Utah Northern Canal along Canyon Road in Logan, I have some opinions to share. Thank you for providing this opportunity.

We have lived in our house since 1976 and have appreciated the beauty of the canal and the adjacent dirt road. We were shocked when the canal collapsed last year, and, of course, we want to have a safe alternative chosen.

We want very much to retain both the walking trail, and, where possible, open canals that can be seen and can add to the beauty of Logan. It is true that some water is lost to evaporation, but that water cools the area.

I was involved 2 years ago with a class from the USU Honors Program in constructing a bridge, stairs, and a trail above the canal near the Wuthrich Nursery property. I believe that bridges like this one -- 5 of them now, constructed by local citizen volunteers -- help facilitate walking traffic to campus and are a good outlet for the volunteerism of the community. Please work to preserve the many walkways both along the canal and to and from campus.

Nick Eastmond  
 Professor  
 Instructional Technology & Learning Sciences  
 Utah State University  
 Logan, UT 84322-2830



Comment S-95

Comment S-95 (continued)



To: Bronson Smart, NRCS

From: Jeff White, P.E.  
Director  
Logan City Light & Power

Date: September 1, 2010

Re: EIS Comment for Proposed Alternative to Logan Northern Canal Reconstruction

Dear Mr. Smart,

As you know, all of Logan City's citizens have been significantly impacted in many ways by the 2009 landslide tragedy of the Logan Northern Canal. Not only were the lives of three innocent residents lost in the catastrophe, but there have also been countless other economic consequences that have impacted our community, which include:

- The costly expense to Logan City taxpayers in responding to the tragedy with all types of vehicles and special equipment & personnel to secure the landslide area, search for survivors, recover the bodies of the victims, and ultimately clean up and remediate the site.
- The negative aspects reflected upon Logan City that have arisen from accusations and innuendo from the public that somehow Logan City may have been negligent or at fault for not doing a better job to oversee, regulate, and intervene in the operations and maintenance activities of the Logan Northern Company to protect the public the inherent dangers.
- Logan City's cost to purchase the damaged properties through a third party following the landslide, in an attempt to eventually find a way to try and stabilize the landslide area to protect the public and remaining private property owners from future landslide events.
- Legal costs for Logan City to defend itself against litigation that has arisen from the tragedy.
- Costs associated with Logan City's efforts and expenses to help the Logan Northern Canal Company shareholders by using Logan's municipal culinary deep-well pumps to supply water to the canal to help farmers save their crops during the summer of 2009.
- The cost, time, and labor required for Logan City to install a temporary by-pass ADS pipeline from the upper canal through the Lundstrom Park area to help supply irrigation water during the 2010 season from the upper Logan-Hyde Park-Smithfield (LHPS) canal system.
- Lost hydro-electric power generation during 2009 & 2010 due to extra water diversions into the upper LHPS Canal that by-passes water around Logan City's Hydro Plant #2.

There are undoubtedly numerous additional cost impacts that have been incurred by Logan City as a consequence of the landslide tragedy that are not mentioned above, but the important point is that

1

Logan City is an extremely crucial third party victim of this incident that appears to have been predominantly left out of the project study and scoping process altogether. During the past 13 months since the incident occurred, not a single NRCS engineer has made an effort to contact Logan City officials to ask for their input in helping to identify and explore possibilities or alternatives to remediate the landslide damage to the neighborhood, and to restore the lost canal system with the least impact to the community as a whole.

It is fortunate for Logan City that a full-blown EIS was requested by NEPA that will finally enable Logan City to provide some input on this project.

Consequently, Logan City would like to propose that the NRCS include a fifth option for consideration among its proposed alternatives that appears to have been immediately dismissed and completely ignored during the scoping process. As ridiculous as it may sound, Logan City would like to propose an alternative option that would provide for the hillside stabilization of the landslide area along Canyon Road. If a viable stabilization system can be identified, perhaps using grouted or helical tie-back anchoring systems that would provide for "an acceptable" engineered level of reliability and "factor of safety", then Logan proposes the replacement pipeline be installed within the same existing canal alignment between the original diversion point near First Dam and 4<sup>th</sup> North (US 89) where the new pipeline could discharge into the existing open flow canal as before.

Logan believes this alternative is truly the only option available that maintains the mandated goal of the Emergency Watershed Protection Program (EWP), especially since the EWP is providing the major funding source for this project. As stated, the purpose of the EWP Program is *"to help remove threats to life and property that remain in the nation's watersheds in the aftermath of natural disasters"*.

At this point in time, it appears that the NRCS has completely ignored the purpose of the EWP Program because it has focused only upon efforts to restore irrigation water to farmers, rather than addressing and removing ongoing threats of life and property that still remain along Canyon Road following the aftermath of the landslide. It is apparent that if something doesn't drastically change the course of the ship that has been launched, several years from now, after the NRCS has combined the two canal systems into a pipeline located in the upper canal, then the residents and homeowners along Canyon Road will still remain at risk of life and property damage because we somehow failed to acknowledge and include considerations for their best interests in our haste to focus solely on the needs of two canal companies.

Logan City believes there are numerous advantages to an alternative project that will include the stabilization of the Canyon Road hillside to remove future threats to loss of life and property damage. A project that can accomplish this will be much more attractive and beneficial for everyone, not just the canal company, when compared to the other options. However, since Logan City has never been privy to the NRCS scoring system used to calculate the benefits associated with their "cost/benefit analysis", it is difficult to determine how they can promote an alternative that does not include the benefits to eliminate the threats of life and property damage to Logan City residents.

Preliminary investigations into the feasibility of this alternative with the help of geotechnical engineering consultants indicate this alternative appears to be very viable and achievable. However, as with any engineered system, the cost of the project is inversely proportional to amount of risk you are willing to accept. In other words, if you want to design and build a slope stabilization project along the hillside of Canyon Road that will be 100% safe and guaranteed to never fail again, then it can perhaps be accomplished, but only at a very expensive cost. On the flip side, if you don't want to spend much money, then you'll probably never be able to build a system that is very reliable and safe.

Yet, any of the other proposed NRCS alternatives that include relocation to the LHPS upper canal using a pipeline or box culvert, can also never be built to be 100% safe and guaranteed from failure without making the same cost comparisons. In other words, both projects are fraught with the same ultimate

• Page 2

**Comment S-95 (continued)**

risks for future landslide events. Although one could argue that a landslide event at the mouth of Logan Canyon near the power plant does not have near the risk for property damages as compared to the Canyon Road hillside, this will not "hold water", so to speak, because the value of the power plant is well worth the value of 20 or 30 homes along Canyon Road, except for perhaps one home, however.

It is interesting to note that the only alternative offered by the NRCS where there will never be a possibility for a future landslide event is Alternative #3 to divert water into a pipeline down Canyon Road. All of the other alternatives offered by the NRCS study will have some risk of a future landslide event because they all rely on the existing alignment of the LHPS Canal system on the north side of the mountain coming out of Logan Canyon and this terrain is probably no more reliable than Canyon Road.

With regard loss of life, which project would offer the most protection from "threats of life" for the public as mandated by the EWP Program? For a landslide in the canyon near the power plant, there may be Logan City employees working at the plant who could be endangered and there is one rental home whose occupants could also be endangered. Now compare this possibility to the risk for loss of life if there is another landslide along the hillside of Canyon Road. It is obvious that there is significantly more threat to loss of life here than up Logan Canyon. So it is troublesome that there is no NRCS alternative proposed to address these ongoing risks to our residents.

Obviously there was never any serious consideration given to an alternative that included the existing alignment because of the tragic deaths of those three innocent victims on that fateful day and a commitment by officials to avoid, at all cost, any possibility whatsoever that a tragedy like this could ever occur again. Yet, it is ironic that in ignoring the problem without addressing it in the scope of this project, it will only guarantee that it will ultimately happen again, because someday, without stabilization, there will be another landslide along Canyon Road with other properties damaged and perhaps some lives endangered, all because this project focused only on irrigator's interests and not what's best for the community as a whole.

So we have to ask ourselves why would we ever promote, finance, and sanction a project that would fail to consider the overall best interests of the entire community, with an apparent indifference to following the EWP Program mandates "to remove threats to life and property"?

It is critical for everyone to realize that if the NRCS does not address the existing dangers of future landslides along the Canyon Road hillside within the scope of this project, then they are compromising the safety and well-being of our residents because there is very little chance that there will be another opportunity arise for Logan City to financially address the problem in the future on their own nickel.

The potential benefits achieved with a project to stabilize the Canyon Road hillside and to install a new pipeline within the existing alignment are as follows:

1. May eliminate the huge cost and time delays associated with a full EIS requirement.
2. Vital irrigation water may be delivered to farmers within the next year.
3. Provides a long term solution to address the threat of life and property damage to Canyon Road residents, UDOT Hwy 89, and will allow remediation of the existing landslide damages that will not be achieved otherwise.
4. Will eliminate the hydro-electric energy losses from Logan City's power plant that will occur if the Logan Northern Canal Company relocates their diversion to the LHPS diversion point.
5. Will eliminate the ongoing public outcry and controversy from homeowners and hikers who enjoy the scenic beauty and wildlife associated with the existing open flow LHPS canal system.

**Comment S-96**

From: [REDACTED]  
 To: LNC-EIS  
 Subject: Fwd: Canal Replacement Issues  
 Date: Tuesday, August 31, 2010 4:58:03 PM

----- Forwarded Message -----

From: [REDACTED]  
 To: "Dorothy and Paul Riley" <[REDACTED]>  
 Sent: Tuesday, August 31, 2010 4:56:04 PM  
 Subject: Re: Canal Replacement Issues

Dear Paul,

Thanks for sending me the input from Jack Keller. That got me to considering some things that I had not figured out before.

First, the very shallow position of the upper confining layer [UCL] of Robinson [1999] beneath The Island essentially guarantees that much of the water entering the Provo delta [from the golf course, subdivisions north of the golf course, leakage from the LHPS canal, subdivisions, churches, and schools east of the golf course, the cemetery, and U.S.U. to the (eastward) pinchout of the upper confining layer] will move laterally toward a slope where it can escape. The UCL extends eastward at least to the easternmost well on USU campus, where it is still 50 or more feet thick. The extent of a higher, thin confining layer about 30 feet down is unknown, but it is present eastward at least to the gravel pit near 1200 East and to the U.S.U. parking area south of U.S. Hwy 89 where Thad Erickson saw it, both east of the main areas of past slope failures along the Logan Northern canal route. Water applied above the thin confining layer can also leak out laterally and then infiltrate the slope beneath along the north, east, and south margins of the Provo delta north of The Island.

I previously concluded that slope failures will continue along the steep escarpment just north of Canyon Road. I now consider excavation along the route of Canyon Road to be a potential trigger for additional failure, based on the proximity of the UCL to the surface there, where high pore pressures in the overlying sandy deposits could make the UCL a site [locus] for failure. If not during construction, then later during a series of wet years, failure there might again destroy the now-piped canal if it is beneath Canyon Road. Thus, your suggestion of moving the location of the piped canal at least one block south seems extremely critical, to decrease [but not remove entirely] the hazard of failure of the steep slope at the escarpment.

Second, I thought that the \$25 million needed for the combined-canal option was no longer available, with the loss of Senator Bennett from Washington. I had not realized that \$25 million in tax dollars has already been sequestered in a separate account by NRCS to apply to the combined-canal option. If the combined-canal option, with piping to 3100 North, is not chosen, the sequestered funds then would be withdrawn and given to a different project. Thus, it will not decrease the expenditure of our tax dollars if another option is chosen. It will simply redirect our already-

**Comment S-96 (continued)**

committed tax dollars into another project, probably in another state. Further, I have learned that Logan City is negotiating the release of water from the combined canal for generation of electricity during peak hours when/as needed. Also, the enclosed combined canal will be set up to take in stormwater runoff and release such at designated points downflow, which accrues to the benefit of all. Finally, intake of rather good-quality water upstream in Logan Canyon would permit lesser costs of treatment and of pumping if that water is treated for culinary use or M&I use at some future date as development in Cache Valley continues northward. Thus, I have downgraded my original preference of the Canyon Road option considerably, and reinstated the combined-canal option as a viable possibility.

Bob Oaks

**Comment S-97**

**From:** [REDACTED]  
**To:** [LNC-EIS](#)  
**Subject:** Canal EIS input from Bob Oaks: photos  
**Date:** Tuesday, August 31, 2010 11:09:58 AM

---

Mr. Bronson Smart and Ms. Sue Lee  
HDR Engineering  
3949 South 700 East, Suite 500  
Salt Lake City UT 84107  
[LNC-EIS@hdrinc.com](mailto:LNC-EIS@hdrinc.com)

As an additional note, I would be concerned that emplacement of a pipeline beneath Canyon Road would be too close to the base of the escarpment. The escarpment has a potential locus of weakness along the upper confining layer of Robinson [1999], which is about 20 to 30 feet deep there. An alternative, suggested by Paul Riley, would be to move the position of such a pipeline about one block farther south, to avoid potential removal of support along the toe of the escarpment when the pipeline is emplaced and also thereafter [in case of leakage of the pipeline].

The date and time indicated [if they show up] on each photo should be 13 hours later, because I set up the camera defaults while overseas, and cannot change them until I change to a new battery.

Bob Oaks

Comment S-98

Comment S-98 (continued)

August 27, 2010

**HDR**  
 REC: AUG 30 2010  
 PROJ:  
 FILE:  
 DIST:

Natural Resources Conservation Services  
 U. S. DEPARTMENT OF AGRICULTURE  
 125 South State Street Room 4402  
 Salt Lake City UT 84138  
 Attn Bronson Smart  
 State Conservation Engineer

and

HDR ENGINEERING  
 3949 South 700 East Suite 500  
 Salt Lake City UT 84107  
 Attn Sue Lee / Alana Spendlove

RE Logan-Northern Canal Reconstruction Project (Cache County, Utah)

These comments, suggestions and historical information are submitted as public comment on the Logan Northern Canal Reconstruction project. I'm still a shareholder of the Logan, Hyde Park and Smithfield Canal Company (LHPS Canal), was on the Board and its elected vice president for 30 years, and was its Water Master for 29 years. As Water Master I was responsible for (and thus am intimately familiar with) the LHPS Canal's entire length: its capacity and flow, its maintenance and repair, the delivery and equitable allocation of irrigation water to shareholders. I was Water Master under three presidents (George Maughan, Cyril Lauritzen, Keith Meikle) and during the change from shovel & open ditch through the gradual (over a decade) adoption of piped gravity flow to sprinklers.

In July 2009 there was a nasty break in the Logan-Northern Canal (L-N Canal). It washed a hillside down onto the Canyon Road. Three people (a mother and 2 kids) died in a home that filled up with mud; neighbors were inconvenienced; the livelihood of many L-N Canal irrigators was threatened. It was serious. LHPS Canal (sometimes called the "upper canal") allowed its Logan River diversion and canal bed to be used to carry L-N Canal water to the temporary piped bypass to get some water into the middle canal.

The Board of LHPS Canal called stockholder meetings in 11-09. In the meeting they showed some pictures of the canal: Those pictures looked bad and made everybody say "the canal is gone" and "we've got to do something".

I'd seen that every spring for more than my 30 years on the canal. You can't wear a dirt canal out! Look at both of these canals - they're 100 years old and absolutely capable of carrying water for another 100 years if they're maintained right. The upper canal has carried 100 second-feet and, with good maintenance and cleaning, it still could do it.

The Board called the 11-09 meetings to seek shareholder approval to join with L-N Canal as one of the two parties in a new "highline water association" and to proceed with evaluation of putting all the water of both canals into the upper canal under combined management.

I was at the meeting and listened to what was said. They said that this break involves 7,000 acres, which is not true because it only involves the land served by L-N Canal. One or two things were said that discouraged me. The president got up and said, "Just think, stockholders. We could have a gold-plated canal for absolutely nothing." I thought that's not a very good statement to make: I've never seen anything that's "something for nothing". He was talking about the government putting up the money, but what the Board is trying to do is consolidate the two canals to take care of the break

NRCS / USDA  
 HDR Engineering

August 27, 2010  
 Page Two

RE Logan-Northern Canal Reconstruction Project (Cache County, Utah)

on L-N Canal. The pictures they showed, the stories they told, were very convincing, so convincing that the votes were much in favor of pursuing a combined canal.

I'm quite concerned about this combined canal because during my 30 years on the Board we were thinking about that at one time. We thought it might be a good idea to put all the water in the upper canal and have gravity flow clear down to the highway. We thought it over, we talked it over, we even went to the government and asked if they'd give us a grant or something for it. The report we got back is that they will not help to improve a canal but they would help out for a break. We didn't have a break, so we weren't qualified, and we couldn't get it. We gave the information to our stockholders and had a vote. Because of all the things we would have had to do for a project like that, they voted 100% against it - it was too much money for what we'd get out of it, it was too complicated, and it would change all kinds of things (like rights-of-way).

After my time on the Board there was an opportunity to change how LHPS Canal brings its water out of the canyon. Logan City operates the old Utah Power & Light plant to produce electricity, and in the mid-1980s it piped some of its river flow from Second Dam, down past the LHPS Canal diversion, to its hydro plant near First Dam. I heard the City wanted the canal to put its water into that pipe with City water. It didn't happen - whether because of cost or something else - but that would probably have been a good time, at a good deal (but I don't know the numbers), to get LHPS Canal water into a pipe through the canyon.

Looking at the Project Study Area and preliminary Alternatives, Alts. 1, 2 and 4 require diversion of L-N Canal water into the existing LHPS Canal. I think it would be not wise to do that; indeed I think it would be practically a disaster to try to put that much water in this one canal. LHPS Canal is built along the sidehill, under the cliffs and the rocks. Remaking the water's entry (out of Logan River into LHPS Canal), getting enough fall to move water in a pipe, modifying the canal bed to carry the water rights of both LHPS and L-N Canals will require big changes -- to the canyon, the highway, the river, the canal, the point of diversion, the degree of slope to move the water.

I cannot understand why the talk is all about money to go to Alt. 4, maybe 1 or 2, when there is a simpler way, a much quicker way to put the L-N Canal back in service. I drove down Canyon Road and looked it over myself: First Dam has a very good prospect of carrying water as L-N Canal traditionally carried it. Lay the 4 1/2 foot pipe in the canal as far down as the break. At the break, where the disaster happened, pipe the water behind the houses on Canyon Road. I think Logan City has purchased those properties and it would be quite easy to put a pipe along the back of those lots and homes, run it west to the steep hill, then up and over to 4th North. Its water could then go directly into the L-N Canal. I'm not an engineer, but I think that a few million dollars would do that. This is a where-to-lay-the-pipe variation on Alt. 3.

I was born in 1920, and I just had my 90th birthday. I've had quite a bit of experience with the LHPS Canal, and I'd be willing to talk to anybody about the upper canal and about the alternatives for the L-N Canal Reconstruction project.

*A. Leo Krebs*

A. Leo Krebs

Comment S-99

Comment S-100

Aug-31-10 04:12pm From: T-999 P.002/002 F-708  
 HDR  
 801-743-7800  
 LNC-EIS@hdrinc.com August 30 2010

Dear Sirs,  
 Looking at the plans for the canals & choosing the one I am in favor of. I think it is (option 4 pink?) that goes down from Logan River to 400 North seems best.  
 Paying to pump the H<sub>2</sub>O out to 3100 North & then back in to the center of Logan doesn't make sense to pay for that. (option 1 orange?)  
 Also I would like to keep as much open H<sub>2</sub>O / canal like frontage as possible for the wildlife & aesthetic value. If there has to be some enclosed pipe I think there should be some H<sub>2</sub>Oing (watering) stations w/ float tanks spaced liberally along it (the pipe) to sustain the wild life. Though this might have occurred as an accidental benefit in the past it seems wrong not to maintain H<sub>2</sub>O for the wildlife & other fauna of the area.  
 The Canal system is a great asset to the Cochise Valley & adds to the enjoyment of life here. Possibly there is a nature group that might assist in establishing the watering stations.  
 The natural / rural / small town ambience is the greatest draw for living in this area please don't destroy that.

Sincerely,  
 Sharon Laurie Lauritzen  
 Logan & Northern Canal - Shareholder -  
 Sharon Lauritzen

Received Time: Aug. 31, 2010 4:14PM No. 1676

From: [Lynne H Goodhart](#)  
 To: [LNC-EIS](#)  
 Subject: Logan Canal system  
 Date: Wednesday, September 01, 2010 9:03:22 PM

To Whom It May Concern:

I am a resident of Lundstrom Park area, and have lived near the canal for over 30 years. I walk often along the canal bank in the park, and have found great beauty and pleasure in the sound of the water and the greenery along the banks. The views are superb and I have always found it the most beautiful feature of our neighborhood.

If taxpayer contributions are taken, then all taxpayers should have a voice, not just the farmers. The canals greatly enhance the lifestyle in our neighborhood, and in the park itself. I would feel robbed should they disappear.

I believe a rigorous Environmental Impact Study should be done, and public sentiment taken into account if public monies are used. To do otherwise would be dishonest.

Sincerely,  
 Lynne H. Goodhart

**Comment S-101**

**From:** [Derinzy, John W SPK](#)  
**To:** [Lee, Susan](#)  
**Cc:** [Gipson, Jason A SPK](#)  
**Subject:** Logan Northern Canal Project  
**Date:** Monday, September 13, 2010 4:38:41 PM  
**Importance:** High

Dear Susan,

Please find below the Corps' comments in response to the public agency scoping meeting pertaining to the Logan-Northern Canal Project.

The Corps would like to be a cooperating agency with the NRCS throughout the process. This will insure that any CWA Section 404 permit that may be required will be facilitated through the process more effectively. For the purpose of the Clean Water Act Section 404 Program, applicants will need to keep in mind that avoidance and minimization of impacts to Waters of the U.S. (WOUS) must occur to the most practicable extent possible and that WOUS include jurisdictional waters such as the Logan River, its tributaries, certain irrigation canals and ditches, and special aquatic sites such as wetlands, playas, springs, seeps, etc. Please keep this in mind during the early stages of project development.

Please feel free to contact me if you need further information or have questions about the Corps' Regulatory Program.

Thank you,

John Derinzy  
 Regulatory Project Manager  
 Nevada-Utah Branch  
 U.S. Army Corps of Engineers, Sacramento District  
 533 West 2600 South, Suite 150  
 Bountiful, Utah 84010-7744



"When one tugs at a single thing in nature, he finds it hitched to the rest of the universe." John Muir

Let us know how we're doing.  
<http://per2.nwp.usace.army.mil/survey.html>

Information on the Regulatory Program.  
<http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/index.html>

*This space is intentionally blank.*

*This page is intentionally blank.*