

Chapter 12: Comments on the Draft EIS

12.1 Introduction

NEPA requires Federal agencies preparing an EIS to solicit comments on the Draft EIS from appropriate Federal, State, and local agencies; the project applicant (in this case, the SLO); and the public (CEQ NEPA regulations, Section 1503.1).

EPA published a notice of availability for the Draft EIS in the Federal Register on March 18, 2011. This notice opened the official Draft EIS comment period. NRCS accepted comments on the Draft EIS through May 2, 2011. Comments were collected by U.S. mail and e-mail and at a public open house on March 31, 2011.

This chapter includes an index of comments received, copies of the comments and transcripts of oral comments, and NRCS’s responses to all comments received during the Draft EIS comment period. This chapter does not include copies of comments received before or after the official Draft EIS comment period.

NRCS made changes to the EIS in response to some of the comments received. Please see Section S.1.2, Changes from the Draft EIS, for a summary of changes to the Draft EIS that are reflected in this Final EIS.

What is included in this chapter?

This chapter includes an index of comments received, copies of the comments and transcripts of oral comments, and NRCS’s responses to all comments received during the Draft EIS comment period.

12.2 Comment Index

NRCS received a total of 57 comment letters, comment e-mails, and transcribed oral comments during the official Draft EIS comment period. Table 12-1 is an index of all comments received.

Table 12-1. Listing of Commenters and Comment Identifiers

| Name | Comment Number | Name | Comment Number |
|--|-----------------------|---------------------------------------|-----------------------|
| Don Westenskow | D-01 | Lucy Peterson Watkins | D-30 |
| William E. Piercy | D-02 | Clare Marler | D-31 |
| Carl Malouf | D-03 | Don Younker | D-32 |
| Karen Flessner | D-04 | Donald Hansen | D-33 |
| Thad Box | D-05 | Virginia Hansen | D-34 |
| Steven Hicken | D-06 | Arlene Younker | D-35 |
| Michael Kuhns | D-07 | Kay Gillgen | D-36 |
| Irene S. Eastmond | D-08 | Bruce Haslem | D-37 |
| Charles Ashurst | D-09 | Pat Pearson | D-38 |
| City of Smithfield | D-10 | Russel Goodwin | D-39 |
| Clair C. Larkin | D-11 | Jon Meikle | D-40 |
| Clyde M. Anderson | D-12 | Ralph Meikle | D-41 |
| Kim Sullivan | D-13 | Jeffery Gittins | D-42 |
| Anonymous | D-14 | Valorie Byrnes | D-43 |
| Debbie Roper | D-15 | <i>Comment number not used</i> | D-44 |
| Wendi Hassan | D-16 | Lucy Peterson Watkins | D-45 |
| Anonymous | D-17 | Jack Keller | D-46 |
| Eric Hansen | D-18 | Brett Roper | D-47 |
| Mark Christopherson | D-19 | City of Logan | D-48 |
| Gordon Younker | D-20 | Lydia Embry | D-49 |
| Anonymous | D-21 | Kerry Jordan | D-50 |
| Bruce Pendery | D-22 | EPA – Region 8 | D-51 |
| Frederic H. Wagner | D-23 | City of North Logan | D-52 |
| Erik Ashcroft | D-24 | Jordy Guth | D-53 |
| Lydia Embry | D-25 | Eric Joffs | D-54 |
| C. Val Grant | D-26 | E. Bruce Godfrey | D-55 |
| Lucy Peterson Watkins | D-27 | U.S. Forest Service | D-56 |
| DOI Office of Environmental Policy and Compliance | D-28 | U.S. Army Corps of Engineers | D-57 |
| Carey Walkins | D-29 | Russell Goodwin | D-58 |

12.3 Comments and Responses for the Draft EIS

| Comment D-1 | Response |
|--|----------|
| <p>D-1.1 ▶</p> <p>D-1.2 ▶</p> <div data-bbox="289 357 1129 1445" style="border: 1px solid black; padding: 10px;"> <p>From: Don To: LNC-EIS Subject: Logan Northern Canal Date: Thursday, March 17, 2011 1:11:49 PM</p> <hr/> <p>To whom it may concern;</p> <p>I am sending this comment in regards to the Logan North Logan canal project. I live in North Logan; the upper canal runs along my back yard. One of the reasons I purchased this lot in 1987 and built a house on it was because of the open canal. Over the years our family and friends have enjoyed our back yard for many gatherings and even weddings because of the canal backdrop. Year after year we watch the baby ducks grow up. I know the canal system has to be repaired, but I don't see why it should be the most expensive alternative like most of the water share holders seem to favor. The government money that is available for this comes out of all our pockets to benefit a few. I would think one of the less expensive alternates would accomplish the same results with less destruction to the habitat and property ambience and possibly property value along the open canal. I would ask you to please look seriously at alternatives that do not involve piping or covering the upper canal.</p> <p>Thank You,</p> <p>Don Westenskow </p> </div> | |

Comment D-2

Response

Comments on Draft EIS for the Logan Northern Canal Reconstruction Project

Thank you for the opportunity to comment on the draft EIS. As a landowner along the upper canal, a retired environmental engineer and a concerned citizen/taxpayer, I have tried to follow this issue closely and appreciate the depth of information contained in the EIS.

D-2.1 ▶

I support your conclusion to recommend the Purple option, but with reservations. From an engineer's standpoint, I believe that the Blue alternative is the best solution; but I realize that it is politically unacceptable to the general public, since it places the canal on the same hillside that collapsed earlier. This is unfortunate, since the canal failure was as much due to improper maintenance and untimely response to the impending failure as it was to natural conditions, i.e., the springs. While the Blue option design addresses each of the project objectives, it is unlikely to convince those who do not understand the power of good engineering.

D-2.2 ▶

Likewise, I would favor the Yellow option over the Purple option, since it addresses the project needs without reducing the generation of clean electricity. I am concerned that this option has not been fairly assessed. The need for a larger diameter pipe is unconvincing, since adequate hydraulic head is available at the First Dam. The use of smaller pressurized pipe should greatly reduce the cost of the project and minimize, to a degree, the disruption of pipe installation.

D-2.3 ▶

I may be unfair in my next comment, but I believe that the wealth and power of some who live along Canyon Road may have made their inconvenience somehow more important than the inconvenience of those in the way of the other options under consideration. I also question the need to relocate families during the construction, since that seems to be not required for other similar roadwork involving underground utilities. They can park their cars at a slight distance from their homes, as I have had to do in the past myself. On a final note regarding the Yellow Plan, I resent rewarding a private business (the Smithfield-Logan Canal Company) that had nothing whatsoever to do with the original failure. They were two separate entities at the time of the failure, and I question the legality of using EWPP funds to benefit a private, unrelated business.

D-2.4 ▶

I thank you for *not* supporting the Orange Plan, which in the famous words of the president of the Smithfield-Logan Canal Company is "a gold plated canal at a bargain price." A bargain price for them anyway. This option is the most expensive, the most disruptive to the most landholders, the most damaging to the environment, and the most damaging to the ascetics of the area. The benefits of reduced canal seepage and reduced pumping costs for the lucky few canal shareholders hardly justify the greater cost and other adverse effects that this plan entails.

D-2.1

Comment noted.

D-2.2

Please note that NRCS considered, then eliminated, the Yellow Alternative from further analysis and therefore did not consider developing further detail about this option. See Section 3.4, Alternatives Eliminated from Detailed Study, on page 3-31 of the Final EIS for information about the alternative screening process.

The commenter correctly states that the Yellow Alternative, as presented in the Draft EIS, would not require a change in the existing LN Canal POD and therefore would not result in any water-use conflicts between the Logan & Northern Irrigation Company and the Logan City Light and Power Department regarding water availability for hydropower generation.

The modification to the Yellow Alternative suggested by the commenter (moving the LN Canal POD to First Dam and reducing the pipe size due to increased pressure) would be a new option. The alternatives that NRCS considered and presented in the Draft EIS are based on using existing system features to the extent possible and avoiding impacts to new areas. NRCS considered this new option and others during its review of Draft EIS comments. However, NRCS did not include any new options in the Final EIS because the existing action alternatives already meet project objectives. The option suggested by the commenter would not better achieve the project objectives.

The Blue Alternative, which NRCS studied in detail, uses the existing LN Canal POD and existing canal easements and would deliver water to the same location (about 400 North in Logan), is in the same general area, and received broad public support during the NEPA scoping process. Because of this, NRCS did not consider any additional options in the Canyon Road area.

Comment D-2 (continued)

Response

D-2.5 ▶

I believe that the Draft EIS understates some of the negative consequences of the Orange Plan. Many large, mature trees will have to be removed or will die once their root systems are torn out and their source of water dries up. In an area where large trees are not common, this is a greater loss than is stated in the EIS. Likewise, the elimination of open flowing water (even more rare in the area) is minimized in the EIS. This is not just a concern to those, like me, who live adjacent the canal. I see many people each day walking the canal, floating the canal (even though that is suddenly frowned upon after almost 100 years of being perfectly alright), and splashing in the canal. It is impossible to put a dollar value on these types of attributes, but they are very important nonetheless.

D-2.6 ▶

I have a problem with making a big issue out of the danger of the canal to small children. The neighborhood roadways are much more dangerous, yet they are never questioned in this fashion. If there is an issue, then a fence (like I have) is a good option for any parents who are genuinely concerned.

Again, thank you for the opportunity to comment.

William E. Piercy


D-2.3

Constructing the Yellow Alternative would require disconnecting a sewer line that serves people living along Canyon Road. People living in the affected area would need to be temporarily relocated during construction because they would not have basic sewer service. The temporary relocation does not have any relationship to the economic or social status of people living along Canyon Road.

The EWPP is a program designed to assist private parties as well as public agencies. The EWPP states that “private entities or individuals may receive assistance only through the sponsorship of a governmental entity” (7 CFR 624.6[a][1]). In the case of the proposed action, Cache County is sponsoring the project. The EWPP regulations do not specify the type of interest a private entity or individual can or cannot have related to the emergency for which the funds are requested.

D-2.4

Comment noted.

D-2.5

Much of the existing vegetation along the edge of the LHPS Canal would need to be removed during construction of the Orange Alternative to accommodate the box culvert and equipment. The EIS does not propose to re-establish the current pattern of vegetation, but, as described on page 3-18 of the Draft EIS, some restoration of landscaping would occur. The Draft EIS has been corrected to describe this type of revegetation for the Orange Alternative.

Cache County has stated that it would like to consider options to eventually develop a greenway, or linear park, along the canal with a footpath and some landscaping. In order to establish the greenway and facilitate re-establishment of vegetation along the canal, the box culvert proposed as part of the Orange Alternative would include components that would accommodate the installation of low-flow irrigation systems. If a greenway is established in the future, its planning and construction would be accomplished through a process external to the Logan Northern Canal Reconstruction project. Please see the section titled General Vegetation on page 5-50 of the Final EIS for the Purple Alternative; the same information applies to the Orange Alternative.

Comment D-2 (continued)
Response

If constructed, the greenway would legally accommodate pedestrian and bicycle traffic along the canal. Under the current status of the canal, walking along and floating in the canal are unauthorized uses and, in most areas, people taking part in these activities are trespassing.

Please see the response to comment D-1.2 for information regarding why the canal would need to be enclosed (and therefore would be unavailable for floating).

D-2.6

Cache County and canal operators have expressed a desire to lessen the drowning risk to both adults and children associated with an open canal. Many canal operators are justifiably concerned about children around open canals in particular. As referenced in *Whipple v. American Fork Irrigation Company* (Utah Supreme Court 1996), Restatement (Second) of Torts § 333 (1965) states, “except as stated in §§ 334–339, a possessor of land is not liable to trespassers for physical harm caused by his failure to exercise reasonable care (a) to put the land in a condition reasonably safe for their reception, or (b) to carry on his activities so as not to endanger them. The exceptions stated in sections 334 to 339 deal generally with activities and artificial conditions highly dangerous to constant trespassers on a limited area or to known trespassers, controllable forces dangerous to known trespassers, and **artificial conditions highly dangerous to trespassing children**” (emphasis added).

Comparing a roadway to a privately operated canal is not a fair comparison. Roads are generally public property, and entities manage roads for public use. For those segments of the canals used by the Cities for stormwater, the Cities have agreements with the canal company that operates each canal, but these agreements do not generally cover public use of or access to the canal. Please see the response to comment D-1.2 for an explanation regarding why NRCS is proposing to enclose the LHPS and LN Canals with the action alternatives.

This space is intentionally blank.

Comment D-3

Response

From: [Redacted]
To: [Redacted] [LNC-EIS](#)
Subject: Logan Canal Options
Date: Monday, April 04, 2011 10:04:15 AM

Dear Mr Bronson Smart and Ms Sue Lee,
 A few thoughts I hope you have or will consider covering in recommending action on the Logan canals issues.

D-3.1 ▶

1. The Logan-Hyde Park-Smithfield canal cut into cliffs east of LG&CC. My hope and expectation is that the existing structure is properly evaluated for its future planned use to include increased flow over the historical usage. A walk in the channel is fairly easy now and reveals a few cracks and places possibly needing attention (including a large 3 cubic foot size bolder that crashed into the wall within a few hours before my visit March 30. I suggest too, that emergency shut-off options and plans are soon in place, if not already adopted, for this section. Note the existing dump gate about a quarter mile east of the LG&CC.

D-3.2 ▶

2. Consider a reverse siphon pressured smaller pipe with a higher take-off from First Dam (see Jack Keller letter to Herald Journal April 3) for complete restoration of the Logan Northern. The pipe could course through the existing channel to almost the risky side hill and then either be well anchored through there or be diverted to safer levels then back to the existing channel before crossing 400 North. Shareholders in this area could rely on valves for their historically expected supply. Using the existing channel to nest the pipe would seem to save on easements, access and work space for installation and maintenance. As an added benefit, such encasement may even allow realignment of the narrow and dangerous blind curve on Canyon Road across from the Water Research Lab.

D-3.3 ▶

3. Failing restoration of the flow beyond the breakout, how about re-introduction of water to enter the Logan Northern beginning from the existing diversion below First Dam and allowing water to flow to a point almost where the breakout occurred? Open the initial gate to allow only sufficient water head for the existing shareholders in that area. The flow could be minimal to service them, particularly in view of the numerous side hill source water flow additions. This might necessitate a spin-off separate irrigation company for that area. A dam at the western terminus would need to be vandal unfriendly. Also, emergency dump and shut-off plans would need to be adopted.

D-3.4 ▶

A pressured reverse siphon of smaller capacity linking Logan River to River Heights and Providence has been successfully delivering irrigation water for the past two seasons for the Providence-Logan Irrigation Company .

Thank you for your efforts in developing a workable solution.
 Carl Malouf, [Redacted]

D-3.1

For the Purple and Orange Alternatives, NRCS would replace part of the existing LHPS Canal with a box culvert. As described on pages 3-10 (Purple Alternative) and 3-17 (Orange Alternative) of the Final EIS, the box culvert would be sized to accommodate the combined flows for delivery to LN Canal and LHPS Canal shareholders.

The final engineering design of the new conveyance system would consider options to modify operations of the canal system in the event of an emergency.

D-3.2

The modification to the Yellow Alternative suggested by the commenter (moving the LN Canal POD to First Dam and reducing the pipe size due to increased pressure) would be a new option. Please see the response to comment D-2.2 for a discussion about how NRCS considered new options presented during the Draft EIS comment period.

Changes to the alignment of Canyon Road are outside the scope of this project. Any changes to the alignment of Canyon Road would need to be proposed and completed by the City of Logan.

D-3.3

All of the action alternatives include installing a pipeline from the existing LN Canal POD below First Dam to the Laub Diversion in order to supply water to shareholders along this reach of the canal. Because the LN Canal shares for users in this area would be delivered through this pipeline, creating a new irrigation company would not be necessary. Also, this water would be in a pipeline, so there would be no need to construct a vandal-unfriendly dam. This pipeline segment would be short, so an additional shutoff (beyond the gate at the existing POD) would not be necessary.

D-3.4

Comment noted.

Comment D-4

Response

D-4.1 ▶

From: Karen Flessner
To: LNC-EIS
Cc: Ron Flessner
Subject: Canal reconstruction, Canyon Road, EIS, Logan
Date: Monday, April 04, 2011 10:05:42 AM

Hi, Mr. Smart.

I am writing in response to this posting –
<http://hardnewscafe.usu.edu/?p=4592> (EIS for canal reconstruction above Logan's Canyon Road presented at multi-council meeting)
 March 30th, 2011 Posted in [News](#)
 By [Lis Stewart](#)

We own our home on [REDACTED]. We have a canal that runs through our back yard. Since the mudslide in 2009, the water level has decreased significantly. It is now stand-still water. As a result, in fall 2010, the standstill water became a rich breeding ground for mosquitoes. We were not able to enjoy our backyard in the evenings because of the mosquitoes. We petitioned the City to come spray the area to get rid of the mosquitoes, but no one came.

Secondly, the City was to come out once a year to clean out and maintain the canal (remove branches, garbage, etc) and nothing was done since 2009. Please let us know what actions will be taken with regards to this issue. I tried to contact the management of the apartment complex (on the eastside of the canal) to propose a joint-venture plan to clean and maintain the canal between [REDACTED]. No one from the complex management responded.

Thirdly, some occupants to our east (from that same apartment complex) had used the canal as a waste dumping ground. You will see garbage bags, gourd, soda cans, etc in the canal, at the property of [REDACTED]. I had tried to contact the complex management in fall 2010 about this issue. No one responded.

Please let me know what can be done to rectify this, so that the canal can be maintained and kept clean, and with water flowing, and that we can enjoy our backyard again.

Thank you for your time. Please advice.

Karen Flessner
 [REDACTED]

D-4.1

The commenter's property is downstream of the 2009 landslide at about 800 North in Logan. Since the landslide occurred, the canal has continued to convey stormwater runoff from city streets and adjacent lots and to deliver some water to the shareholders via the temporary delivery system as described in Section 2.1.2.2, Operation of the LN and LHPS Canals, on page 2-4 of the Final EIS.

The Logan & Northern Irrigation Company, the canal operator, has primary responsibility for maintaining the LN Canal and for addressing any problems related to maintenance of the canal. However, since the City uses the canal for stormwater conveyance, it has an interest in eliminating debris such as garbage that could block the flow of water, and the City works with the Logan & Northern Irrigation Company to maintain the canal.

Mosquito abatement is not a responsibility of the Logan & Northern Irrigation Company and is beyond the scope of this project. However, all of the action alternatives would once again use the LN Canal alignment to convey irrigation water during the irrigation season. With the Blue Alternative, water would flow in an open canal as it did before the landslide. With the Purple and Orange Alternatives, most of the LN Canal water that is delivered to shareholders in this area would be placed in a pressurized pipeline system and in the canal. The existing canal structure would remain in place and would continue to be used to convey both stormwater and about 2 cfs of Logan & Northern Irrigation Company water during the irrigation season, which would prevent standing water during the summer. Outside of the irrigation season, the canal would function as it has historically and could continue to pond stormwater and non-stormwater flows. Funding for the proposed action from NRCS and the Utah Division of Water Resources requires developing long-term operation and maintenance plans and service agreements that identify responsible parties.

With the No-Action Alternative, the Logan & Northern Irrigation Company would probably abandon the LN Canal easement, and the Cities of Logan and North Logan would probably take over maintenance of the canal structure as a stormwater conveyance facility.

Comment D-5

Response

From: [Thad Box](#)
To: [LNC-EIS](#)
Subject: Comments on Logan Canal Draft EIS
Date: Monday, April 04, 2011 11:06:43 AM

D-5.1 ▶

I was unable to attend the NRCS draft EIS presentation to County and the City officials or the public meeting afterward. My opinions here are based on studying the draft EIS and weighing it against the intent of NEPA.

On January 1, 1970, the day I became Dean of the College of Natural Resources at USU, President Nixon signed the National Environmental Policy Act (NEPA). Faculty in our college and I spent hours, days, and decades sorting out the intent of Congress, the plain language of the act and regulations developed by Nixon's Administration.

Congress intended that projects using the people's money consider both the cost of the project and damage to the environment. The option that does the least environmental damage does not have to be selected, but the EIS process guides decision makers to select the best environmental alternative or justify their action. Cost alone is not sufficient for choosing an option other than the best environmental choice. Officials must answer to the public for any cold blooded decision to damage the environment they choose to take.

In the Northern Canal draft EIS, the NRCS considered a number of alternatives, and did an analysis on four. The so-called Orange option was too costly, leaving the Purple (diverting water below Second Dam and piping it on the bench), the Blue (reconstructing the canal near the historical route) and doing nothing.

D-5.2 ▶

It is unclear to me why purchasing 14 properties along Canyon Road and razing houses is included. If that is an attempt to qualify the project for emergency funds, that should be stated. Such funds are usually limited to repair and safety, not improving systems. But for whatever reason the purchase is included, it is probably an invitation to litigation.

D-5.3 ▶

Purple, the "preferred" option, takes water from the river below Second Dam. It includes major canal improvement, piping and environmental damages over a large area. It will reduce the amount of clean energy (hydropower from Logan's lower plant) and deliver water effectively to farms. It is estimated to cost \$20.4 to \$22.4 million.

The option causing least environmental damage is the "no action" option, but that was not seriously considered. The draft EIS states the Blue option will cause the least environmental and historical damage of those analyzed. Also, Logan's water to generate hydropower, will be unchanged, making it best for clean energy. It would include a strengthened canal, anchors and a berm to protect houses below.

The cost of the Blue option is estimated to be \$24.1 to \$26.5 million. That's a lot of money. But in today's world it is a dirt cheap way to buy beauty, biological diversity and historical ambience, protecting for our grandkids the very things that make Logan and Cache Valley a special place.

And, I think, the extra cost is a small enough that the Blue option should have been

D-5.1

Comments noted.

D-5.2

NRCS is proposing to acquire structures from 14 properties as part of all of the action alternatives. As noted in the NRCS EWPP manual, NRCS can buy the structures only if the buy-out is voluntary (Section 511.6[B]). The structures that would be acquired are within an area that has historically been susceptible to landslides. Since one of the focal points of the EWPP is to reduce hazards to life and property, NRCS determined that purchasing the structures is a cost-effective way to prevent future damage and/or loss of life in this historically unstable area. NRCS has not completed detailed studies on the stability of the slope, but evidence in existing literature and referred to in the EIS indicates that hazards to life and property exist along the Logan Bluff between about 750 East and 1100 East. Please see the discussion about the potential purchase on pages 3-7 through 3-9 of the Final EIS. Additional information about the geologic stability of the area is presented on pages 2-9 and 4-55 of the Final EIS.

As noted in Section 511.6(B) of the NRCS EWPP manual, "NRCS may purchase (based on current value) and remove (which may include relocation or demolition) a structure when removing a building or similar structure is the least costly alternative and the buy-out is voluntary and does not involve a lessee or tenant." NRCS's cost share for such purchase, from willing sellers, cannot exceed 75%, so the County and/or City would probably need to participate in the purchase.

NRCS recognizes that some property owners might not be willing to sell their properties. With the Purple and Orange Alternatives, the project could still be constructed even if property owners are not willing to sell. However, the soil buttress proposed as part of the Blue Alternative could be constructed only if the structures are removed. With the Blue Alternative, if the property owners are unwilling to sell, condemnation proceedings would occur. Because NRCS cannot fund the purchase of structures from unwilling parties, the SLO and its partners would be required to fund the acquisition of the properties through condemnation. Based on phone calls that the NRCS has received since it published the Draft EIS, it appears that many of the structure owners are not willing to sell their properties. The Final EIS has been updated to reflect how structure acquisition might affect the success of the Blue Alternative.

D-5.3

Comments noted.

Comment D-5 (continued)
Response
D-5.4 ▶

identified as the preferred option. Unfortunately, if the Blue option is not the preferred option, litigation costs could ultimately surpass the cost of preventing damage to those things we value most.

Independent water experts suggest there may be even better and less expensive options. One of the world's most respected water engineers, Jack Keller, wrote "The NRCS rejected seriously looking at what they call the "Yellow" alternative, which is the most cost effective and environmentally sound"(Herald Journal, 3 April 2011).

Some have suggested that the EIS does not accurately consider the cost of power buyout, the acreage served is overstated, and other details. Comments on the draft EIS allow NRCS to address such details, but the real question is what is the environmental and historical ambience worth to people.

D-5.5 ▶

Personally, I want the canal shareholders get an improved water delivery system. And I would like my tax funds to build the system with the least environmental damage.

I recommend that the Blue option be the preferred option. Or, perhaps an even better ,Yellow or some other color be considered that will deliver the water at a lower cost and with fewer cultural, environmental and historical damages.

Thadis W. Box

4 April 2011

D-5.4

The EIS describes the potential cost of hydropower lost in the context of comparing an option of pumping LN Canal water from the Logan River near First Dam up to the LHPS Canal to an option to divert LN Canal water upstream at the LHPS Canal POD below Second Dam, not as an analysis for compensation for the potentially lost hydropower due to implementing the Purple or Orange Alternatives. Since the Draft EIS was published, the Cache Highline Water Users' Association (CHWUA or CHWA) and the City of Logan have established an agreement that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple and Orange Alternatives. See page 5-39 of the Final EIS for further discussion.

The commenter is not specific in his comment about the acreage served and where the acreage is overstated. Comment noted.

NRCS assumes that, when the commenter refers to the "environmental and historical ambience to the people," he is referring to quality of life and the historic nature of the canal system. The EIS discloses that some people might feel that changes associated with any of the action alternatives would reduce their quality of life (see pages 5-14 through 5-18 of the Final EIS). However, the EIS also discusses the fact that ongoing agricultural production, which relies on delivery of irrigation water using the canal system, is a positive contribution to quality of life in the study area. As stated on page 5-18 of the Final EIS, the proposed action is not expected to significantly improve or reduce the quality of life of residents in the study area. What some residents might find adverse, others might find positive.

The EIS discloses that any of the action alternatives would affect historic resources in the study area. NRCS and Cache County would work with the State Historic Preservation Officer to ensure that impacts to historic resources (which can include the setting within which physical resources occur) are minimized and mitigated.

D-5.5

Comments noted.

Comment D-6

Response

D-6.1 ▶

From: [REDACTED]
To: [REDACTED]
Cc: [LNC-EIS](#)
Subject: Logan canal project concern
Date: Monday, April 04, 2011 12:50:10 PM

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.

The water feature of our golf course is a huge marketing tool for new membership sales. It has an attraction to golfers like steel has to a magnet.

Please consider leaving this short section an open waterway with only safety and beautification issues addressed.

Sincerely,
 Steven Hicken
 [REDACTED]

D-6.1

Currently, the Purple and Orange Alternatives do not preclude the golf course operator from constructing a water feature in the golf course. If the Purple or Orange Alternative is selected, then the exact nature of the final system would be determined during the final design phase. The final design could accommodate the conveyance of irrigation and stormwater within the canal alignment, so some open water could still be present along the alignment. The golf course operator could use some of its water shares to add flow to the canal for aesthetic purposes or to create other types of water features.

Since constructing recreation trailways for the general public is not part of the project, constructing water features for individual land owners is also not part of the project. If a trail or water feature were established in the future, it would be planned and constructed through a process external to the Logan Northern Canal Reconstruction project.

The Blue Alternative would not affect the golf course's water features.

Comment D-7

Response

D-7.1 ▶

From: [Michael Kuhns](#)
To: [REDACTED] [LNC-EIS](#)
Subject: Logan Canal Project
Date: Monday, April 04, 2011 8:24:56 PM

I am curious about the purple alternative in this project. I live just northwest of the NW corner of Lundstrom Park, at [REDACTED]. The pipe that would convey water through the park and down 1600 E and 1500 N is a 42" pressure pipe. I used to work for a water company and at the time drinking water was moved in ductile iron pipe that was very strong and durable, could hold high pressure, and rarely broke. What is this 42" pipe made of and how durable is it? Are the air vents points where leakage can occur, or are they normally closed? 42" seems huge; that size water main would serve large areas of the city I worked for. Why so big; is it only partially pressurized? Would the pipe go down 1600 E and 1500 N in the street?

D-7.2 ▶

For the record, I am generally against the spending of public money to pay for this canal repair except maybe the purchase of the properties along Canyon Road for safety. There is little broad public benefit from this project, and it will disrupt public resources (like the park and streets) and will potentially greatly detract from property values between the golf course and park. Canal shareholders should pay for most of this. One could argue that it is unaffordable for that fairly small group, but the small size of that group is the exact reason the public shouldn't pay for it.

D-7.3 ▶

That lack of broad public benefit could be mitigated by providing some additional public benefit, preferably with participation by the canal owners. For example, rights-of-way could be modified to allow for very valuable pedestrian trail access along the appropriate portions of the canals involved. Another way to make it more fair would be to have canal owners pay a portion of the cost through surcharges for the water they use from the project.

Mike Kuhns
 [REDACTED]

D-7.1

The pipeline that would connect the LHPS Canal to the LN Canal with the Purple Alternative would consist of a 42-inch-diameter HDPE pipeline. This is the nominal diameter; the actual diameter would vary with pipe thickness as needed to meet pressure requirements. The pipeline would have air vents along the alignment. The terminal connection at the LN Canal would include a flow meter, pressure-reducing valve, and required connections to the LN Canal system. NRCS has proposed the design in order to reduce pressure so that water could be delivered to customers at an appropriate pressure. This would allow water delivery that would not jeopardize the operation of or damage individual sprinkler systems by delivering water at high pressure.

With the Purple Alternative, the pipeline could be routed through Lundstrom Park to 1600 East, then constructed in the 1600 East roadway to 1500 North and then in the 1500 North roadway west through the agricultural field to connect to the LN Canal. Another option would be to continue the concrete box culvert to 1500 North, start the pipeline at the LHPS Canal and 1500 North, and then construct the pipeline in the 1500 North roadway west through undeveloped land before it connects to the LN Canal.

D-7.2

Comment noted.

D-7.3

The canal companies will pay for a portion of the project in accordance with the Federal and State project funding agreements.

For more information about establishing future trails along the canal easements, please see page 5-26 of the Final EIS for the Purple Alternative, page 5-28 for the Orange Alternative, and page 5-29 for the Blue Alternative. If a trail were established in the future, it would be planned and constructed through a process external to the Logan Northern Canal Reconstruction project.

Comment D-8

Response

D-8.1 ▶

From: [Smart, Bronson - Salt Lake City, UT](#)
To: [LNC:EIS](#)
Subject: FW: Canyon Road, Logan
Date: Tuesday, April 05, 2011 12:29:42 PM

From: Irene Eastmond [REDACTED]
Sent: Monday, April 04, 2011 4:57 PM
To: Smart, Bronson - Salt Lake City, UT
Subject: Canyon Road, Logan

Dear Mr. Smart,

We own one of the homes listed in your report that would be demolished. The first word we heard of this was in the newspaper yesterday. We, of course, are stunned and a bit numb. We have many questions about this. The paper states that you will choose the alternative by middle summer. We need to know when the homes would be demolished as we are planning to be gone from the country for a while. It sounds like you are planning to demolish the homes no matter which plan you choose. We have several plans for this next year besides our work and travels that will be impacted by this event. When will we know when we would have to move? We, of course, want to get a very fair market value for our home. Is it Logan City that would be buying the properties, or is it something funded by NRCS, or the federal government?

I am not unfamiliar with the impacts of eminent domain decisions. My grandparents lived in the way of Seventh East in Salt Lake City. So we know that at times these things have to be done. But losing your home of many years like this is not unlike losing your home suddenly to a fire. It is a shock and a loss to be reckoned with. So I appreciate that you published your e-mail so you could be contacted. Please keep us informed so we can plan for our future.

Sincerely,

Irene S. Eastmond
 [REDACTED]

D-8.1

Please see the response to comment D-5.2. All of the action alternatives include purchasing structures along the north side of Canyon Road within an area that has historically been subject to landslides. NRCS understands that this action would affect people living in the affected area.

Purchasing structures is not included in the No-Action Alternative.

NRCS has not selected an alternative yet but has identified the Purple Alternative as its preferred alternative. NRCS plans to publish a record of its decision in the late summer or early fall of 2011. If NRCS selects the Purple Alternative for implementation, then NRCS, Cache County, and the City of Logan would work together to develop a schedule and pursue purchasing structures from willing sellers.

Comment D-9

Response

D-9.1 ▶

From: [REDACTED]
To: brobson.smart@ut.usda.gov; LNC-EIS
Subject: Logan canal rebuild
Date: Tuesday, April 05, 2011 8:48:07 PM

Dear Mr Smart and Ms. Lee:

I'm on the Renewable Energy and Conservation Advisory Board for Logan City. We're seeking to assess how the various Logan canal rebuild options will affect Logan's hydropower resources. Is it true that the "purple" option will result in a loss of hydroelectric generation for Logan? If so, we're concerned about the loss of this valuable source of clean renewable electricity precisely at a time when that it is becoming an increasingly important valuable resource. I'd very much appreciate your comments and information on this.

Charles Ashurst
 Renewable Energy and Conservation Advisory Board for Logan City

D-9.1

The effect of the Purple Alternative on hydropower generation is discussed on pages 5-38 and 5-39 of the Final EIS. The Purple Alternative could affect the production of an estimated maximum of 1,000 kW of hydropower, which is about 1% of the city's summer demand. At the time the Draft EIS was completed, representatives of the Logan City Light and Power Department and members of CHWUA were in the process of negotiating an agreement regarding moving the LN Canal POD to the LHPS Canal POD below Second Dam. Since the Draft EIS was released, CHWUA and the City of Logan have established an agreement that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple Alternative.

The purpose of the EIS is to identify and disclose effects due to the proposed action and project alternatives, not to determine if use of water for irrigation is more important than use of water for hydropower generation.

Comment D-10

Response

D-10.1 ▶

SMITHFIELD CITY CORPORATION
 96 South Main Street - P.O. Box 96
 Smithfield, Utah 84335
 Phone (435) 563-6226
 FAX (435) 563-6228

OFFICIALS
 DARRRELL G. SIMMONS
MAYOR
 O. DEAN CLEGG
RECORDER
 JANE PRICE
TREASURER
 JAMES P. GASS, P.E.
CITY MANAGER
 TERRY K. MOORE
COURT JUSTICE

April 4, 2011

COUNCIL MEMBERS
 BRENT C. BUTTARS
 BARBARA S. KENT
 KRIS MONSON
 MICHAEL G. OLIVERSON
 WILLIAM "DEE" WOOD

Dear Community Leaders and NRCS:

Since the collapse of the hillside above the Logan and Northern Canal which took the lives of three individuals, there has been an enormous effort on the part of several individuals and groups to restore vital secondary water to the canal. As you know, we are now in the midst of a comprehensive Environmental Impact Study for the purpose of determining the best means to achieve that goal. As tragic as the event was that has brought us to this point, it has the potential to address and resolve a number of critical problems that have plagued the cities and individual users of secondary water for decades in this part of Cache County.

As I have watched and been a part of the process over the past several months, I have seen the pendulum swing as various options have been studied. As we begin to close in on what will be the preferred option to solve the problem before us, I believe the time has come when we must express our opinion and take a position.

Water is the most important commodity in Cache Valley. We spend a great deal of time addressing important issues including transportation, economic and residential growth, recreation, public safety, emergency management, and a myriad of other concerns. Yet, there is nothing more important to the health and well being of the citizenry than a reliable source of water. The early settlers of this valley recognized this fact which explains their willingness to undertake the enormous task of diverting water from the Logan River to areas along the east side of Cache Valley through a series of earthen canals. As our population grows, our dependency on that water grows with it. As that dependency grows so must our efforts to maximize its potential through good management, conservation, and preservation.

We have inherited the efforts of those who have come before us through the canals they have built. We have been takers of that inheritance without a willingness to step forward to improve or adequately maintain them. As a result, the canals are in poor condition. We cannot afford to allow water to be lost before it has an opportunity to be put to a beneficial use, yet nearly 20% of the water being transported through the upper canal (Logan, Hyde Park and Smithfield Canal) is lost through leakage even before it reaches the first headgate at the Logan Golf and Country Club. In addition, the amount of water being lost in the Logan and Northern Canal may not be known, but any unnecessary loss is unacceptable. Combining the two canals together in a single water tight conveyance system that follows the current alignment of the upper canal, eliminates a majority of this leakage while solving several other problems.

D-10.1

The Purple Alternative, which is the preferred alternative, would combine the flows of the LN Canal and the LHPS Canal between the LHPS Canal POD below Second Dam and return some LN flows to the LN Canal at about 1500 North in Logan. The Orange Alternative would combine the flows between the LHPS Canal POD and return some LN flows to the LN Canal at either 2900 North or 3100 North in North Logan.

Comment D-10 (continued)
Response

When water from the Logan and Northern Canal is transferred and combined into a single system with the upper canal, the Logan and Northern canal becomes available for storm water conveyance. There has never been a viable option for storm water disposal that has not relied heavily on the canals. Few people understand the challenges that lie ahead for cities throughout the country with regards to storm water disposal and the limited number of affordable options available to the cities of Logan, North Logan, Hyde Park and Smithfield without the use of the canals. Transferring water from the Logan and Northern Canal to the upper canal provides the capacity necessary to address this issue. Without transferring water from the Logan and Northern Canal to the upper canal, there is insufficient capacity available to accommodate any additional storm water. Plus, the storm water that is currently being routed to the canal will continue to overwhelm the Logan and Northern Canal when combined with the ever present secondary water resulting in the flooding of Smithfield during large storm events.

Finally, combining the two canals into one results in an opportunity to provide gravity pressure irrigation to areas below the Logan and Northern Canal that currently rely on pumping to supply the necessary pressure. In addition, it opens up efficient sprinkler irrigation to other areas that are currently using inefficient flood irrigation practices.

It appears to me the preferred choice to solve the problem that resulted because of the tragic slide of 2009 is obvious. Combining the two canals into one eliminates an unacceptable amount of leakage from both canals. It provides opportunities for storm water disposal that has never been available before and likely will not be available in the future. It allows for the distribution of secondary water through a pressurized system permitting the use of sprinkling systems while eliminating the need for costly pumping. And finally it modernizes a secondary water system while eliminating a variety of hazards that are becoming more and more of a concern as our population swells.

To consider constructing a conveyance system along Canyon Road in Logan past the location of the slide as a means to solve the problem, in reality solves nothing other than to put water back into an aging canal system. Without the availability of the current Logan and Northern Canal for storm water disposal much of the incentive for city participation in the project is lost. If one were to ignore the complexity and the cost associated with installing a large diameter pipe or box culvert down Canyon Road through a tangle of existing utility lines and a high groundwater, such an option would still fail to address any of the other issues we are currently being faced with. While we may be able to pacify a segment of the population who are focused on the pleasant atmosphere created by the flow of water down an antiquated open canal as being of greatest importance, we will effectively be turning your backs on the water challenges of the future. Canals are a nice amenity, but nice amenities will not meet the water challenges that we are sure to face in the future. This will likely be our one and only opportunity to leave a lasting legacy to future generations. I urge further support of the option to construct a conveyance system along the current Logan, Hyde Park and Smithfield Canal that will accommodate water from both canals resulting in a modern and efficient water system for future generations.

Sincerely,
SMITHFIELD CITY CORPORATION


 James P. Gass
 City Manager

This space is intentionally blank.

Comment D-11

Response



**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): CLAIR C. LARKIN

Comments may be submitted to:

Alana Spendlove
Logan Northern Canal Reconstruction Project
3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

*thanks for the good research, I am concerned about
the long time frame (2-3 yrs) before the project
may be completed. I do not have any environmental
issues & impacts that I am concerned about as long as
the canal would be stable from the diversion point
to the ~~end~~ point where the canal separates.*

D-11.1

Comment noted.

D-11.1 ▶

Comment D-12

Response

Sales

To: Inc-eis@hdrinc.com
Subject: Logan Northern Canal reconstruction project

Attn: Sue Lee, Project Manager

Hi Sue,

D-12.1 ▶

My name is Clyde Anderson and I have lived on [REDACTED] 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.

D-12.2 ▶

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.

D-12.3 ▶

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 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
[REDACTED]

1

012 11z DEFSAnderson 083111

D-12.1

Comment noted.

D-12.2

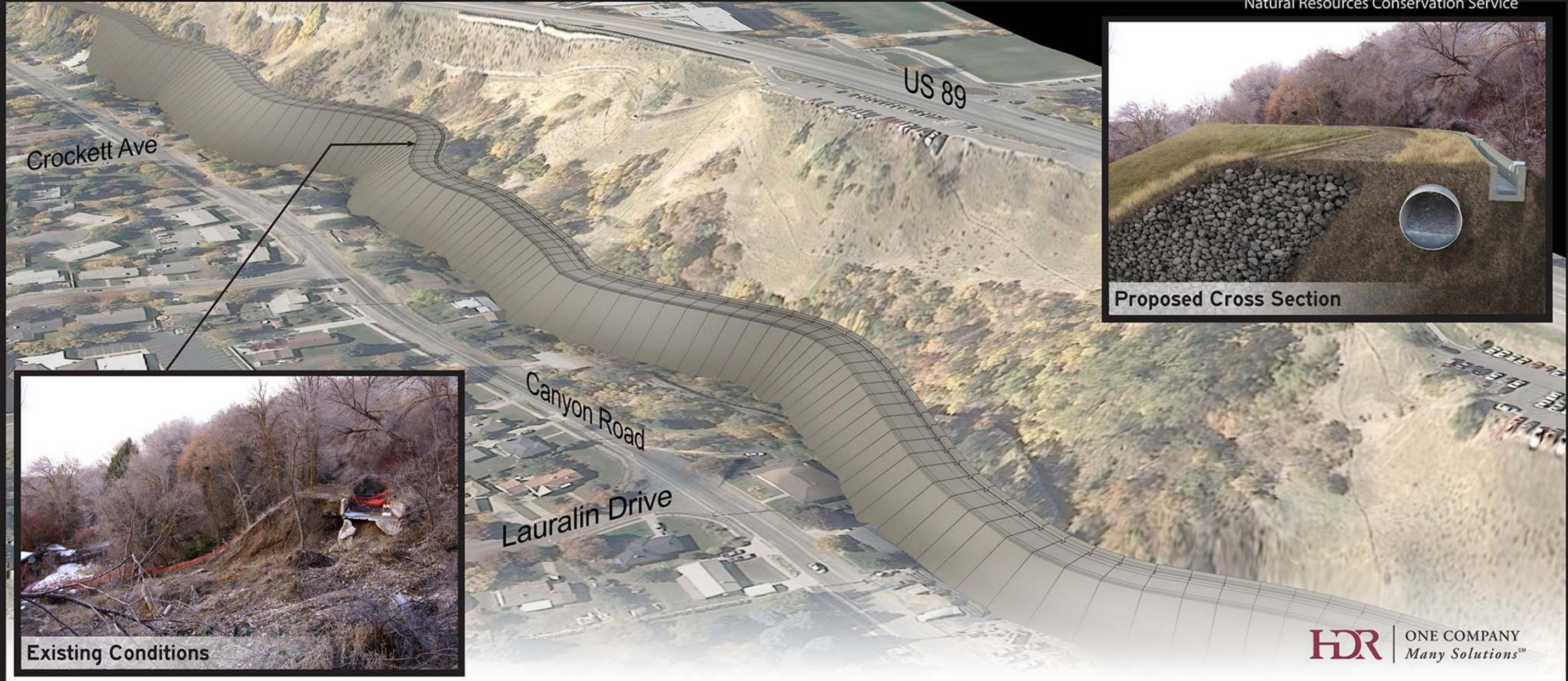
NRCS did evaluate an alternative that would collect and convey water from seeps and springs along the Logan Bluff. The Blue Alternative, which is described beginning on page 3-20 of the Final EIS, would place the LN Canal in a pipeline and construct a separate drainage ditch alongside the pipeline to collect and convey the seep and spring water as well as stormwater runoff from US 89. The ditch would discharge into the LN Canal at about 400 North and 600 East. See the figure on the next page for a rendering of the new pipeline and drainage channel. Please note, however, that NRCS has not identified the Blue Alternative as the preferred alternative.

The Purple and Orange Alternatives do not include any changes to the existing LN Canal POD structure. Both of these alternatives would include installing a pipeline in the LN Canal between the LN Canal POD below First Dam and the Laub Diversion to deliver water to shareholders in this area. The pipeline would be placed in the existing canal, and the canal would still capture water from seeps and springs and stormwater from US 89. Upstream of the landslide area, flowing water would be directed from the Laub Diversion into a ditch system. Downstream of the landslide, water collected in the canal would continue to flow in the LN Canal to the north to about 400 North. For the Purple and Orange Alternatives, irrigation water would be introduced into the canal at 400 North, and the canal would convey both irrigation water and stormwater downstream. However, upstream of 400 North, water could pond in the canal at times of very low flow (such as in summer).

The Purple and Orange Alternatives would use the existing LN Canal downstream of the 2009 landslide to convey water from seeps and springs and stormwater. This would include the reach parallel to Canyon Road. Because the City of Logan would use the canal structure to collect and convey this water and the canal would also capture and convey stormwater from US 89, it is in the City's and UDOT's interest to maintain the canal in good working order.

Logan Northern Canal Reconstruction Project

Soil Buttress - Blue Alternative



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Comment D-12 (continued)**Response****D-12.3**

The Blue Alternative would collect and convey water from seeps and springs and stormwater. This alternative was not the most expensive option studied, nor was it the least expensive. Please see the response to comment D-5.2 and the discussions on pages 2-9 and 4-55 of the Final EIS for information about historic landslides along the Logan Bluff.

This space is intentionally blank.

Comment D-13

Response

**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): Kim Sullivan
[REDACTED]

Comments may be submitted to:
 Alana Spendlove
 Logan Northern Canal Reconstruction Project
 3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

D-13.1 ▶ ① We live at [REDACTED] and raise sheep & tomatoes. We are concerned about the amount of water we would receive with an open canal versus a pressurized pipe.

D-13.2 ▶ ② Will the walking path up the hill from Crockett Ave. to USU still exist?

Logan Northern Canal Reconstruction Project Draft EIS Public Meeting Comment Form

N14 16c NRCS Sullivan 032111

D-13.1

All of the action alternatives would re-establish delivery of LN Canal shares to shareholders. The amount of water delivered to shareholders would be about the same as the amount delivered before the landslide. For the Purple and Orange Alternatives, a representative of the Logan & Northern Irrigation Company has stated that the company would supply water to the four shareholders just south (upstream) of 400 North using a small pipeline that would connect to the LN Canal pressure pipe downstream. Please see the discussion on page 3-11 of the Final EIS for detailed information.

D-13.2

The Blue Alternative could affect a part of the trail described by the commenter in the area of the soil buttress. The current trail that connects to USU is not a publicly maintained trail. Because detailed construction plans have not been developed for the Blue Alternative, it is not known whether the uphill trails along the bluff would remain available. It is possible that, after construction of the Blue Alternative, the trail might not be available for public use.

The Purple and Orange Alternatives would not affect this trail.

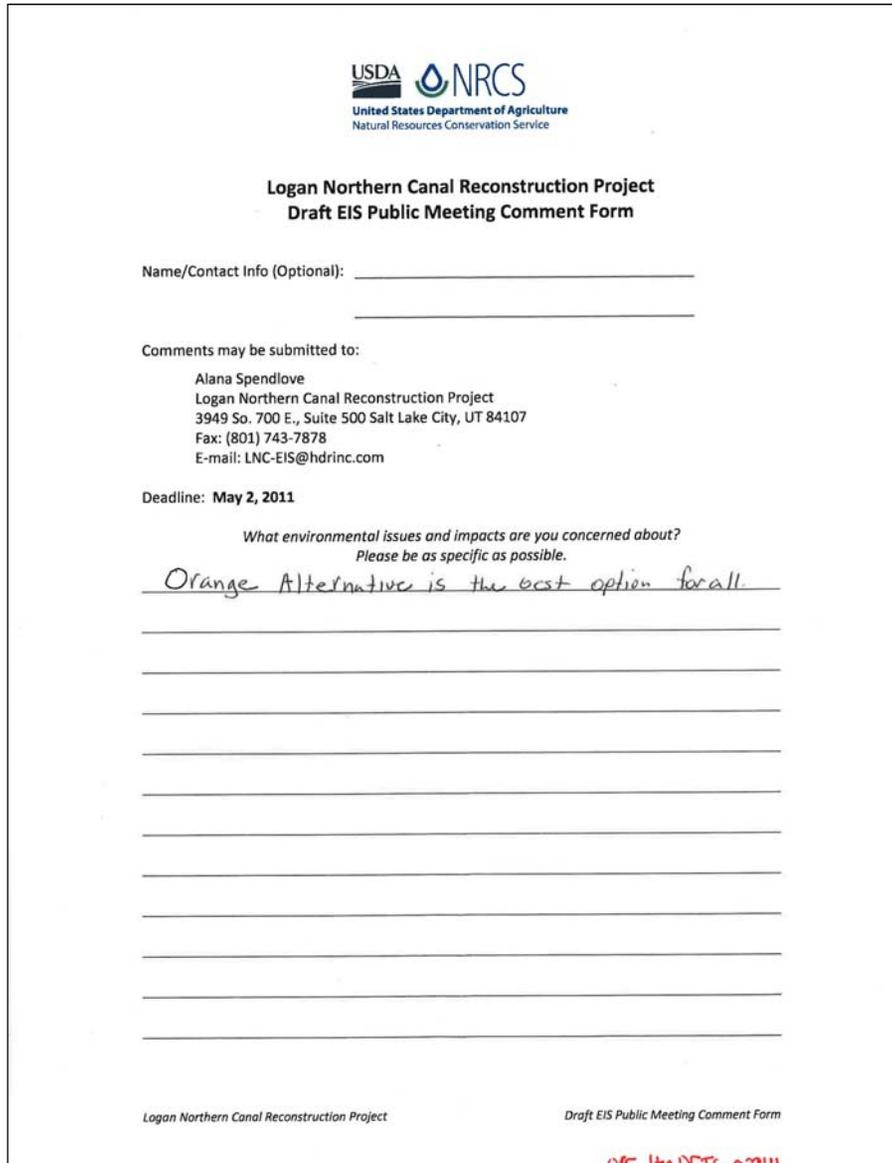
Comment D-14

Response

D-14.1

Comment noted.

D-14.1 ▶



USDA 
United States Department of Agriculture
Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): _____

Comments may be submitted to:
Alana Spendlove
Logan Northern Canal Reconstruction Project
3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

Orange Alternative is the best option for all.

Logan Northern Canal Reconstruction Project Draft EIS Public Meeting Comment Form

05-14-2011

Comment D-15

Response


 United States Department of Agriculture
 Natural Resources Conservation Service

**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): Debbie Roper
[REDACTED]

Comments may be submitted to:
 Alana Spendlove
 Logan Northern Canal Reconstruction Project
 3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

The Purple Alternative is the best option
for this project both for cost & safety
purposes. I would like to see them
go ahead with this alternative.

Logan Northern Canal Reconstruction Project Draft EIS Public Meeting Comment Form

OK to DEIS Roper 033111

D-15.1

Comment noted.

D-15.1 ▶

Comment D-16

Response

**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): Wendi Nasson
[REDACTED]

Comments may be submitted to:
 Alana Spendlove
 Logan Northern Canal Reconstruction Project
 3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

D-16.1 ▶ Please please please do not cover the canal along the trail between the golf course and Lundstrom Park. It is a beautiful, irreplaceable, irreplaceable social resource no more hazardous than the Logan River trail (or crossing 200 W main). If you cover it, we'll lose the trail and because the open waterway is the beauty of that trail I know it will decrease home values because I was looking at buying a home along the trail and what attracted me was the open canal.

D-16.2 ▶ I am also concerned that there is no amelioration for the vegetation currently fed by the seepage which will wither & die.

D-16.3 ▶ Don't destroy this valuable social resource! I thought we were going to build trails--not rip them out!

Logan Northern Canal Reconstruction Project Draft EIS Public Meeting Comment Form

017 16-DETS-Nasson 083111

D-16.1

Please see the response to comment D-1.2 for an explanation regarding why NRCS is proposing to enclose part of the LHPS Canal as part of the Purple and Orange Alternatives. Also, please review the discussion at the top of page 5-26 of the Final EIS regarding Cache County's intent to develop a recreation corridor along the canal and establish a way for people to legally use the easement for walking and bicycling. This information pertains to both the Purple and Orange Alternatives.

D-16.2

Constructing either the Purple or Orange Alternative would require clearing existing vegetation along the LHPS Canal between the golf course and Lundstrom Park/1500 North. Please see the section titled General Vegetation on page 5-50 of the Final EIS; this information pertains to both the Purple and Orange Alternatives. Some landscaping would be replaced following construction. As described in that section, the County has stated that it would like to consider options to eventually develop greenways, or linear parks, along canals in the region with a footpath and some landscaping. In order to accommodate a future greenway along the LHPS Canal and facilitate re-establishment of vegetation along the canal, the box culvert would include components that would accommodate the installation of low-flow irrigation systems. If a greenway were established in the future, it would be planned and constructed through a process external to the Logan Northern Canal Reconstruction project.

D-16.3

Comment noted.

Comment D-17

Response



**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): _____

Comments may be submitted to:

Alana Spendlove
Logan Northern Canal Reconstruction Project
3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

D-17.1 ▶

I would like to see the minimum impact to the riparian environment. I am also concerned about future slides.

D-17.2 ▶

I read the draft report summary and the alternatives chapters (chap 5 & 3). I am in agreement with the pos choice of the "purple" alternative as the best choice.

D-17.1

Any of the action alternatives would affect limited areas of riparian vegetation along the Logan River due to reconstruction of a POD structure. Cache County and its contractors intend to minimize impacts to riparian vegetation along the river. Work at the POD for the Purple or Orange Alternative would also be overseen by USFS consistent with a special-use permit for construction. For more information about impacts to riparian vegetation, please see pages 5-49 and 5-109 of the Final EIS for the Purple Alternative (which also applies to the Orange Alternative) and pages 5-53 and 5-112 for the Blue Alternative. The No-Action Alternative would not affect any riparian vegetation.

D-17.2

Comment noted.

Comment D-18

Response



**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): Eric Hansen
[REDACTED]

Comments may be submitted to:

Alana Spendlove
 Logan Northern Canal Reconstruction Project
 3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
 Fax: (801) 743-7878
 E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

As a small shareholder who uses the water, I'm concerned about getting water flowing and a project done quickly. I am split between the orange and purple alternatives. I can live with either one. The deciding factor for me would be which one can get going sooner. I think the Blue alternative is totally unacceptable. To my understanding, the hillside is unstable, this option puts the canal company and people at risk, we've already seen what can happen. It makes no sense to repeat errors of the past. Either the orange or purple options do some good things, the

Logan Northern Canal Reconstruction Project

Draft EIS Public Meeting Comment Form

09.11c DEIS Hansen 02/11

D-18.1

Comment noted.

D-18.1 ▶

Comment D-19

Response



**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): Mark Christopherson



Comments may be submitted to:

Alana Spendlove
Logan Northern Canal Reconstruction Project
3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

I'm concerned that the wildlife, large and small, will still be able to get water in a natural canal each summer North of Lundstrom Park.

Mark S. Christopherson

n21 ltr DEIS Christopherson_033111

D-19.1

Only the Orange Alternative would enclose part of the LHPS Canal north (downstream) of Lundstrom Park/1500 North. The Purple, Blue, and No-Action Alternatives would not affect the LHPS Canal north of Lundstrom Park/1500 North. As shown in Figure 3-3, Typical Cross-Section B, on page 3-6 of the Final EIS, the Orange Alternative would provide for some open water (stormwater) in the canal alignment north of Lundstrom Park. The Orange Alternative would not affect the LHPS Canal downstream of 2900 North/3100 North.

Please see the discussions about impacts to wildlife on pages 5-49 and 5-50 of the Final EIS (these are discussions about the Purple Alternative that also apply to the Orange Alternative).

D-19.1 ▶

Comment D-20

Response

D-20.1

Comment noted.



**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional): Gordon Spindlove

Comments may be submitted to:

Alana Spindlove
Logan Northern Canal Reconstruction Project
3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

Thank you HDR & NRCS for helping our community navigate the controversy - Our family favors the preferred alternative, one suggestion - the alignment at Junaluska Park could be changed to come straight down 1500 North. Then above the Junaluska Park pipe in place as a spill point for excess storm water.

red_hdr_DEIS Youker-033111

D-20.1 ▶

Comment D-21

Response



**Logan Northern Canal Reconstruction Project
Draft EIS Public Meeting Comment Form**

Name/Contact Info (Optional):

RE blue alt

033111

Comments may be submitted to:

Alana Spendlove
Logan Northern Canal Reconstruction Project
3949 So. 700 E., Suite 500 Salt Lake City, UT 84107
Fax: (801) 743-7878
E-mail: LNC-EIS@hdrinc.com

Deadline: **May 2, 2011**

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

Why is the blue Alt in the "existing alignment" → up & on the bluff slope of the plan includes sig of structures residences on the N side of canyon Rd why not run the L-N in a pipe from its POD, along the side of the road & lift the water ~~to~~ 400 N from the base of slope (not mid. as existing) reviewed in Blue Alt)*

** besides the time to sig parcels*

Logan Northern Canal Reconstruction Project

Draft EIS Public Meeting Comment Form

022-4rc DEIS 033111

D-21.1 ▶

D-21.1

The Blue Alternative, as presented in the Draft EIS, is proposed in the existing LN Canal alignment in response to comments received during the EIS scoping process. Many members of the public asked NRCS to consider an alternative that would rebuild the LN Canal on its original alignment, and the evaluation of the Blue Alternative responds to this request.

The modification to the Blue Alternative suggested by the commenter (moving the pipe from the existing alignment to the road and back to the alignment) would be a new option. The alternatives NRCS considered and presented in the Draft EIS are based on using existing system features. NRCS considered this new option and others during the review of Draft EIS comments but did not include any new options in the Final EIS because the existing action alternatives meet the project purpose and need and project objectives. The option suggested by the commenter would not better achieve the project purpose, need, or objectives.

The Blue Alternative, which NRCS studied in detail, uses the existing LN Canal POD, would deliver water to the same location (about 400 North in Logan), is in the same general area, and received broad public support during the NEPA scoping process. Because of this, NRCS did not consider any additional options in the Canyon Road area.

Please note that NRCS would pursue structure acquisition with any action alternative. NRCS determined that purchasing the structures is a cost-effective way to prevent future damage and/or loss of life in this historically unstable area. While structure acquisition is included as part of the Purple and Orange Alternatives, those alternatives could still be constructed even if structure owners were unwilling to sell. This is not the case for the Blue Alternative; the soil buttress proposed as part of the Blue Alternative could be constructed only if the structures are removed. If structure owners are not willing to sell, then the properties would need to be condemned and the condemnation process could require extra time to complete. The condemnation process would also require additional funding from the project sponsors because NRCS cannot fund property acquisition through condemnation.

Comment D-22

Response

April 10, 2011

Bruce Pendery
[REDACTED]


REC: APR 13 2011
PROJ: _____
FILE: _____
DIST: _____

Alana Spendlove
HDR Engineering
3949 South 700 East, Suite 500
Salt Lake City, UT 84107

Re: Logan Northern Canal Reconstruction Environmental Impact Statement

Dear Ms. Spendlove:

Please accept these comments on the above-referenced environmental impact statement (EIS). As a shareholder in the Logan Northern Canal Company, my primary interest is to see water service fully restored at my point of diversion as soon as possible. For that reason I support the preferred alternative, the purple alternative. I believe the EIS meets the requirements of the National Environmental Policy Act (NEPA). Specifically I believe the EIS provides a "hard look" at the environmental consequences of this project and that it has also considered a reasonable range of alternatives to meet the purpose and need for this project. Given that those key legal requirements have been met, the Natural Resources Conservation Service (NRCS) would be justified in moving forward with implementation of its preferred alternative, the purple alternative, and I again support doing so.

However, despite my support for the purple alternative, I urge the NRCS and the other principal stakeholders like the Logan Northern Canal Company to fully consider adopting other alternatives as the preferred alternative. I specifically urge you to consider adoption of the blue alternative and to give greater consideration to the yellow alternative. Both of these alternatives would essentially involve reconstructing the canal on the existing alignment. My reason for urging you to do this is the following. Based on conversations I have had with numerous local residents, it is apparent that there is considerable opposition to the purple alternative and considerable support for adopting the blue/yellow alternative framework. Passions related to the choice of the alternative appear to me to be high enough that I believe there is a strong likelihood of litigation if the purple alternative is selected. While it is well known that agencies "win" NEPA lawsuits much more often than they lose them—I know this from personal experience because I am an environmental lawyer for an environmental group and NEPA litigation occupies a very considerable amount of my time—agencies do not always win by any means. So I believe what you must consider is whether it is worth taking the risk of a two to three year delay in this project due to litigation over selection of the purple alternative or whether it may simply more prudent to select the blue or yellow alternative as a means to "head off" potential litigation and delay. I think that represents a very real practical consideration that should be made in selection of the preferred alternative. Again, my primary concern is to have water service restored as soon as possible, so it is not critically important to me how that it is achieved, it is more critical to me service be restored promptly. Litigation could defeat that goal more than the choice of alternative would.

On a somewhat related matter I would like to note the following. Even if the purple alternative is selected as the preferred alternative, I think it is important that consideration be given to means to retain the current riparian, brook-like habitat that is found along the 2.4 miles of the canal that would be converted to a box culvert from the Logan Hyde Park Smithfield Canal Company point of diversion to Lundstrom Park. This habitat is deeply valued by many Cache Valley residents (not just those that live

D-22.1

Comment noted.

D-22.2

Please see page 3-53 of the Final EIS for a listing of reasons why NRCS has identified the Purple Alternative as the preferred alternative. NRCS fairly considered all of the action alternatives and a No-Action Alternative as part of the decision-making process. As described in Section 3.5, Preferred Alternative, of the Final EIS, NRCS found that the Purple Alternative would fulfill its statutory mission and responsibilities by giving consideration to economic, environmental, technical, and regulatory factors. NRCS is not aware of the considerable opposition to the Purple Alternative mentioned by the commenter, although we know that some people support other options over the Purple Alternative.

NRCS considered the Blue Alternative at an equal level of detail as the Purple Alternative.

For the reasons described on pages 3-52 and 3-53 of the Final EIS, NRCS eliminated the Yellow Alternative from detailed analysis. Please note that the Yellow Alternative is not along the existing canal alignment but rather is under Canyon Road and 600 East.

D-22.3

Existing vegetation along the LHPS Canal between the LHPS Canal POD below Second Dam and Lundstrom Park/1500 North would need to be removed during construction of the Purple Alternative in order to accommodate the box culvert and construction activity. Although the EIS does not propose to re-establish the current pattern of vegetation, some revegetation would occur. Cache County has stated that it would like to consider options to eventually develop a greenway, or linear park, along the canal with a footpath and some landscaping. In order to establish the greenway and facilitate re-establishment of vegetation along the canal, the box culvert proposed as part of the Purple Alternative would include components that would accommodate the installation of low-flow irrigation systems. If a greenway were established in the future, it would be planned and constructed through a process external to the Logan Northern Canal Reconstruction project. Please see the section titled General Vegetation on page 5-50 of the Final EIS.

D-22.1 ▶**D-22.2** ▶**D-22.3** ▶

Comment D-22 (continued)

Response

along the ditch as the EIS incorrectly claims). These canal ways have become important background features in the lives all Cache Valley residents. They are used for recreation, but more importantly, they to a significant degree establish the “ambience of life” in the Logan area. Loosing these features will be deeply concerning and deeply controversial to many residents. So, just as is true with alternative selection, I believe the NRCS should fully consider the potential for litigation and means to head that off so as to prevent delay. One way that controversy could be reduced would be to ensure that the current riparian habitat is maintained to the extent possible even if the canal is put in a box culvert. I believe it would be possible to maintain this habitat if water withdraws were made from the culvert and used to irrigate the vegetation currently occurring along the canal. I believe it would be possible to make modest water withdrawals for riparian habitat maintenance that would not significantly reduce irrigation flows, and by doing so the controversy surrounding this project could be reduced and the likelihood of delays due to litigation also reduced. I believe a component of the purple alternative should be to maintain the current riparian habitats to the maximum extent possible—I believe this must be done or there will be major opposition. And quite possibly delay. I ask the NRCS to fully consider this option as a component of the purple alternative in the final EIS.

D-22.4 ▶

Finally, I would like to mention a technical matter. Under the purple alternative, a pipeline would be constructed from about 1500 North back to 400 North. Water could be withdrawn at various points directly from this pipeline, or if users wish they could withdraw water from the ditch as they have in the past because water from the pipeline would be put into the ditch at 400 North. My concerns are as follows. The EIS does not seem to explain where the points would be made available for withdraw from the pipeline. Where would these be and how many of them would there be? What will be involved in making such a withdrawal from the pipeline? Will it be a simple matter or will users have to invest in new technology to do this? How much will this new technology cost users? Even if I withdraw water from the pipeline directly, I will likely continue to flood irrigate. What will be involved in maintaining that system if withdrawals are made from the pipeline? How much will it cost? Then there is this. Assuming water would continue to be withdrawn from the ditch—I currently do that at 700 North—what will the level of flows be in the ditch? Will the flow in the ditch approximate prior flow levels prior to the ditch failure? What will the flow rate be? Will flows be less than they were historically in the ditch between 400 North and 1500 North? If flows will likely be less, I believe this needs to be disclosed. What this could well mean is that users in this area may either be forced to spend more money to put in place the technology to withdraw water from the pipeline, or accept a permanent lesser flow level for withdraws from the ditch, as we have experienced the last two years. If users are going to be faced with lesser flows than historic levels, it is my opinion that the Logan Northern Canal Company must make rate adjustments for users in this area, reducing their annual use rates. The EIS should disclose these matters.

Thank you for considering these comments.

Sincerely,



Bruce Pendery,

cc: Logan Northern Canal Company

NRCS recognizes that many members the public (including people who do not live along the canals) like the vegetation along the canals and consider it an amenity. Not all of the 2.4 to 2.6 miles of LHPS Canal that would be placed into a culvert as part of the Purple Alternative support the type of vegetation described by the commenter. Enclosing 2.4 to 2.6 miles of canal would not affect the regional ambience of Cache Valley. As the LHPS Canal operator, the Logan, Hyde Park and Smithfield Canal Company conducts routine maintenance of the canal to ensure that water shares can be delivered and that vegetation or debris do not obstruct flow or otherwise affect the amount of water that is delivered using the canal. This routine maintenance sometimes includes removing vegetation.

The proposed action would not affect other canals in Cache Valley. Converting 2.4 to 2.6 miles of the over 400 miles of canal valley-wide would not affect the overall ambience of the valley. The EIS discloses that “[r]esidents and landowners who associate a positive quality of life with the existing canal system might feel that these changes reduce their quality of life” (see pages 5-14 and 5-15 of the Final EIS). The EIS concludes that, overall, the proposed action is not expected to significantly improve or reduce the quality of life of residents living in the study area.

D-22.4

With the Purple Alternative, NRCS expects that water would be delivered to each shareholder at their current diversion points in order to meet shareholders’ use of either flood irrigation or a sprinkler system. With this alternative, the existing LN Canal would continue to capture stormwater runoff and deliver about 2 cfs of irrigation water during the irrigation season between 400 North and 1500 North. Because water would be available in the LN Canal or through the pressurized pipeline system, shareholders would be able to choose the type of method used to take water from the LN Canal.

Comment D-23

Response

D-23.1 ▶

From: [Frederic Wagner](#)
To: [LNC-EIS](#)
Subject: Preferred Alternative on the North Logan Canal
Date: Thursday, April 14, 2011 3:16:34 PM

Gentlemen, for reasons of costs, impacts on the North Logan neighborhood, and earthquake hazards to the northeast portion of Logan east of 16th East, I ask that you choose the blue option.

Frederic H. Wagner
[Redacted]

[Redacted]

D-23.1

Comment noted.

Comment D-24

Response

D-24.1 ▶

From: [REDACTED]
To: LNC-EIS
Subject: Logan Northern Canal Reconstruction Project Draft EIS
Date: Friday, April 15, 2011 2:45:05 PM

To whom it may concern

There seems to be some calculation errors on the size of pipe required to carry 2 cfs of water from the existing Logan Northern POD to the Laub diversion. It calls for a 6" diameter pipe. It is almost level to a very slight drop in elevation. After consulting with other engineers it would be impossible to carry 2 cfs of water even if it was under pressure. At the existing slope and condition it is questionable if a 6" pipe in the existing canal could carry 1 cfs.

• About 1 mile of 6-inch-diameter pipe in the current LN Canal alignment between the LN Canal POD and the Laub Diversion at about 1100 East. This pipeline would carry up to 2 cfs for delivery to shareholders in this area. The POD would not need to be modified to accommodate the 6-inch pipeline.

You are calling for a 10" diameter pipe to carry 2 cfs of water back from 1500 North to 400 North and that is going to be under pressure.

• About 1 mile of 10-inch-diameter pressure pipe from 1500 North to 400 North installed in the existing canal maintenance road. The pressure pipe, which would not affect the existing LN Canal, would convey about 2 cfs for use by shareholders in this reach. These shareholders could access water from the pressure pipe or from the LN Canal. Access from the canal would be available for water not taken from the pressure pipe and that is discharged from the pipe into the LN Canal at about 400 North.

Taking into account the current canal slope and the slight decrease in elevation it would take a minimum 10" pipe at the least, most engineers would spec. a 12" pipe to carry 2cfs with little to no pressure.

If you need I can get you a table with the current charts to show you pipe capacities under different pressure and the various scenarios.

Why would you call for a 6" pipe from the existing Logan Northern POD to the Laub Diversion to carry the same amount of water that you are calling for a 10" pipe under pressure from 1500 North to 400 North?

This is something that needs to be looked at again, larger diameter pipe is cheap in comparison to construction and labor cost to install the pipe. It would be better to get it right. It would cost a lot more to have to do it over.

Erik Ashcroft

D-24.1

The commenter is correct regarding the pipe size for delivering water to shareholders between the LN Canal POD and the Laub Diversion. The Final EIS reflects a pipe diameter of 10 inches for this local delivery pipeline for all action alternatives.

Comment D-25

Response

April 18, 2011

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

FR Lydia Embry mail to 1304 East 1700 North 435-752-3290 North Logan UT 84341

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

This is a request for review and possible modification of portions of the narrative in the Draft Environmental Impact Statement (dEIS) dated March 2011. Similar to the NOTE in my public comments dated 08-26-10, there are factual errors and/or misleading statements in this dEIS:

- p.2-3 2.1.2.1 3rd para. **description of day-to-day delivery of water is not accurate**
 Our shares in Logan, Hyde Park & Smithfield Canal Company (LHPS Canal) are all assigned to headgates in North Logan. LHPS Canal is an open channel whose water, once 'gated into open-ditch delivery, with the canal watermaster controlling *begin-end* watering time based on availability & shares, is now (and has for more than 50 years) delivered by the canal's flow as it passes open headgates, drawn into pressurized pipe for gravity-flow delivery to sprinklers at each parcel.
It works better & easier than it writes!!
- p.4-75 4.4.6.6 3rd para. As acknowledged, Utah's water is public and its use is directed by the State Engineer, allocated by historic claim... which, for irrigation, is specific months. While some shareholders of LHPS Canal and of Logan-Northern Canal (L-N Canal) pump from their canal and/or flood-irrigate, headgates control release into piped delivery.
- zoning classifications are not the same as land use**
- p.4-4+ 4.2.1 Looking no deeper than North Logan's zoning in the study area (*incl* sub§.4 LHPS, sub§.5 L-N)
- p.4-13 4.3.3.3 2nd para. and saying that "most of the study area is built out", *plz* reconcile these statements with a quick-look (fly-over aerial or drive-by), with Fig.4.3 and with "cropland" at p.4-26 4.4.12
 !! The course of both canals were surveyed separately by at least three parties in 2010 !!

Respectfully, please assure that LAND USE, evidenced by aerial/on-ground visual inspection, by green-belt filings at the Cache County Assessor, by identifying USUs as experiment tracts/plots, by USDA-*incl* FSA/ State/UACD production records, by canal-mapped headgate numbers, by records of acres in/out production, by revising to actual use (*incl* esp. public buildings, parks), not zoning, is the dominant discussion, and that tis clear that each & both L-N Canal and LHPS Canal are essential to agricultural production within the study area.

Thanx!! I expect to forward comments on the dEIS, its Preferred & other Alternatives, and Impacts under separate cover.

LE/bh

D-25.1

The text in Section 2.1.2.1 has been modified to reflect the correction provided by the commenter.

D-25.2

Comment noted.

D-25.3

Please see the revised text on page 4-2 of the Final EIS that explains the difference between land use and zoning.

The discussion in Section 4.2.1 generally addresses land uses in the parts of Logan, North Logan, Hyde Park, and unincorporated areas in the study area but focuses on land uses and zoning along the canal alignments only.

Build-out is discussed only for Logan. As used in the EIS, *build-out* refers to land uses as described in the Logan General Plan. The text in this EIS is taken from that General Plan. According to the Logan General Plan:

From 1952 to 1993, while the population of Logan increased by almost 100%, land consumption increased by over 200%. (Section 5.2.1, Page 5-2 of the Logan General Plan)

and

The scarce remaining land within Logan's existing boundary is being developed for a variety of uses. Every year more than 900 new residents are added to the City accompanied by 300 new dwelling units and 600 new jobs. At this rate, the City has virtually reached residential build-out already. Commercial build-out will be reached by 2014 and there will be no more room for employment and manufacturing facilities by the year 2053. (Section 5.2.1, Page 5-2 of the Logan General Plan)

The EIS does not state that land in North Logan is built out. Page 4-4 of the Final EIS clearly states that about 3% of the land in North Logan is designated for agricultural use; NRCS recognizes that landowners might use land having other designations (such as residential) for agricultural production and that this is currently the practice in many parts of the study area. NRCS presents zoning designations in Tables 4-1 and 4-2 because zoning represents the development scenario expected by the Cities. NRCS recognizes that Cities can change zoning and that landowners often use land for purposes that are different than those described in the applicable zoning regulations.

Comment D-26

Response

April 14, 2011

Mr. Bronson Smart
 State Conservation Engineer
 Natural Resources Conservation Service
 125 South State Street, Room 4010
 Salt Lake City, Utah 84138-1100

Dear Mr. Smart:

D-26.1 ▶

There are a number of factors that need to be addressed now that the Logan Northern Canal Reconstruction Draft Environmental Impact Statement (DEIS) has been issued. The first concern is the choice of the Purple Alternative as Preferred; it is completely at odds with the direction provided by the Emergency Watershed Protection Plan (EWPP), so much so its selection would necessitate a challenge in court. This action would needlessly delay satisfaction for the Logan Northern Canal (LN Canal) shareholders. To satisfy the EWPP, the DEIS needs to analyze the Yellow Alternative and Blue Alternative; thereby complying with the EWPP and saving shareholders and citizens millions of dollars.

D-26.2 ▶

Prior to presenting the rationale for the Yellow Alternative, a second factor concerned the Scoping Meeting on August 10, 2010. There was no opportunity for the public to directly question and interact with the proponents of the preferred Purple Alternative or the Orange, Blue, and the discarded Yellow and Green Alternatives. This meeting was successful in quelling face-to-face confrontation with the sponsor of the DEIS, Cache County. Allowing Cache County to answer questions from ten citizens, five proponents, five opponents, each given 20 minutes to address the council and the Natural Resource Conservation Service would solve this problem.

D-26.3 ▶

Another statement in the DEIS requires proof. Section 3.1.1 in the Summary states:
 Before the landslide, the LN Canal diverted an average of about 60 cfs from the LN Canal POD just below First Dam. Since the landslide, the overall amount of both LN Canal and LHPS Canal shares that is being delivered has decreased by about 50%. The temporary system allowed the continued delivery of some water, but all shareholders experienced adverse effects from not receiving their full shares of water. This reduction affected the financial performance of agricultural production (only 50% of the water is delivered, but production costs are nearly the same as they would be if 100% of the water were delivered); irrigation of public land such as the golf course, parks, and school grounds; and the amount of water available for drinking water exchanges downstream (p.S-5, DEIS).
 The temporary water delivery system didn't seem to effect canal shareholders as reflected in the Highline Canal meeting (September 2, 2010 minutes) when Jon Meikle stated "Watering season is over and we got by pretty well. It is amazing we did so well with our current system". Somehow *adverse* doesn't seem to fit. Exactly how much loss did this 50% decrease in delivered water do? Did golf courses, parks, and school grounds become parched wastelands? How many people became dehydrated and had to be hospitalized? Or did the DEIS exaggerate this adversity?

D-26.1

NRCS has identified the Purple Alternative as the preferred alternative. Please see the discussion beginning on page 3-31 of the Final EIS that describes the alternative screening process.

D-26.2

Comment noted.

D-26.3

The EIS uses the term *adverse* because the decrease in water delivery did adversely affect shareholders compared to pre-landslide conditions during the 2010 irrigation season. Mr. Meikle's statement does not prove that the effect was adverse, neutral, or beneficial or that the EIS exaggerates adversity. NRCS reached its conclusion about the adverse effect based on the fact that the LN Canal could not be used to deliver irrigation water to many shareholders and based on historic water delivery compared to delivery under the compromised system.

Comment D-26 (continued)

Response

D-26.4 ▶

The fourth factor is discarding the Yellow Alternative, the least expensive and most direct solution to the loss of the LN Canal. The Blue and the Yellow Alternatives (BA and YA) deal with the lost canal service as directed by the EWPP. The BA's description follows:

This alternative would divert LN Canal water using the existing LN Canal POD just below First Dam. Once the water is diverted, it would be conveyed for about 1.7 miles along the existing LN Canal alignment in a pipeline. The pipeline would discharge directly into the existing LN Canal for delivering water to downstream shareholders. This alternative would repair the area affected by the 2009 landslide so that the pipeline could be constructed through the landslide area. ... shareholders between the existing LN Canal POD and the Laub Diversion (a distance of about 1 mile) would receive water through a new 6-inch-diameter pipeline constructed in the existing LN Canal alignment for delivering water to shareholders in this area (*This delivery is also included in the YA-my addition*). The Blue Alternative also includes purchasing structures from 14 properties in the 2009 landslide zone... (p 3-19, DEIS).

D-26.5 ▶

Even though the DEIS states that all shareholders on this alternative will receive water, this isn't true. The shareholders between the Laub Diversion and 400 N would have their shares purchased by the canal company and use Logan City culinary water for their needs. If the canal company is going to make up the difference in irrigation versus culinary water, this needs to be mentioned. The overall cost for BA is estimated at \$24.1 million to \$26.5 million dollars.

D-26.6 ▶

The YA's abbreviated description and rationale for eliminating it from analysis follows: As mentioned in Section 3.4.1.2, Step 2: NRCS Objectives, the Logan & Northern Irrigation Company does not support the Yellow or Blue Alternatives because of liability concerns and concerns about its inability to secure funding for the project without the participation of other stakeholders. NRCS decided that the Yellow Alternative would not be carried forward because it would not provide substantial benefits over the Blue Alternative. The Yellow Alternative is in the same general area, would use the same POD, would cost about the same amount, would deliver water to the same location, and received only moderate support during scoping. The Yellow Alternative would include the same number of structure acquisitions in order to reduce the risks to life and property in the historic landslide zone but would not address the stability of the 2009 landslide site. Some future risk to residents related to the instability of the Logan Bluff would remain under any alternative in this general area. However, The Blue Alternative would provide the benefit of addressing at least some of the risk associated with the historically unstable area along the canal alignment. Finally, the Yellow Alternative would cause substantial impacts to the local community during construction by requiring residents to be temporarily relocated because of interruptions to utility service (p 3-52, DEIS).

"...the Logan and Northern Irrigation Company does not support the Yellow and Blue Alternatives..." is at complete odds with the shareholder's statement in the September 2010 minutes noted above: "A lot of comments requesting to put the canal back into its current alignment, will add that as another alternative". Then the DEIS states that the YA "would cost about the same amount" as the Blue Alternative, assuming the YA was constructed as presented. This logic was taken to task by Trevor Hughes in his recent letter to the editor in the Herald Journal:

2

D-26.4

Comment noted.

D-26.5

The commenter correctly states that some shareholders would not receive water with the action alternatives. Please see page 3-11 of the Final EIS, which discloses how the shareholders between the 2009 landslide area and 400 North would be serviced.

D-26.6

Please note that NRCS eliminated the Yellow Alternative from further analysis and therefore did not consider developing further detail about this option. See Section 3.4, Alternatives Eliminated from Detailed Study, on page 3-31 of the Final EIS for a discussion of the alternative screening process.

The modification to the Yellow Alternative suggested by the commenter (moving the LN Canal POD to First Dam and reducing the pipe size due to increased pressure) would be a new option. Please see the response to comment D-2.2 for a discussion about how NRCS considered new options presented during the Draft EIS comment period.

Comment D-26 (continued)

Response

The Canyon Road (yellow) alternative was dismissed without serious consideration, but was estimated to cost slightly higher (\$400,000) than the preferred (purple) alternative. They selected a 72-inch-diameter pipe because of the very limited hydraulic head between the river diversion and the hill top on 400 North. An alternative I had suggested would double the available head by taking advantage of the head inside First Dam rather than diverting from the river. That would allow using a 48-inch pipe with less than half the resulting pipe area, thereby reducing the cost of this alternative by several million dollars (HJ Mar. 21, 2011).

With the diversion from First Dam, the cost of pipe is reduced by at least \$2.4 million [(assuming a 40% reduction from 72" to 48" pipe) DEIS Table C2-7, p. C2]. The cost of reconstructing the POD for YA is \$100,000; this may be more for a First Dam POD but we have a lot of money to play with. This is a new iteration to YA: place the 48" pipe in the verge north of Canyon Road and reduce or eliminate Roadway Excavation - \$1.3 million- as well as Asphalt Removal/Disposal/ Replacement - \$1.3 million. Placing the 48" pipe along Canyon Road would also reduce or eliminate Major Utility Relocations - \$2.8 million. Reducing the \$22.8 million cost for YA by \$7.8 million to \$15 million boldly states that the Yellow Alternative not only needs to be considered in the analysis but needs to be the Preferred Alternative. The inconvenience to homeowners along Canyon Road may well be reduced or eliminated by constructing on the side of the road, not in it. Pipeline construction companies are well versed building in urban areas and reducing impacts to homeowners. Mr. Hughes was "spot on".

Regarding slope instability, burying the water pipe in or on the side of Canyon Road eliminates any liability due to a landslide destroying a canal, a factor that is present in the Blue Alternative, no matter what safeguards are installed. It also makes sense to install drain tiles and pipes at spring sites along the Logan Bluff, directing them into what remains of the LN Canal to reduce soil instability. According to Clyde Anderson, Anderson's Feed and Seed, the original LN Canal was built in the Bluff's soils; and water from springs was diverted into the canal to control saturation. After concrete was used for the canal, the drain tiles and pipes were abandoned. Not a good decision then but one that will serve the current resident's safety.

Regarding structure acquisition, an underground pipe would eliminate the need for this step, an additional reduction of \$2.2 million. Those home owners who choose to keep their structures that are listed for demolition would be subject to increased insurance; and this is no different than those who build in a flood zone. You pay your dime, you take your chances. However, this may not be plausible since NRCS has declared the entire Logan Bluff unstable.

Regarding LN shareholders not wanting to assume liability for landslides, a monitoring program of soil movement would give residents an opportunity to be out of harms way. Also is the DEIS including the shareholders from the newly formed Cache Highline Water Association in their count? If so this would seem to be a conflict of interest in that the shareholders in the Logan Hyde Park Canal are mainly interested in repairing a very leaky canal piggy-backing the loss of the LN Canal. This is an inappropriate use of EWPP funds. The inability to secure funds through other stakeholders points a finger at Cache County not wanting any future responsibility for any landslide. They don't mind

D-26.7

The EIS discloses that the Blue Alternative would not completely eliminate hazards to life and property. NRCS added this alternative to the list of initial alternatives considered and carried it forward for detailed analysis due to public comments raised during project scoping.

D-26.8

All of the action alternatives include the purchase of structures from 14 properties along the north side of Canyon Road. Since one of the focal points of the EWPP is to reduce hazards to life and property, NRCS determined that purchasing the structures is a cost-effective way to prevent future damage and/or loss of life in this historically unstable area. If NRCS had studied the Yellow Alternative in detail in the EIS, structure acquisition would have been part of that alternative as well. The subject of structure acquisition would not have been treated differently for the Yellow Alternative than it was for the action alternatives that did not include any modifications to the Logan Bluff.

D-26.9

The Blue Alternative includes monitoring the Logan Bluff.

As noted in Section 511.6(B) of the NRCS EWPP manual, NRCS may purchase and remove a structure when removing a building or similar structure is the least-costly alternative. Purchasing and removing the structures with the other action alternatives would be less costly than long-term monitoring, and long-term monitoring would not provide the same level of risk reduction as removing the structures.

CHWUA is incorporated with the combination of the Logan & Northern Irrigation Company and the Logan, Hyde Park and Smithfield Canal Company. Voting would be conducted in accordance with CHWUA articles of incorporation.

D-26.7 ▶

D-26.8 ▶

D-26.9 ▶

Comment D-26 (continued)
Response
D-26.10 ▶

that some Logan residents will lose their water rights, nor do they recognize the liabilities that Logan City assumes channeling irrigation water through its neighborhoods and dealing with storm water runoff. Cache County demonstrates a false sense of community. One assumes responsibility (liability) when the rewards (irrigation water) are a precious commodity.

Lastly, the preferred Purple Alternative, PA, will eliminate power generation for Logan City and be paid for by the citizens of Logan in their utility bills or passed on to the canal shareholders, the appropriate place as noted above by Mr. Hughes. He also noted the \$4.6 million loss of revenue calculated over 50 years should be added to the PA's cost estimate. Jack Keller noted that NRCS assumed that power costs would remain the same for Logan residents. He recalculated the loss, assuming a 6%/yr increase, resulting in a loss of \$17 million, a significant impact to the city's residents.

D-26.11 ▶

The water delivered to the LN Canal by the PA is 40 cfs via 42" pipe along 1500 North, below the 60 cfs the canal had previously carried. Since I'm unable to calculate how many cfs a 48" pipe will deliver into the LN Canal at 400 North, I can only guess that it will exceed the amount noted for the PA.

D-26.12 ▶

Please restructure the DEIS and include only three alternatives, Yellow, Blue and No Action.

Sincerely,



C. Val Grant



cc: Cache County
City of Logan, Mayor Randy Watts
Herm Olsen
Trevor Hughes
Jack Keller
Lucy Watkins
Clyde Anderson
Herald Journal, Charles McCollum

4

D-26.10

The Purple Alternative could affect, but would not eliminate, power generation by the City of Logan. Diverting some of the Logan & Northern Irrigation Company water at the LHPS Canal POD could reduce power generation at the City of Logan's hydropower facility by up to about 1,000 kW. This amount is about 1% of the city's peak summer demand. Please see pages 5-38 and 5-39 of the Final EIS for a discussion regarding this alternative's potential effect on power generation.

NRCS considered the value of lost hydropower as part of the alternatives development process. This value was not added to the alternatives' cost estimates because the effect would be considered an operating expense and could vary depending on actual diversions. River diversions are influenced by climatic and river conditions at the time of the diversion, and these conditions vary daily. The Final EIS has been updated to reflect an agreement between CHWUA and the City of Logan that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple and Orange Alternatives.

Please see page 3-49 of the Final EIS for a discussion regarding the calculation of lost hydropower. The net present values presented in Table 3-7 were calculated using a discount rate established by statutes and applied using rules governing NRCS's analysis of net present values for water and related land resources implementation studies. NRCS uses the discount rate published by the Water Resources Council for Federal water projects (USDA NRCS 2011), which is calculated based on formulas specified by the White House Office of Management and Budget Circular A-94, Appendix C (OMB 2010). The commenter's assertion that, over time, power rate escalation would always outpace general inflation and crop or water value increases is speculative.

D-26.11

The intent of the Purple Alternative is to deliver full shares to shareholders. NRCS and the SLO have proposed a system that would accomplish this intent. Please see page 3-11 of the Final EIS, which discusses how the shareholders between the 2009 landslide area and 400 North would be serviced.

D-26.12

Comment noted.

Comment D-27

Response

Memorandum Draft EIS

Date: 4/21/2011

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

From: Lucy Peterson Watkins
[Redacted]

The reconstruction of the Logan Northern Canal

Our elected leaders and public servants have let us down. They lost sight of the goal. So much time and money has been wasted in this process. The objective for use of EWP emergency funds provided by U.S. taxpayers money has been patently ignored.

My comments to address the Draft EIS will be concerned with what I believe to be a flawed process based on the premise of a predetermined outcome orchestrated by the NRCS, Canal Company Officers and Cache County Council and Staff. From the inception of the preferred plan (3100 North) in the early fall of 2009 to the release of the Draft EIS (March 2011) All ignored the fact that this funding went well beyond the criteria for EWP use, spelled out in congressional record and USDA. My comments will be in chronological order and include most all the letters, emails sent to officials involved in the EWP funding process. It is important to me to have all my correspondence as part of the public record within the draft EIS comments, as I am disputing the process set out with the NRCS and Logan Northern Canal Company beginning in 2009.

I asked in November 2009, "what is the true cost of 3100 North?" *Re: Herald Journal letter to editor.* "I am voting my few shares no, with good reasons."

"What will be the true cost of this project to the Logan, Hyde Park Smithfield Canal shareholders? (The amount has not been clarified so the cost to the share holders will be unknown). *If this is the case this is not acceptable and is imprudent for a company to ask of it's share holders.*"

"I feel certain the majority of the upper canal shareholders will regret going forth with this plan as now that federal funds and local matches are required this will no longer be a canal company matter. It has and will become a public issue. The diminution of property values of non shareholder and shareholders will become a liability and the impact on bird and wildlife by covering or cement channelling or lining will be out of the control of the High Line Canal Company—it will be a public issue. What will that cost be? How long will the delay be?"

- This alternate (3100 North) was touted as the preferred route for well over 18 months. This alternate is priced (March 2011/draft EIS) at \$39.5 million to \$44.9 million. This is 38% to 57% over the \$28,500,000 available for construction. I ask the NRCS, High Line Canal Company Officers and Cache County Officials for an explanation. Did no one think to ask if this massive public works project could be accomplished within the funding available? Canal company officers, Cache County officials and NRCS have wasted almost two years of shareholders and communities time in manpower, money and public angst for the alternate that was never viable. Their actions have done nothing but delay what emergency funding should have been used for. That is to get agriculture

D-27.1 ▶

D-27.2 ▶

D-27.3 ▶

D-27.1

NRCS determined that the alternatives studied in detail in the EIS are eligible for funding through the EWPP. Please see the discussion in the Final EIS in Section 1.1.2, Authority, beginning on page 1-1 and Section 3.4.1.2, Step 2: NRCS Objectives, beginning on page 3-34.

D-27.2

The action alternative costs are stated in Section 3.2, Alternatives Studied in This EIS. Detailed cost estimates for the action alternatives are included in Appendix C1, Action Alternative Cost Estimates.

NRCS prepared cost estimates for the purpose of this EIS so that it could compare the action alternatives and understand the estimated engineering and construction costs of the options. NRCS can provide up to 75% of the project funding for allowable costs. The remaining 25% is the responsibility of the SLO, which may in turn look to other non-Federal sources for assistance (such as grants, loans, in-kind services, and funding provided by local governments or funding provided by private entities). NRCS understands that the SLO expects CHWUA to provide the 25% through a State loan, local money (such as contributions from Cities in the area), and contributions from the Logan & Northern Irrigation Company and the Logan, Hyde Park and Smithfield Canal Company.

NRCS and Cache County intend to begin the design and construction process as soon as possible after NRCS issues its Record of Decision (ROD) and would like to avoid delay. NRCS cannot control the match funding process but recognizes that delay could occur during that process. Speculating on the nature and length of delay related to the 25% match funding is beyond the scope of this EIS.

D-27.3

NRCS does not agree that the EIS process through which it evaluated the Orange Alternative (which is the same as the 3100 North alternate referenced by the commenter) was a waste of time or effort. NEPA requires lead agencies to evaluate a range of reasonable alternatives; NRCS determined that the Orange Alternative was a reasonable option.

Comment D-27 (continued)

Response

D-27.4 ▶

water to the shareholders of the middle canal. This leads one to question the competence of the federal funding process and the responsible parties involved.

- The Logan Northern Canal Company could not meet the expense 25% match. Therefore any alternate route in the Canyon Road area had to be rejected. The original preferred plan needed to show and create benefits to communities and the Logan Hyde Park Smithfield Canal Company for financial help in the 25 % match required to fund the balance of \$19.3 million of EWP funds. The middle canal and NRCS had to accomplish the following:
 1. Convince the shareholders of the upper canal to "get on board" and give up their autonomy by creating the High Line Canal Company. This umbrella company would oversee the emergency process, make all decisions for the funding requirements and incur debt over \$100,000. The preferred alternate was presented with misinformation and exaggerated benefits to the share holders. There would be no full EIS, a EA was a guarantee for emergency funding and construction would be started with one year. There was no discussion of the negative effects to the Logan City Hydro plant and at what cost the shareholders may be responsible for this, calculated now at least \$ 16 million over a 50 year period. There was no discussion of securing more easement space, time and funds to accomplish this. (*see November 7, 2009 share holder meeting below*)
 2. Convince the communities involved of the benefits of the preferred 3100 North alternate. This was done by suggesting the benefits of flood control, less electricity use, and more water to charge to Smithfield's Summit Creek.
 3. Exaggerating the amount of acreage benefitted from 3500 acres to 7000 acres. Thus keeping the cost benefit per acre as low as possible.

D-27.5 ▶

- *Logan Hyde Park Smithfield Canal meeting November 7, 2009.*

"We'd get a gold-plated canal at a real discount price. It does not get any better than the situation we have." said Keith Meikle, president of the upper canal. The canal leadership, local and state elected leaders and USU also hyped the 3100 North plan. Unfortunately no NRCS engineer showed up -although he was on the agenda. The plan was sold to the share holders of both the middle and upper canal companies out of ignorance and arrogance from those that were supposedly "in the know". These same individuals also assured the stakeholders of a guarantee of an Environmental Assessment rather than a full EIS and "shovels will be in the ground next fall" (2010). In effect the Logan Hyde Park Smithfield Canal share holders voted to "get on board" with misinformation. The canal companies voted to create the High Line Canal company in Nov. 2009. This umbrella company had to be created in order to accept Federal emergency funding from EWP.

The Canal Company officers exploited an emergency situation and took it as an opportunity for their own agenda giving up any pretense of their fiduciary responsibility they had to share-holders and community stakeholders. The original voting process of November 2009 of both canal companies should be called in to question legally by the shareholders and negated.

email I sent to Sylvia Gillen State of Utah Conservationist. March 30, 2010

Ms. Gillen,

"This information and quote in the local paper should alarm you.

Herald Journal Monday March 29. 2010

D-27.6 ▶

D-27.4

As described in the response to comment D-27.3, the NRCS funding agreement states that Cache County will provide a 25% match and that Cache County would look to CHWUA to establish the match. These other sources might include communities that benefit from the project in the study area.

Please note that NRCS completed an EIS, not an Environmental Assessment (EA), and that the EIS contains extensive information about its preferred alternative, the Purple Alternative. Please see the discussion on page 3-49 of the Final EIS regarding potential effects to the Logan City Light and Power facility on the Logan River. See the response to comment D-5.4 for information about the associated water right and potential impact to hydropower.

The EIS discusses easements in general, but detailed information about easements would not be known until the design phase of the project is complete. Please see the response to comment D-27.2 regarding project funding and timing.

Please note that the Orange Alternative (called the 3100 North alternate by the commenter) is not NRCS's preferred alternative.

D-27.5

NRCS cannot control the voting process of the canal companies.

D-27.6

Please note that Cache County would receive and manage the NRCS funds distributed through the EWPP, as stated on page S-1 of the Final EIS. Cache County would work with CHWUA and the canal companies, but CHWUA and/or the canal companies would not receive EWPP funding directly. However, Cache County has agreed to sponsor the effort because the project would benefit residents living in the county and would achieve a common, positive result.

As stated in its response to comment D-27.1, NRCS determined that the alternatives studied in detail in the EIS are eligible for funding through the EWPP. The preferred alternative is the least-expensive action alternative studied in detail in the EIS.

Comment D-27 (continued)

Response

Quote from Keith Meikle, Pres. High Land Canal Association & Pres. Logan, Hyde Park, Smithfield Canal.

"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."

Mr. Meikle has made a clear admission that the federal money designated for the middle canal is being spent to take care of problems on the upper canal that are totally unrelated to the disaster on Logan Northern Canal. He clearly states that they are trying to take this opportunity to fix something that they will need to fix with their own money, if they are denied the EWP subsidies.

The upper canal (Logan, Hyde Park, Smithfield Canal) was not damaged, but the alternatives Mr. Meikle is referring to involves abandoning the Middle canal's (Logan Northern) Logan River diversion point and fix and enlarge upper canal's diversion structure and the capacity of several miles the upper canal, which as he quotes "are in dire need of repair" to carry the allocated water for both canals which according to the NRCS Engineer's estimate will require \$19.5 million of EWP funding.

The canal companies were merged in Nov. 09. As I am a shareholder of the upper canal I attended the meeting—where shareholders were convinced to vote for the merge. **"It had to be accomplished ASAP as EWP funding could not be applied for until after the merge was in place."** the Highline Canal Company was formed as an umbrella to accept the emergency funding. The Logan Northern (middle canal) followed suit a week later.

The newly created High Land Canal could then use Federal funding to fix and repair the upper canal and middle canal at the same time and roughly double the area served. The 19.5 federal funding would require a 25% match from shareholders and communities involved. Total cost around 25-26 Million.

AS the criteria for receiving EWP is very clear: The following paragraph is quoted directly from the USDA Natural Resources Conservation Services (NRCS) website (<http://www.nrcs.usda.gov/programs/EWP/questions.html>) under the section titled:

"What can't EWP do"

"EWP funds cannot be used to solve problems that existed before the disaster or to improve the level of protection that which existed prior to the disaster. EWP cannot fund operation and maintenance work, or repair private or public transportation facilities or utilities."

"All work must represent the least expensive alternative. All EWP work must reduce threats to life and property. Furthermore, it must be economically and environmentally defensible."

The Cache County Council is going to vote tonight on whether to move forward tonight and accept the EWP funding. It is imperative that I have some response from you to clarify this issue. What is NRCS position on the legality of spending federal disaster money to upgrade the upper canal that is unrelated to the Logan Northern Canal disaster? I will call this am for further guidance on this issue.

Sincerely,

Lucy Peterson Watkins

This space is intentionally blank.

Comment D-27 (continued)

Response

D-27.7 ▶

As a result of this email: Sylvia Gillen, State Conservationist, NRCS design engineer, NEPA official met with myself, Dr. Trevor Hughes, Dr. Jack Keller, Bob Fortheringham, Cary Watkins, and Cache County Councilman (name not to be disclosed).

The meeting lasted about one hour. The most pertinent questions asked were the following:

- How did the preferred route (3100 North) work with the criteria of EWP funding? Was this misuse of the emergency funding as spelled out in congressional record and it the USDA web site information?
- Was there a guarantee of an environmental assessment? Was no environmental impact study necessary as repeated by Canal Company officers, State and local elected officials?
- What other alternates were going to be considered?
- Would the 3100 North alternate fall into the \$25-28 million funding budget?

The only question that was answered with some very little specifics was the routes of the other three alternates.

The NRCS was clearly offended by any questions of misuse of federal funds and suggested that the USDA web site was misleading. Ms. Gillen stated that all information regarding use of EWP funds would be removed from the USDA website. (which it never was)

There was no explanation of if only an EA would be necessary but assurances were given that if an EIS was deemed necessary one would be complied with. There was never a guarantee from the NRCS to act only on an EA.

The cost of the 3100 North Alternate would be determined within the scope of the initial EA.

The Cache Council approved the sponsorship of the EWP funding for the Reconstruction of the Logan Northern Canal at that evening's (March 30, 2010) council meeting. No public comment was allowed.

April 1, 2010

D-27.8 ▶

USDA, NRCS, Office of the Chief
1400 Independence Ave., SW, Room 5105-A
Washington, DC 20250

I and my colleagues who are engineers are concerned that based on the criteria for use of EWP funds (see: <http://www.nrcs.usda.gov/programs/EWP/questions.html>), in his effort to assist water users, Mr. Smart has not adhered to the stated criteria. Furthermore, from Mr. Smart's 30 March 2010 presentation to the Cache County Council, it appears NRCS's current plans involve activities that are included in the "What Can't EWP do?" section on the above website. Mr. Smart seems to have already decided on a preferred solution that will cost more than \$25 million and benefit more water users outside of the effect service area than within it.

Dividing the cost by the acres served by the Logan Northern Canal gives a figure of between \$7,000 and \$8,000 per acre, which in itself is unfeasible - even for a new project, for irrigating mostly forage

D-27.7

As the commenter is aware, NRCS completed an EIS for the proposed action. Alternatives considered are described in Chapter 3, Alternatives, of the EIS. As noted in the response to comment D-27.2, detailed cost analyses are presented in Appendix C1, Action Alternative Cost Estimates, of the EIS.

D-27.8

As noted in the response to comment D-27.1, NRCS determined that the alternatives studied in detail in the EIS are eligible for funding through the EWPP. Please see Appendix C1 of the EIS for detailed action alternative cost estimates.

Comment D-27 (continued)

Response

D-27.9 ▶

and small grain crops. We believe there is an alternative that would be much less expensive. These issues are outlined in the attached letter. We would appreciate your looking into this matter, and letting me know if the transactions underway fall within the stated criteria for and use of EWP funds.

Along with my engineering friends, we realize what we think is the best Canyon Road alternative (as outlined in the letter to Mr. Smart) is a rather subtle option that was most likely unconsciously overlooked.

This letter has been emailed or hand delivered to the following: Cache County Council, Cache County Executive: Lynn Lemon, Logan Mayor: Randy Watts, Logan City Council, North Logan City Council, North Logan Mayor, Dave White USDA, NRCS, Office of the Chief, Bronson Smart NRCS Engineer, Sylvia Gillen, Sen. Bob Bennett, and the Logan Herald Journal

Sincerely,
Lucy Peterson Watkins

This is a copy of letter enclosed sent by email to Bronson Smart State of Utah Engineer:

April 1, 2010

Cache County Council Members
Lynn Lemon, Executive
Randy Watts, Mayor Logan
North Logan Council
Mayor Lloyd Berentzen
Jeff Jorgensen, North Logan City Administrator

Dear Mr. Smart,

This note is in response to your comments at the Cache County Council meeting on 31 March. I have discussed your presentation with my engineer friends who were also long time colleagues of my father, Dean F. Peterson. We are pleased your agency is planning to study four action alternatives and to provide for public participation and comment; but believe all and at least one additional action alternative should be carefully considered, an environmental impact statement rather than assessment, and the declared beneficiaries for the public funding analysis should be limited to the service area of the Logan Northern Canal. More specifically, we will be expecting the following to be available for review and public comment:

1. We believe there are two Canyon Road alternatives 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, which we assume you have already been considering. This would 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 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.

D-27.9

Please note that NRCS considered then eliminated the Yellow Alternative from further analysis and therefore did not consider developing further detail about this option. See Section 3.4, Alternatives Eliminated from Detailed Study, on page 3-31 of the Final EIS for a discussion of the alternative screening process.

The letter correctly states that the Yellow Alternative, as presented in the Draft EIS, would not require a change in the existing LN Canal POD. This option would not affect where the Logan & Northern Irrigation Company uses the LN Canal water and therefore would not affect hydropower generation by the City of Logan.

The modification to the Yellow Alternative suggested by the commenter (moving the LN Canal POD to First Dam and reducing the pipe size due to increased pressure) would be a new option. Please see the response to comment D-2.2 for a discussion about how NRCS considered new options presented during the Draft EIS comment period. NRCS made the decision to prepare an EIS and released a Notice of Intent to do so in July 2010. Once it made this decision, NRCS did not re-examine the type of document that would be prepared. Lead agencies do not normally revert to preparing an EA after considering alternatives.

The EIS describes the expected impacts of the project alternatives, including potential impacts to hydropower generation by the City of Logan (beginning on page 5-37 of the Final EIS), seepage (beginning on page 5-90 of the Final EIS), habitat associated with the canals (beginning on page 5-48 of the Final EIS), and the Logan River (beginning on page 5-48 and page 5-70 of the Final EIS). NRCS did not complete a detailed analysis of effects on property values because such an analysis would require speculation about future market conditions. However, NRCS did consider how the alternatives could affect the social environment; these discussions begin on page 5-13 of the Final EIS.

Comment D-27 (continued)

Response

D-27.10

Comment noted.

2. By moving the Logan Northern Canal's point of diversion, combining it with the Logan, Hyde Park, Smithfield Canal and piping the combined water for several miles along the upper canal's right-of-way creates some environmental and economic issues that you seemed to gloss over. These include:

- a. Logan City would lose considerable power because the Logan Northern Canal water would be diverted above its power Logan River hydropower facility (we have heard this is in the order of \$70,000 per year).
- b. Seepage out of nearly 10 miles of canal would no longer be available for groundwater recharge.
- c. Nearly 10 miles of riparian habitat would be affected, and if water is piped all the way to 3100 North half of it would be completely lost.
- d. A considerably longer section of the Logan River would be essentially dried up during the peak irrigation season.
- e. Property values along the upper canal right-of-way will be adversely affected both during the construction period and thereafter.

These issues should be fully presented for consideration by our elected officials as well as the public. Also in view of the complexity of the situation and the entailed environmental issues, an Environmental Impact Study will be needed.

- a. We have difficulty understanding how national emergency disaster funding and addition local funding can be so generously allocated to and partly justified by the benefits to users of the Logan, Hyde Park, Smithfield Canal and others when it was the when it the "act of God" disaster was on the Logan Northern Canal. Thus it seems inappropriate to consider benefits to the shareholders of both canals for justification. As taxpayers, we are interested in fixing the problem at the lowest cost, not in using added beneficiaries to justify higher costs.

3. One final point regarding your presentation, and that is, the takeaway message was that the preferred solution was already selected; and that is to combine and pipe the water for the two canals out to 3100 North, etc. the feeling you conveyed was that the other studies were being carried out to satisfy procedural protocols, and this was especially true in the way you handled the Canyon Road highway 89 alternative. Also you mentioned energy savings due to reduced pumping for irrigation, but did not mention energy generation losses to Logan City, and probably miss-lead the Council to believe that an Environmental Assessment was in order instead an Environmental Impact Study for the combined canal alternatives.

Lucy Peterson Watkins

Posted: Saturday, July 31, 2010 12:45 am | Updated: 11:37 pm, Fri Jul 30, 2010.

Canal holdup: In-depth study ordered for waterway construction

By Jay Patrick The Herald Journal |

Work to restore a full flow of irrigation water to 7,000 acres of farmland in northern Cache County could take a couple years longer than officials expected, prompting fears of a possible agricultural and economic crisis.

The irrigation water was suddenly lost in July 2009 when the Logan Northern Canal, fed by the Logan River, ruptured in Logan's Island neighborhood.

In March, when the Cache County Council agreed to partner with the U.S. Department of Agriculture's Natural Resources Conservation Service on a \$27 million project to build a new canal that would serve

D-27.10 ▶

Comment D-27 (continued)

Response

customers of both the upper canal - also known as the Logan-Hyde Park-Smithfield Canal - and the defunct Logan Northern Canal (the middle canal), officials believed construction could get going this fall.

But the NRCS is now opting for a full-blown Environmental Impact Study (EIS) instead of a relatively rudimentary Environmental Assessment (EA) - a change that can add about two years to the process. Bronson Smart, state conservation engineer with the NRCS, said projects usually start with an EA, which determines if a more-involved EIS is needed.

"With this project we just went directly to the EIS because there was some public controversy," said Smart. "An EIS is how you avoid litigation" due to more public participation and buy-in, he said.

The U.S. Department of Agriculture earlier this year granted Cache County around \$20 million to pay for most of the job. As the project's local sponsor, the county is responsible for construction and for coming up a 25 percent match to the USDA grant, about \$5 million. Funding plans call for the canal company and the cities of Logan, Hyde Park, North Logan and Smithfield to pay the match.

A small number of residents, including Lucy Peterson Watkins, of North Logan, have questioned the appropriateness of what are supposed to be emergency funds being used to build a new canal. Watkins, a holder of six canal water shares, has also voiced concerns about the impact on wildlife of enclosing a canal that has been open for decades.

At the County Council meeting Tuesday, council members blasted Watkins, blaming her opposition to the plan for instigating the EIS.

Though they did not name her, Watkins, the wife of former North Logan Mayor Cary Watkins who has complained about the project in letters to newspapers and officials, was clearly the target. She sat in the third row at the meeting.

"It angers me that people are so self-serving," said Councilman Craig Butters. "It aggravates me to no end."

Following the meeting, Council Chairman Gordon Zilles and County Executive Lynn Lemon drafted a letter (dated July 29) to State Conservationist Sylvia Gillen, reading: "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 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."

Watkins said in an interview that it's ridiculous to think she's responsible for the EIS, that with a project this size an EIS would have been done anyway as a matter of course.

"If I didn't exist this (the EIS) would have happened. I did not create this," she said.

Watkins said she questions the use of the federal Emergency Watershed Protection funds to pay for a new canal system. According to the USDA Web site, EWP money is meant to remedy "emergencies created by natural disasters, such as the floods and fires. The program is designed to protect life and property from any future event of a similar magnitude."

Watkins said in an interview after the meeting that she's disappointed "that people in charge did not do what I did," questioning the funding and possible environmental impacts of the project. In an e-mail, she wrote:

This space is intentionally blank.

Comment D-27 (continued)

Response

"They (the council and the canal companies) are very lucky that I have been outspoken on this issue. They can now use me as their 'whipping girl' and use me as the reason for their failure in the due diligence they did not do. They now can cover their fannies."

Keith Miekle, president of the newly formed Highline Canal Company - a coupling of the Logan Northern and the Logan, Hyde Park, Smithfield canal companies - said he's bitter about Watkins' involvement and the NRCS decision to "cover their butts" by ordering a time-consuming study.

Earlier on, "The NRCS made it clear that an EA was all that was needed and an EA was all we were going to do," said Miekle, adding that officials believed things here would progress similarly to a recent \$80 million flood rehabilitation project near St. George that only required an EA.

Smart said the official protests of the city of Logan and Utah State University to the canal reconstruction plan also played into the decision to go for an EIS - the city claimed the change in the diversion of water from the Logan River would mean less water for the city's hydroelectric plant at the mouth of Logan Canyon. USU's Water Research Lab claims less water available because of the new canal will hurt the school's ability to run experiments using water.

However, Logan withdrew its protest earlier this week, said Logan City Light & Power Director Jeff White, in order to help farmers hurting for water. Though the power department protested the plan, the city as a shareholder has voted in favor of it and appointed and elected leaders have voiced support.

"In order for us to continue on with the negotiations in 'good faith' we have chosen to withdraw our protest ... since it would create a significant hardship for farmers to cut back on their water needs at this point in the irrigation season," wrote White in an e-mail. "However, this good faith effort does create a considerable cost to our Light & Power Department and Logan residents in general that are roughly estimated to be in the neighborhood of a couple hundred thousand dollars in lost power generation for this summer. Yet, we are hopeful that we will be able to find some kind of compromise whereby Logan City will be adequately compensated for these damages, in addition to those incurred last year, along with any permanent diversions made in the future."

Farmers once dependent on the Logan Northern are getting some water this summer via a temporary patchwork of canals, but there's not as much water to go around and crop loss is happening, said Miekle. A few years of low water and low yields could drive farmers to sell their fields, he said.

"It's killing them," said Miekle, adding that some farmers are looking at losing half their summer harvest. (see Jon Miekle comments taken from High Line Canal meetings approved minutes below)

At the meeting Tuesday, Zilles, a farmer, said when talking about water being cut back for several years, "you are talking about complete devastation."

Councilman Craig Peterson called the threat of lawsuits and the NRCS's shift to an EIS in response "ludicrous."

While the EIS route at this point looks to add a couple of years to the process, Smart said in the long run it could save time if potential lawsuits can be squelched.

This space is intentionally blank.

Comment D-27 (continued)

Response

D-27.11

Comment noted.

In the meantime, the millions of dollars from the federal government remain in hand, but an extension has already been granted and a couple more will likely be needed, said Smart. Having the money available when all the studies are done is not a foregone conclusion.

"It's never just no problem," he said of retaining funding.

* minutes from High Line Canal Company
Highline Canal Meeting
 August 5th 2010

8) Logan Northern

a. Jon Meikle is extremely pleased at the lines and how they are servicing the north part of the valley.

Highline Canal Meeting
 September 2nd 2010

4) Report, Updates from Logan Northern Irrigation Company

a. Jon – Thanks to everyone's participation we have made the summer. Watering season is over and we got by pretty well. It is amazing we did so well with our current system.

D-27.11 ▶

I have included the minutes of Cache County Council meeting referred to in above Herald Journal article. I take issue with approved minutes as they do not reflect what I said at that council meeting. Unfortunately the video is mysteriously missing from the archives but an audio has been listened to by myself. I never stated that I forced an EIS but stated that I was consistently warning that an EIS would be required for such a massive construction project and was curious why the Cache County Council and staff presumed a 'guaranty' of an environmental assessment only. I was also asked to apologize in writing to the NRCS for my behavior that was caused by my selfishness, vindictiveness and that I was self serving. The County took it upon themselves to apologize for me in the following letter to NRCS:

July 27, 2010 Cache County Minutes

Report on High Line Canal Project - Bob Fotheringham reviewed the canal restoration project alternatives noting that the most expensive option would cost \$28,575,000.00 with the NRCS Grant paying \$21,685,000.00 or 75.9%, the Board of Water Resources paying \$5,875,000.00 or 20.8% and Cache County, local cities and canal companies paying \$1,015,000.00 or 3.5%.
 The Technical and Financial Assistance agreements expire in September of 2010 and an extension was requested on July 19, 2010.
 Because a party or parties have threatened to sue if an Environmental Impact Study (EIS) is not completed, the projected timeline has been extended and work on the project cannot begin for four to five years.
 Council member Buttars voiced frustration and anger that a few or one person can create delays that will have such a detrimental effect on farmers and their families and cost the county and its residents so much time and money.
 Council member Petersen agreed.
 Keith Meikle of the Logan, Hyde Park and Smithfield Canal Company expressed grave concerns over the extended timeline for completion of the project. Farmers cannot survive that long on less than half their normal water allotments. He predicts that farmers will be forced to sell substantial amounts of property at greatly reduced prices which will negatively impact all property values in Cache County.
 Lucy Watkins announced that she is the party who has forced the EIS, but stated that the EIS would have been required anyway because it involved federal funds.

Comment D-27 (continued)

Response

D-27.12

Comment noted.

Fotheringham said his information is that if Watkins had not forced the EIS, only the Environmental Assessment (EA) would have been required, which is a much accelerated process compared to the EIS.

Fotheringham indicated there is to be a Public Scoping Meeting for the Cache High Line Canal Project on August 11, 2010 at the Bridgerland Area Technical College at 1301 North 800 West, Logan, the south entrance. People can choose to attend either the 5:30 p.m. or 6:30 p.m. meeting. Fotheringham urged public attendance. Written comments will be received until Friday, August 31, 2010 at the following address:

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

LNC-EIS@hdrinc.com

Council member Buttars asked if a letter to the federal agency listing the seriousness of the extended timeline's effect on farmers and, indeed, all residents of Cache County should be drafted? Buttars also asked those opposing the project to write a letter withdrawing their concerns and opposition.

Council member Petersen concurred that a letter should be drafted by the Council.

Chairman Zilles asked if the county could or should have done something else to avert this crisis? Fotheringham said the county did all it could by signing the TA and FA agreements to hasten the project.

(Attachment 2)

ACTION: Motion by Council member Buttars to draft a letter to the federal government stating the Council's concerns over the economic impact the extended EIS timeline will have on the county. Chambers seconded the motion.

The vote was unanimous, 6-0. White absent

D-27.12 ▶

Thursday, August 19, 2010 4:25 pm

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 by the county executive 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 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." Item 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 ..."

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.

Comment D-27 (continued)

Response

It is leading to the NRCS's fraudulent administration of EWP funding by including and subsidizing benefits unrelated to the landslide.

My email (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 (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."

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 7000 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 email 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

 Email (Feb. 6, 2011) To: Bronson Smart, State Conservationist, Chief USDA, Sen. Mike Lee, Cache County, Logan Council and Logan Mayor.

I have no confidence in the evaluation of the scoping summary report regarding the EIS comments. Prepared by HDR Engineering, Inc. Logan Northern Canal Reconstruction October 5, 2010.

Re :3.2 Comments about options (alternates)

Quote: "Specific comments were received regarding each of the four options that were presented at the scoping meeting. The two options that received the most support were Option 4 (the 3100 North option) and one option that was not presented at the meeting (restoring the breached section and using the historic Logan Northern Canal alignment). Option 1 (the US 89 alignment) received the fewest comments of support."

Subsequently the NRCS dropped the Canyon Road piping plan (Alternate 3) Hwy 89 (Alternate 1) and added the "historical" Alignment option. *This alternative would reconstruct the Logan Northern Canal on its historic alignment in a box culvert or a pipe from the canal's point of diversion (POD) just below the First Dam to the intersection of 400 North (US 89) and 600 East. From this point, water would be delivered downstream using the existing Logan Northern Canal.*

I have reread and studied all the comments and find the above summary misleading. I have separated the EIS comments into the following categories:

- | | |
|---|--------------|
| 1. Non-specific in naming a preferred route. | 27 comments |
| 2. option 1 Hwy 89 | 2 preferred |
| 3. Option 2 1500 North | 2 preferred |
| 4. Option 3 Canyon Road | 9 preferred |
| 5. Option 4 3100 North | 14 preferred |
| 6. Historical alignment of Logan Northern Canal | 5 preferred |
| 7. Keeping diversion at First Dam and were specific only in that the diversion point on the Logan Northern Canal should not be moved. | 32 preferred |

D-27.13

The scoping summary report is simply a summary of comments received. The purpose of the report was to help NRCS identify subjects that should be studied in the EIS.

Please see the response to comment D-1.2 regarding why only closed/piped systems are considered in this EIS.

D-27.13 ▶

Comment D-27 (continued)

Response

D-27.14 ▶

I realize that the EIS comments are not to be taken as "votes". I am concerned that only 14% of those comments were specific to the 3100 North Route while 50.5 % (# 4,6,7 combined) of the EIS comments preferred an option that encompassed the Canyon Road area and in keeping two diversion points rather than combining as the "preferred" alternate 3100 requires.

In rereading the non specific comments the majority of those were regarding the detriment of covered canals, misuse of taxpayers funds, diminution of their property and lack of available water for their water shares. These comments, although non specific in stating a preferred route, were specific in the negative aspects of a piped system.

The minutes from the Highline Canal Meeting September 2, 2010 also reflects what I believe to be a misinterpretation of the EIS comments:
"1) NRCS Update/Review

- a. On schedule
- b. Comment period finished
- c. Doing touch ups & beginning to write the draft EIS.
- d. Received about 100 comments. A lot of concern about temple ditch and Logan's Canyon Road but pretty well resolved.
- e. Over all really positive response.
- f. A lot of comments requesting to put the canal back into its current alignment, will add that as another alternative."

D-27.15 ▶

It will only be a matter of time until the Cache County comes out against the "historical canal route".

Friday, November 5, 2010 12:45 am | Updated: 10:28 am, Thu Nov 4, 2010. Herald Journal

Canal options too limited

To the editor:

I am concerned with the new alternative being studied for restoring service to the Logan Northern Canal proposed by NRCS, which states: "Reconstruct Logan Northern Canal. This alternative would reconstruct the Logan Northern Canal on its historic alignment in a box culvert or a pipe from the canal's point of diversion (POD) just below the First Dam to the intersection of 400 North (U.S. 89) and 800 East. From this point, water would be delivered downstream using the existing Logan Northern Canal."

This alternative is too specific to the Logan Northern Canal's original alignment. It eliminates any consideration of an alignment that doesn't necessarily continue a pipeline along the failed section. Instead it should allow creative concepts such as an inverted siphon to drop the water down and run it along the base of the hill on stable ground. The fact that consideration is only for "historical alignment" precludes other credible options. Thus it should be revised accordingly by the NRCS.

The way the option is stated calls into question the intent of the NRCS process that created the "Preferred Alternative of 3100N." The perception is that NRCS wants to placate those opposed to the 3100 North and 1500 North routes by going through the motions to prove the historical route is too costly.

I believe the EIS comments by those opposed to the 3100 North and 1500 North alternate were specific only in that the diversion point on the Logan Northern Canal should not be moved to the upper canal's diversion. These comments reflected the desire for a "common sense" approach to keep the diversion at first dam and use engineering "know how" to repair, reroute and replace the canal's alignment practically, economically and to expedite the use of the canal. These comments also expressed concerns regarding the Logan Hydro Plant and Water Lab water loss.

D-27.14

Comment noted.

D-27.15

NEPA does not require lead agencies to evaluate every conceivable alternative. Rather, NEPA directs agencies to evaluate a range of reasonable alternatives. NRCS concludes that the action alternatives studied in the EIS represent a range of reasonable alternatives.

Please note that NRCS has identified the least-costly action alternative, the Purple Alternative, as its preferred alternative.

Comment D-27 (continued)

Response

D-27.16

Comment noted.

D-27.16 ▶

I continue to have difficulty understanding how national emergency disaster funding and additional local funding can be so generously allocated to and partly justified by the benefits to users of the Logan, Hyde Park, Smithfield Canal and others when the disaster was on the Logan Northern Canal. Thus it seems inappropriate to consider benefits to the shareholders of both canals for justification. As taxpayers, we are interested in fixing the problem at the lowest cost, not in using added beneficiaries to justify higher costs.

Everyone seems to be convinced that based on a cost to benefit analysis, the 3100 North plan can be justified, but this does not comply with the wording in the Congressional Record regarding use of Emergency Watershed Protection funds.

Lucy Peterson Watkins

As expected, Cache County is opposed to this option (historical alignment) and their concerns were documented in Herald Journal article December 14, 2010. "Cache County is opposed to reconstructing the Logan Northern Canal in its historic alignment through the area impacted by last year's fatal landslide and canal breach."

Posted: Tuesday, December 14, 2010 1:15 am
By Charles Geraci |

Cache County is opposed to reconstructing the Logan Northern Canal in its historic alignment through the area impacted by last year's fatal landslide and canal breach.

The option is one of three being studied by the Natural Resources Conservation Service (NRCS) in its environmental impact statement, as part of a project designed to restore irrigation water to shareholders impacted by the landslide, which killed a mother and her two children in July 2009.

In a Nov. 12 letter, Bronson Smart, state conservation engineer with the NRCS, wrote to County Executive Lynn Lemon that federal funds associated with the NRCS Emergency Watershed Protection Program are not eligible to be used for "more robust actions such as stabilization of the entire Logan Bluff area."

Smart added, "The evaluation of the alternative to reconstruct the Logan Northern Canal will consider the probability of future landslides through this unstable area and the potential effects of such movement to the proposed new pipeline."

The county responded to Smart in a letter sent last Wednesday, which was signed by Lemon and County Council Chairman Gordon Zilles.

Since funding is not available for stabilization of the hillside - the officials note there have even been "more landslides along the disaster area" subsequent to the July 2009 break - the county would be responsible to cover 100 percent of the general stabilization costs.

Lemon told The Herald Journal on Monday that the county is not interested in doing that, given the significant costs and possible liability involved.

"We'd be responsible to stabilize the hillside, and we're not going to do that," he said. "We don't want to do it. We don't want to take that liability."

In the letter to Smart, the officials note their "grave concern" with reconstructing the Logan Northern through the landslide area, specifically, that "the disaster area could be washed out in the future from the existing springs and super-loading of the above highway or any other reason. ... The potential for loss of life in any way connected to the rebuilding of the canal along the disaster area makes this option untenable for the county."

A second possibility being considered by the NRCS includes redirecting water from the Logan Northern Canal into the Logan, Hyde Park, Smithfield Canal just beneath Second Dam. The combined waters would be transported in a pipe or box culvert to Lundstrom Park. From there, the majority of the Logan Northern Canal water would be sent into a different pipeline under the park and city streets; it would be released back into the Logan Northern Canal at roughly 1500 North.

The final alternative calls for the combined canal waters to be carried in a box culvert or pipe in the Logan, Hyde Park, Smithfield Canal alignment to about 3100 North in North Logan. From there, the water would be piped west to the Logan Northern Canal. With the use of a pressurized pipe, some water would be delivered to shareholders between about 400 North in Logan and 3100 North, while remaining water would be "discharged directly into the canal for downstream delivery." end of article.

Comment D-27 (continued)

Response

D-27.17

Comment noted.

D-27.17 ▶

The Cache County leaders then had second thoughts regarding the Canyon Road area but it was a little late as the routes had already been selected:

Jan 2011

Cache County: Don't rebuild canal on hillside, but keep it close By Charles Geraci The Herald Journal |

Cache County is reiterating its position that rebuilding the Logan Northern Canal in its historic location poses safety and liability concerns.

However, officials have sent another letter to the Natural Resources Conservation Service, which is studying various options for a massive canal project, encouraging the agency not to abandon rebuilding the canal in the vicinity of Canyon Road.

"As per Cache County's letter which was approved and forwarded to you on Dec. 8, 2010, rebuilding the canal in the existing alignment has grave safety and liability issues," the letter reads. "However, Cache County would encourage more study of rebuilding the Logan Northern Canal near or adjacent to Canyon Road and off the hillside. Please consider studying these options."

Rebuilding the canal in its prior location is one of three options being studied by the NRCS in its environmental impact statement, as part of a project designed to restore irrigation water to shareholders impacted by a landslide, which killed a mother and her two children in July 2009.

Since federal funding is not available for stabilization of the hillside, the county would be responsible to cover 100 percent of the general stabilization costs, and county officials have said they're not interested in doing that.

"We'd be responsible to stabilize the hillside, and we're not going to do that," County Executive Lynn Lemon told The Herald Journal in December. "We don't want to do it. We don't want to take that liability."

County Councilman Craig Petersen said Thursday he wouldn't support rebuilding the canal in its historic alignment "unless I could be absolutely sure that the liability and risk factors could be mitigated."

Lemon told the County Council on Tuesday that the second letter is partly motivated to allay the concerns of some local residents that the county was originally trying to shelve the Canyon Road option.

"I know we have major concerns with the canal being put back in where it is, but some in the community felt like the county was really just sending that (December letter) so that we could force the canal to another option - that we wouldn't consider Canyon Road," Lemon said. "And we've said, 'That wasn't our objective.' We just said, 'We weren't willing to take the liability to put it back where it was.'"

He noted an environmental impact statement looking at the three options for the project may be ready by March.

Comment D-27 (continued)

Response

A second possibility being considered by the NRCS includes redirecting water from the Logan Northern Canal into the Logan, Hyde Park, Smithfield Canal just below Second Dam. The combined waters would be transported in a pipe or box culvert to Lundstrom Park.

From there, the majority of the Logan Northern Canal water would be sent into a different pipeline under the park and city streets; it would be released back into the Logan Northern Canal at roughly 1500 North.

The final alternative calls for the combined canal waters to be carried in a box culvert or pipe in the Logan, Hyde Park, Smithfield Canal alignment to about 3100 North in North Logan. From there, the water would be piped west to the Logan Northern Canal. With the use of a pressurized pipe, some water would be delivered to shareholders between about 400 North in Logan and 3100 North, while remaining water would be "discharged directly into the canal for downstream delivery." end of article

I am opposed to the (Purple) 1500 North plan for these reasons:

- Loss of Logan City's hydro power and the real cost to Logan City and stakeholders involved.
- Real costs of easements necessary for construction and the time frame to secure them.
- Massive road construction down 1500North/1400North.
- Loss of water to shareholders in the Canyon Road area.
- Construction risks in the Logan Canyon area with the expansion of original diversion point.
- Loss of our unique water-ways that make Cache Valley a very special place.
- Misuse of Emergency Water Protection Taxpayer funds.
- Manipulation of the emergency funding process for a predetermined goal by via presentation of misinformation, exaggeration of benefits and omission of pertinent facts.

D-27.18 ▶

I believe there are two Canyon Road alternatives which are iterations of the Yellow (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.

- Both plans or practical iterations of these routes have never been studied by the NRCS but have been recommended by citizens since March 30, 2010. Support of both plans are also in the EIS comments (September 2010).
- These routes would also relieve Cache County from securing extra easement space through Logan subdivisions. This could possibly take an inordinate amount of time, funds and could lead to contracted litigation. This process can not be started until after the record of decision is made by the NRCS.

D-27.19 ▶

D-27.18

As described in the response to comment D-27.9, the EIS describes the expected impacts of the project alternatives on the City of Logan's hydropower generation. The action alternative cost estimates included in Appendix C1 included estimated easement costs.

Construction activity on 1500 North would be temporary. The road surface would be returned to preconstruction conditions after work in this area is completed. The contractor performing work in the roadway would develop and implement a maintenance of traffic plan that ensures continued access for people living in the area.

Please see the alternatives description beginning on page 3-2 of the Final EIS. All of the action alternatives include a small-diameter pipeline to serve shareholders living along Canyon Road between the LN Canal POD and the Laub Diversion. See page 3-11 of the Final EIS for information about how the Purple Alternative would serve shareholders between the Laub Diversion and 400 North.

NRCS has not identified any specific construction risks in Logan Canyon associated with modifying the POD structure just below Second Dam. If the Purple Alternative is selected, part of the design process would be identifying site-specific hazards and challenges. This is a normal part of any construction project.

Canals in the study area are not unique, though many residents feel that they contribute positively to the ambience of the area. Based on the EIS analyses, NRCS did not find that converting about 2.4 to 2.6 miles of the LHPS Canal to a box culvert would significantly affect the overall ambience of Cache Valley.

As stated in the response to comment D-27.1, NRCS determined that the alternatives studied in detail in the EIS are eligible for funding through the EWPP. Please see the discussion beginning on page 3-53 of the Final EIS regarding NRCS's identification of the Purple Alternative as the preferred alternative. NRCS based its decision on EWPP requirements and the expected beneficial and adverse environmental consequences of each alternative.

D-27.19

NRCS began formulating and studying the action alternatives in August 2010. NRCS was aware of some potential options for the Yellow Alternative, but after careful consideration chose to stay with its original decision to not evaluate the Yellow Alternative or any modifications of the Yellow Alternative in detail.

Comment D-27 (continued)**Response**

- There would be no massive road construction down 1500/1400 North.
- These routes would also give all shareholders in the Canyon Road area to have use of water.
- Have no impact on Logan City's hydro plant.

Submitted by,

Lucy Peterson Watkins

Please see the response to comment D-2.2 for a discussion about how NRCS considered new options presented during the Draft EIS comment period.

NRCS understands that new options would have different easement requirements. NRCS considered easement requirements, but they were not a major factor in identifying a preferred alternative. New permanent easements would probably be required as part of any alternative. Please see the action alternative cost estimates in Appendix C1 for conceptual estimates of easement requirements.

Although the Yellow Alternative or modifications of the Yellow Alternative would not require construction along 1500 North, they would require construction under or along Canyon Road. Because the City of Logan owns a sewer line in Canyon Road, construction would require temporarily shutting down this line and probably the culinary water system. The exact duration of the expected shutdown is unknown, but NRCS and Cache County estimate that the service interruption could last a number of weeks. This would require temporarily relocating people living in the area due to health and safety concerns. Therefore, as described on page 3-50 of the Final EIS, constructing the Yellow Alternative would be much more disruptive to people living along Canyon Road than the Purple Alternative would be to people living along 1500 North. Constructing the Purple Alternative might cause short-term effects to utility service in the area, but such effects would probably last hours rather than days or weeks.

The Yellow Alternative and any new options resulting from modifications to the Yellow Alternative would probably also require a separate irrigation water delivery pipeline that is included as part of all of the action alternatives to serve shareholders along Canyon Road. The placement and operation of this pipeline with the Yellow Alternative would be the same as that with the Purple, Orange, and Blue Alternatives. Please see page 3-22 of the Final EIS for a description of how the Blue Alternative would serve shareholders between the Laub Diversion and 400 North.

The commenter correctly states that the Yellow Alternative or any new options resulting from modifications to the Yellow Alternative would not affect hydropower generation by the City of Logan.

Comment D-28

Response



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Denver Federal Center, Building 67, Room 118
Post Office Box 25007 (D-108)
Denver, Colorado 80225-0007



April 22, 2011

9043.1
ER 11/251

Ms. Sylvia Gillen, State Conservationist
Natural Resources Conservation Service
Wallace F. Bennett Federal Building
125 South State Street, Room 4010
Salt Lake City, UT 84138-1100

Dear Ms. Gillen:

The Department of the Interior has reviewed the Draft Environmental Impact Statement (DEIS) for the Draft Environmental Impact Statement Logan Northern Canal Reconstruction Project, City of Logan, Cache County, UT, and offers the following comments provided by the U.S. Geological Survey.

1. Figure 4-9 references a 1999 USGS document. The reference list identifies the document as U.S. Geological Survey 1999 National Hydrologic Dataset GIS Layer, SGID_U024_StreamsNHDHighRes.gdb. The correct reference might be a U.S. Geological Survey, National Hydrographic Dataset (<http://nhd.usgs.gov/>). Suggest the authors check reference title and web address.
2. Figure 4-12 references a 1988 U.S Geological and Mineral survey. The reference list identifies the document as U.S. Geological and Mineral Survey, 1988 Shallow Groundwater GIS Layer, GID93_GEOSCIENCE_ShallowGroundWater.gdb. We are unable to locate the reference. Suggest check the authors check the reference title and access.
3. Section 4.4.6.5, first paragraph: Conclusions about confining layers in the valley are attributed to the Utah DNR and USGS, 1971. The date is missing from the Utah DNR reference and the reference list does not include a 1971 USGS reference. It appears the correct references are listed in the reference list as Bjorklund and McGreevey, 1971 and McGreevey and Bjorklund, 1971. Suggest the author check and update if needed.

D-28.1

The reference noted by the commenter is a geodatabase and a shapefile that were obtained from the Utah Automated Geographic Reference Center (AGRC) but were originally published by USGS. This geodatabase is a compilation of information from several different agencies. The reference has been updated in the text and in Chapter 9, References, to reflect AGRC as the reference source.

D-28.2

The reference noted by the commenter is a geodatabase and a shapefile that were obtained from AGRC. The reference has been updated in the text and in Chapter 9, References, to reflect AGRC as the reference source.

D-28.3

The commenter is correct; the reference is Bjorklund and McGreevey 1971. The reference has been corrected in the Final EIS.

D-28.1 ▶

D-28.2 ▶

D-28.3 ▶

Comment D-28 (continued)

Response

Ms. Sylvia Gillen, State Conservationist

2

Thank you for the opportunity to review and comment on the DEIS. If you have any questions concerning our comments, please contact Gary LeCain, USGS Coordinator for Environmental Document Reviews, at (303) 236-5050 (x229) or at gdlcain@usgs.gov

Sincerely,



Robert F. Stewart
Regional Environmental Officer

cc: Bronson Smart, Project Manager

This space is intentionally blank.

Comment D-29

Response

D-29.1 ▶

D-29.2 ▶

Public Comments 3/31/2011

[2]

P R O C E E D I N G S

CAREY WALKINS: I'm Carey Walkins. I am from North Logan Utah. I want to make a couple of comments. The first one is on the selection of the alternatives, or the consideration of the preferred alternatives, and one of which, which was looked at, at least to some degree, was what is called the Blue Alternative, which is the taking a pipe down existing historic route of Canyon Road. And, however, nothing else was examined, other than that route.

The County had, after the EIS was underway, had requested that they look at other iterations of that, one of which would be to take a pipe down the existing rights the way of Canyon Road. And another route that I suggested, and some credible water engineers suggested, was to lay the pipe down at the base of the hill, where the slide occurred, east and west, and avoid any hillside issues.

Given the fact that all of the alternatives require the purchase of 14 homes, on Canyon Road, eliminates any need for acquisition of easements, or any of those other things, so that land will be open. And, of course, one of the iterations that could solve this problem, and save millions of dollars, is to take a pipe down the base of the hill, that flight area, bluff area,

D-29.1

Comment noted.

D-29.2

NRCS assumes that the commenter is referring to the February 2011 letter from Cache County to NRCS that states the County encourages more study of rebuilding of the LN Canal along Canyon Road and off the hillside.

The alternatives NRCS considered and presented in the Draft EIS are based on using existing system features, to the extent possible, and avoiding impacts to new areas. The modification to the Blue Alternative suggested by the commenter (moving the pipeline to Canyon Road) would be a new option. A modification of the Yellow Alternative that would have moved the pipeline to the north along the toe of the Logan Bluff would also be considered a new option. This Yellow Alternative option would have *required* acquisition of the properties; this is similar to the Blue Alternative in that it could not be constructed unless the structures were removed. Based on phone calls that NRCS has received since it published the Draft EIS, it appears that many of the structure owners are not willing to sell their properties, which means that the properties would need to be acquired through condemnation. Because NRCS cannot fund purchase of structures from unwilling parties, the SLO and its partners would be required to fund the acquisition of the properties through the condemnation process.

NRCS considered the new options during the review of Draft EIS comments but did not include any new options in the Final EIS because the existing action alternatives already meet the project purpose and need and objectives. The option suggested by the commenter would not better achieve the project purpose, need, and objectives.

The Blue Alternative, which NRCS studied in detail, would use the existing LN Canal POD, would deliver water as it has historically, is in the same general area as the other initial alternatives in the southern part of the study area, and received broad public support during the NEPA scoping process. Because of this, NRCS did not consider any additional options in the Canyon Road area.

The commenter correctly assumes that if it had been studied in detail, the Yellow Alternative could have included acquiring structures from 14 properties. Like the Purple and Orange Alternatives, the Yellow Alternative described in Chapter 3, Alternatives, of the EIS could have been constructed even if the structure owners were not willing sellers.

Comment D-29 (continued)

Response

D-29.3 ▶

| Public Comments | | 3/31/2011 |
|-----------------|--|-----------|
| | | [3] |
| 1 | and create what is called an inverted siphon, and that | |
| 2 | way you would be able to take water from the first damn, | |
| 3 | from that point of diversion, then take it down the | |
| 4 | pipe. | |
| 5 | And you probably, based upon the pressure | |
| 6 | head and the elevation flow, would be able to use, not a | |
| 7 | 72-inch pipe, a pipe that would be substantially | |
| 8 | smaller. It is even suggested it could be half the | |
| 9 | diameter. But that alternative, or iteration of the | |
| 10 | Blue Alternative, was never examined, or at least it's | |
| 11 | never been -- there's nothing been printed or discussed | |
| 12 | with regard to that and the cost involved in that. That | |
| 13 | is the first point. | |
| 14 | The second point is that one of the benefits | |
| 15 | to the entities that are not directly related to the | |
| 16 | emergency, such as the City of North Logan, in | |
| 17 | particular, is required to come up with a 1.5 -- if I | |
| 18 | have the numbers right -- match as part of the matching | |
| 19 | requirement, and that matching requirement would be paid | |
| 20 | by state loan, with everybody else, but the benefit that | |
| 21 | was expressed in doing this was the benefits being able | |
| 22 | to move storm water. | |
| 23 | Given the fact now that preferred | |
| 24 | alternative is the Purple Alternative, the Purple | |
| 25 | Alternative being the one that diverts the water from | |

D-29.3

The Purple Alternative would not change the LHPS or LN Canals downstream of about 1500 North, which is just at the North Logan city boundary. The canal systems downstream of 1500 North would continue to collect stormwater that runs off from land in North Logan and to convey stormwater from Logan. The EIS discloses that reaches of the LHPS Canal downstream of about 1500 North could still be overwhelmed during large storms (see page 5-83), a condition that occurs during storms under the LHPS Canal's existing condition.

Although the Purple Alternative would not construct additional stormwater capacity downstream of Lundstrom Park/1500 North, cities through which the canals pass would still benefit from the alternative. The LHPS Canal would continue to convey water for all shareholders, including water for irrigation and water exchange agreements. The cities would also benefit from an overall increase in efficiency and reliability of the canal conveyance structure due to structural improvements upstream.

Please see the response to comment D-3.1 for a discussion of the system considerations for emergency planning.

The Cities of Logan, North Logan, Hyde Park, and Smithfield all have municipal stormwater discharge permits that address stormwater discharges to receiving waters. These permits are consistent with Section 402 of the CWA, which is administered by the State of Utah.

The EIS contains a measure that directs development of a stormwater management and maintenance program for the reach of the LHPS Canal between the Logan Golf & Country Club and Lundstrom Park/1500 North. Please see page 5-87 of the Final EIS for the text of this measure.

Comment D-29 (continued)

Response

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[4]

1 the upper canal, down through 14th -- 15th and 14th
 2 North, pressurized south to about 400 North, and then
 3 open canal, from that canal, north.

4 Given the fact that state law requires that
 5 cities that don't have a storm water, a hard-pipe storm
 6 water drain system, which North Logan does not have,
 7 that all water has to be, by law, retained on site. It
 8 can't be diverted, it can't be dumped on the property,
 9 properties, or onto other areas. It has to remain on
 10 site, and it's done that way through a series of
 11 retention basins and detention basins, which are a
 12 requirement right now for undeveloped property.

13 The fact that the Purple Alternative diverts
 14 water from just north of Lindstrom Park around 1450 and
 15 goes down, like I said, and flows open north, from 14th
 16 North, there's no way there can be any kind of a
 17 benefit, for North Logan, to have the ability to move
 18 storm water for the reasons I have just mentioned. The
 19 question is: What is the benefit to the City of North
 20 Logan for doing this. I am speaking as a private
 21 citizen, and so those are two points that I wanted to
 22 make.

23 The thing I wanted to point out was that,
 24 from the beginning, this became what I would, for lack
 25 of a better word, a crisis too good to pass up. So what

D-29.4

Comment noted.

D-29.4 ▶

Comment D-29 (continued)
Response
D-29.5 ▶
D-29.6 ▶

| Public Comments | | 3/31/2011 |
|-----------------|--|-----------|
| 1 | happened, in the media, the decision not do anything, | [5] |
| 2 | with regard to repairing the break or replacing piping | |
| 3 | to continue the water flowing, as it historically has | |
| 4 | done in the middle canal, the decision, right out of the | |
| 5 | shoot, was to go ahead and abandon that, and then go to | |
| 6 | a greater project, to the -- go beyond what the | |
| 7 | emergency really dictated, and that is why this whole | |
| 8 | process has gone underway. | |
| 9 | So now that it's been pretty well determined | |
| 10 | that that preferred plan, which was the -- I can't | |
| 11 | remember what they called it, it's the 3100 Plan, is | |
| 12 | going to cost \$44 million or so. It makes it impossible | |
| 13 | for that to happen. And the question really becomes, | |
| 14 | what we are trying to do with the taxpayers money. Are | |
| 15 | we trying to achieve the benefit reconnecting the | |
| 16 | waterway for the middle canal in a most economic way, or | |
| 17 | are we trying to spend all the money that the NCRS had, | |
| 18 | through the 19 million that we had, plus the match, and | |
| 19 | so it gets right back to the cost benefit of what we are | |
| 20 | trying to achieve. | |
| 21 | And here we are now, a year and a half after | |
| 22 | the emergency, and we are in a temporary water supply | |
| 23 | mode, which could have been repaired. And so now we are | |
| 24 | not looking at now one still having to go through this | |
| 25 | process for another year maybe. We have to acquire | |

D-29.5

NRCS's preferred alternative is the Purple Alternative. This alternative is the least costly of the action alternatives and is estimated to cost between \$20.4 million and \$22.4 million. Cost estimates for all of the action alternatives are included in Appendix C1, Action Alternative Cost Estimates, of the EIS.

D-29.6

Please note that NRCS and Cache County did not consider an easy, quick fix to the LN Canal to be a safe solution to the problem of needing to restore delivery of the LN Canal water. Furthermore, NRCS decided to prepare an EIS to evaluate the project options, a process that typically requires 1 to 2 years to complete. NRCS is working with Cache County to complete the process in a timely manner and consistent with Federal requirements. This EIS process is part of the Federal requirements.

Comment D-30

Response

Public Comments 3/31/2011

[6]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 LUCY PETERSON WATKINS: Lucy Peterson, and

12 Watkins is the last name. I am extremely disappointed

13 in that for the last 18 months, we have been hearing

14 about the preferred plan, which was the 3100 North Plan.

15 My question, or my disappointment is, I would think that

16 the Conservation Service Engineering and an engineering

17 company would have almost, from the get-go, found that

18 that particular route would have been way out of budget,

19 and it is, in fact, 50 to 57 percent over budget. Why

20 was it pursued? It was a waste of time, manpower,

21 energy, and it created a lot of angst in the community.

22 It leaves me to draw a conclusion that they really

23 didn't care, they being the conservation service, about

24 the communities or their incompetent.

25 If I was in private business, and I was

D-30.1

The Orange Alternative, which is the same as the 3100 North plan referred to by the commenter, is one of the options that NRCS studied as part of the EIS process. NEPA requires NRCS to evaluate a range of reasonable alternatives; NRCS and Cache County concluded that the Orange Alternative is a reasonable alternative that would meet the purpose of and need for the project. Please note that the Orange Alternative is not NRCS's preferred alternative.

D-30.1 ▶

Comment D-30 (continued)

Response

D-30.2 ▶

Public Comments 3/31/2011

[7]

1 getting a bid on something and I was told it was going
 2 to be the best alternative, but I only had a limited
 3 budget, and then it came in 57 percent over what I could
 4 well afford, I would fire the people. So I guess my
 5 confidence in this whole process of the EIS, the HDR
 6 Engineering, HDR, yes, Engineering, is really
 7 disappointing; very, very disappointed in them.

8 And I think my husband has clarified,
 9 probably, the other thing that concerns me, that doesn't
 10 concern them, is as a community is trying to get the
 11 easements for the pipe section from the country club
 12 down to around 1500 North. That is, of course, the
 13 responsibility of the county, as they signed on to be
 14 the sponsor. I think that is going to be very, very
 15 difficult.

16 I have walked that canal; therefore, the
 17 room they need -- I realize the canal company has the
 18 prevention easement in there. It's valid. It's legal.
 19 However, they will need more room and that, for the 12
 20 by 5 foot, and for the 9 foot easement, and just for
 21 building process. The record of decision will come and
 22 then the county must secure the easements. How long is
 23 that going to take? We don't know. How can they do a
 24 combination procedure, if, in fact, that becomes
 25 necessary for a private canal company.

D-30.2

The EIS notes that construction of any of the action alternatives would require temporary easements. All of the alternatives would probably also require permanent easements, but NRCS and Cache County do not expect that a large number or area of permanent easements would be needed. Acquiring easements (temporary construction and/or permanent easements) is a common part of construction projects.

Preliminary evaluations indicate that the Purple and Orange Alternatives would need minimal additional permanent easements; the proposed box culvert could be installed in a manner that would maximize use of the existing easement for project construction. The sections of the Blue Alternative that would be upstream and downstream of the soil buttress would also take advantage of existing easements.

All of the action alternatives would require new permanent and temporary construction easements. See pages 5-99 through 5-101 of the Final EIS for information about easements required for construction. NRCS cannot speculate on how long acquiring the temporary and permanent easements might take. Acquiring easements would be one of many tasks that would need to be completed after issuance of the ROD if an action alternative is selected and the final design progresses. If an action alternative is selected, the County would develop a construction schedule that focuses on restoring water delivery to the LN Canal shareholders as quickly as practical.

Comment D-31

Response

D-31.1

Comment noted.

D-31.1 ▶

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[8]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 CLARE MARLER: I have been a farmer all my

13 life, in the Lewisville area. I have been involved in

14 the canal systems with my employment down here in Logan,

15 and I just feel like this is a project that the farmers,

16 the cities, the county, and the whole valley needs, and

17 I hope we build the system.

18 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Comment D-32

Response

Public Comments 3/31/2011

[8]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 DON YONKER: I just want to say whatever

19 they come up now, is 1500 East, is fine, and I was to

20 the meeting yesterday, when all the people were there,

21 and they said that is the cheapest way to go. And then

22 it will relieve, from there, all the way past our place.

23 Leave the canal back just the way it is; to the ducks,

24 they can have a little country there. The deer are out

25 there and can drink out of it. And the canal runs right

D-32.1

Comment noted.

D-32.2

Please see the response to comment D-1.2 for an explanation regarding why NRCS is proposing to enclose about 2.4 to 2.6 miles of the LHPS Canal as part of the Purple Alternative. Enclosing the canal would change the way wildlife such as deer and ducks use the canal. However, wildlife would still have access to other reaches of the canal and the Logan River. Enclosing 2.4 to 2.6 miles of the LHPS Canal is not expected to significantly affect populations of common wildlife in the study area. Please see the discussion regarding common wildlife impacts beginning on page 5-49 of the Final EIS.

D-32.1 ▶

D-32.2 ▶

Comment D-33

Response

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[9]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 DONALD HANSEN: My name is Donald Hansen. I

15 live in Smithfield. I am a farmer. We have -- I am the

16 largest stockholder in Logan Northern Irrigation

17 Company. And I have seen some things that are around

18 the bluff of the hill over the years that I could tell

19 people, if they wanted to listen.

20 In 1983, when we received a lot of excess

21 rain and water, three-fourths of the way of the bluff,

22 it erupted a hole, about three feet in diameter. And

23 the stream of the water came out, and I estimated to be

24 four to five second feet of water. It came down the

25 bluff and filled the canal with debris, and the stream

D-33.1 ▶

D-33.1

The Blue Alternative would include structural features and control measures designed to capture and convey water flowing from seeps and springs along the Logan Bluff. The features would include subsurface drains. Please see the description of the Blue Alternative beginning on page 3-20 of the Final EIS.

The Purple and Orange Alternatives would not modify drainage along the Logan Bluff. NRCS cannot use EWPP funds to solve watershed problems that existed before the natural disaster (Title 390, Part 511.4[v]).

In order to minimize future risks to life and property along the Logan Bluff, the Purple and Orange Alternatives include purchasing structures from 14 properties along the historically unstable part of the bluff. If property owners are willing to sell and the structures are removed, then the risk of private property damage and of injury or death would be minimized in the event of another slope failure in the future.

NRCS can purchase structures from willing sellers only. If the Purple or Orange Alternative is selected and property owners are unwilling to sell, then their properties would remain at risk of damage from future landslides along the Logan Bluff. Other parties might choose to make improvements to the Logan Bluff, but NRCS cannot do so through the EWPP. With the Blue Alternative, the 14 structures would need to be removed to construct the soil buttress. Because of this, the Blue Alternative would minimize future risks to life and property on the 14 properties.

Comment D-33 (continued)

Response

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[10]

1 run over the top of the debris and then the streets and
 2 homes and all the people in that area. And the only way
 3 that done anything to curtail the flow of the water, was
 4 seeing the Department of Transportation owns that area,
 5 from the canal to Highway 89, and we called the OT and
 6 told them what the situation was. They came with their
 7 freighted trucks and loaded some out of the canyons
 8 large angular rock. They brought it down and dumped it
 9 over the side of the hill, off of Highway 89. We put it
 10 down into this hole that had erupted, packed it in, and
 11 then we put clay over the top of that hole, and sealed
 12 it off and stopped the flow of water.

13 That already had damage down below, and
 14 being president of the irrigation company for many
 15 years, and also as the president and director of the
 16 Logan River Water Users Association, I have seen a lot
 17 of things that have happened along the canal. The
 18 amount of water flows off the side hill, from the first
 19 state damn, the first damn that's in the state, and 6th
 20 East and 4th North, there's seepage of water that gets
 21 under the Logan Canal.

22 And the main thing that water -- my
 23 suggestion is that -- I studied the situation -- that
 24 horizontal perforated pipe be put along the bluff and
 25 put it in a drain system that would put it back into

This space is intentionally blank.

Comment D-33 (continued)**Response**

| Public Comments | |
|-----------------|--|
| | 3/31/2011 |
| | [11] |
| 1 | Logan River. Also I think that in piling, by driving |
| 2 | pilings into the bluff, would have a tendency to |
| 3 | stabilize the side hill. It is not unusual to see |
| 4 | several scars, along that side hill, that water has come |
| 5 | to the surface. Also, I made a study of the Watershed |
| 6 | River to the Logan River, there are several canyons that |
| 7 | are great watersheds, but, yet, no water flows out of |
| 8 | the canyon to anything. |
| 9 | The first one is the Millville coming from |
| 10 | that part going north. Millville has a small stream at |
| 11 | Providence. There is a little more water coming and as |
| 12 | it moves on north to Dry Canyon, which comes from the |
| 13 | watershed, extending clear through Mt. Logan, but there |
| 14 | is no permanent stream of water that flows out of Dry |
| 15 | Canyon. And so the water that causes that bluff to be |
| 16 | loaded with ground water is probably produced by the |
| 17 | watersheds of the mountains to the north and south from |
| 18 | the bluff. |
| 19 | And I think there is -- I think there is no |
| 20 | way to control what comes from the watersheds. They |
| 21 | will need to do something on the bluff to catch the |
| 22 | water and stabilize the side of the hill. And I don't |
| 23 | know what all the things could be done, but I think |
| 24 | pilings, diagonally perforated pipes, to catch the water |
| 25 | and to take to the river. There is no way to tell |

This space is intentionally blank.

Comment D-33 (continued)

Response

D-33.2 ▶

D-33.3 ▶

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[12]

1 exactly where the underground aquifers are fed to come
 2 to that side, to come to a surface. That's my thoughts
 3 about the bluff.

4 And being a heavy stockholder and owning
 5 several acres of land in the Smithfield area, I would
 6 like to see the water continue to be used in the Logan
 7 Northern Canal. The Logan Northern Canal has usage,
 8 from the time it leaves the river, until it gets to
 9 Richmond, Utah, and goes into the Richmond Irrigation
 10 Company. From that point, on back, the Logan Northern
 11 Canal, it is well used water. There is no surplus to
 12 amount to anything that is gone to waste. It is well
 13 used, through the cities and towns, for storm, sewer,
 14 and is in such a position that it can catch water and
 15 dispose of it. There is at least three to four areas,
 16 that I know of, that the water can be turned into there
 17 and not do any damage in the city.

18 I don't know of any other comment I can
 19 make, but I know that there is a lot of stockholders, in
 20 Logan Northern, that are looking forward to the use of
 21 water in the Logan Northern Canal. And they all had
 22 their systems already in place, and it would be
 23 difficult to change the area. Also, I think it would be
 24 very hazardous to divert the canal. We would lose our
 25 right of the canal area and the ground on which it

D-33.2

The purpose of the project is to construct a system that will safely restore delivery of water that was diverted using the LN Canal before the 2009 landslide (see pages 2-8 and 2-11 of the Final EIS). The Blue Alternative would modify the LN Canal between the LN Canal POD and about 400 North before water flowing in the canal discharges to the existing canal structure. The Purple and Orange Alternatives would use a short reach of the LN Canal between the LN Canal POD and the Laub Diversion, but this use would be a small-diameter pipe placed in the canal. This pipe would deliver water to shareholders living along that reach. See page 3-11 of the EIS for information about how shareholders between the 2009 landslide area and 400 North would be serviced under the Purple and Orange Alternatives.

The Purple and Orange Alternatives would also use the LN Canal downstream of 400 North for stormwater conveyance (between 400 North and 1500 North for the Purple Alternative and between 400 North and either 2900 North or 3100 North for the Orange Alternative). With the Purple and Orange Alternatives, the LN Canal irrigation water would be delivered to shareholders upstream of 1500 North or 2900 North/3100 North using a pressure pipe or open ditch. None of the alternatives would affect the LN Canal downstream of 3100 North. The LN Canal would be used for irrigation water delivery and stormwater conveyance as it has historically.

D-33.3

Comment noted.

Comment D-33 (continued)

Response

D-33.4 ▶

D-33.5 ▶

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[13]

1 travels on. And the fall of the Logan Northern Canal is
 2 very meager, from the intake to Richmond, Utah, there is
 3 only about 13 to 14 feet of flow in that 14 miles. It
 4 would be only a foot of flow per mile, and it makes it a
 5 canal, it needs to be tended often because deposits left
 6 in the canal builds the bottom out and it shortens the
 7 capacity of the canal.

8 I am aware of that, and when I was president
 9 of the canal, that was one of our main objectives, to
 10 make the canal able to pack the water to Richmond, Utah.
 11 I don't know of any other suggestions that I might make
 12 but that on the comment that was made, that 90 some
 13 percent of the stockholders in the Logan Northern Canal
 14 voted to merge and put their water in the upper canal,
 15 that was untrue statement. I voted my total stock,
 16 again, the merger, and that would make a different story
 17 because I am the majority stockholder.

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 MR. HANSEN: Anyone can come and talk to me.
 25 My phone number is (435)563-6993. I have a good

D-33.4

Comment noted.

D-33.5

Comment noted.

(Please see comment D-34.1 for the redacted section shown on this page.)

Comment D-34

Response

D-34.1

Comment noted.

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[13]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 VIRGINIA HANSEN: Last summer, when they put

19 all that extra water in the upper canal, my

20 granddaughter has a home up on the -- above the golf

21 course, where the canal comes, and when they filled it

22 really full, the bank started to erode, and it took out

23 their whole back fence. So it's just eating it away.

24 [REDACTED]

[REDACTED]

D-34.1 ▶

Comment D-35**Response****D-35.1 ▶**

Public Comments 3/31/2011

[14]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 ARLENE YONKER: I think the most reasonable

5 thing to do would be to rebuild it on Canyon Road. I

6 think with today's technology, there is no reason they

7 couldn't do that. But they seem to be determined not to

8 do that. So I like this 1500 North Alternative much

9 better than the 3100 South Plan. I think it would be

10 much more sensible, though, if they could go straight

11 down 1500 North, rather than make those two curves. I

12 think we are losing most of their water, along the

13 canyon side hill, rather than farther down, like they

14 talked about before. And if, in the future, they ever

15 want to feel like they are losing too much water from

16 1500 North, they can cover a piece, as a time, as money,

17 becomes available. That's it.

18 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

D-35.1

The Final EIS has been revised to emphasize that the Purple Alternative allows for the new conveyance to be aligned through Lundstrom Park or extended in the LHPS Canal alignment to 1500 North. The Purple Alternative is now consistently referred to as conveying flows in the LHPS Canal alignment to Lundstrom Park/1500 North. Please see Figure 3-1, Purple Alternative, on page 3-5 and the discussion beginning on page 3-4 of the Final EIS for a description of this option.

Comment D-36

Response

D-36.1

Please see the response to comment D-35.1.

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[14]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 KAY GILLGEN: On 15th North, instead of

19 making this 90 degree bend in here, they need to bring

20 it over and come straight down. It's pretty simple.

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

D-36.1 ▶

Comment D-37

Response

D-37.1

Comment noted.

Public Comments 3/31/2011

[14]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 BRUCE HASLEM: I think that the direction

22 they are heading, considering the amount of money that

23 is available, looks to be the right direction, as far as

24 I'm concerned. I would love them to go ahead, go out to

25 31st with that, but, you know, I understand that it

D-37.1 ▶

Comment D-38

Response

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[15]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 PAT PEARSON: 1215 Canyon Road. Okay, I am

14 riled up. First, I want to comment on that picture they

15 have of that ugly cement thing that is supposed to be

16 the canal. They made that look as ugly and obnoxious

17 and horrible as they could, to scare people away from

18 that alternative. The little crosscut section they have

19 on the picture, that shows the in, where it shows grass

20 and everything on it, is a lot more pleasing than that

21 obnoxious looking hideous thing, and that will steer

22 people away from that alternative.

23 Okay. Well, let's go down. I want to know

24 what is going to happen to those springs that are coming

25 down from the hillside, if they don't put the canal

D-38.1 ▶

D-38.2 ▶

D-38.1

Comment noted.

D-38.2

Please see the response to comment D-33.1.

Comment D-38 (continued)
Response
D-38.3 ▶
D-38.4 ▶

| Public Comments | |
|-----------------|--|
| | 3/31/2011 |
| | [16] |
| 1 | back, because that water that is coming down isn't going |
| 2 | to stop just because the canal isn't there, or just |
| 3 | because the canal is piped. So there's got to be a |
| 4 | solution for those. |
| 5 | And there's two people along there that own |
| 6 | springs. It's the Rigby family, and they're just across |
| 7 | the street from where Laura Lynn Drive turns down, I |
| 8 | don't know their address, but they own a big spring and |
| 9 | then we own a spring. We live at 1215, and our spring |
| 10 | is a little further east than our property, on the |
| 11 | canal, you know. And we own an acre of ground up on the |
| 12 | hillside where our spring is. We are the only people |
| 13 | that own any ground on that upper side of the canal, |
| 14 | above the canal. And our overflow, we have three, three |
| 15 | reservoirs that that spring fills up, and our overflow |
| 16 | runs into the canal. In fact, we have got more of an |
| 17 | overflow running into the canal than the water we take |
| 18 | out. |
| 19 | Okay. And with all the technologies and all |
| 20 | the things that they can do now days, I heard -- I can't |
| 21 | remember if it was on TV or what, where they stabilize a |
| 22 | hillside that was in far worse condition than this one. |
| 23 | So why can't they do something with this one. |
| 24 | Especially, if everything is working on the water up |
| 25 | above and the springs and everything. |

D-38.3

Comment noted.

D-38.4

The Blue Alternative would include measures to stabilize the LN Canal along the Logan Bluff. These measures would include horizontal drains for springs and seeps. The focus of the Blue Alternative would be to make sure the conveyance structure is as safe as possible. NRCS cannot use EWPP funds to solve larger watershed or natural problems—such as widespread problems associated with the historically unstable Logan Bluff—that existed prior to the landslide that damaged the LN Canal (EWPP Manual, Title 390, Part 511.4[v]). Please see the response to comment D-33.1.

Comment D-38 (continued)

Response

D-38.5 ▶

D-38.6 ▶

D-38.7 ▶

Public Comments 3/31/2011

[17]

1 Okay. And this is a historical site. That

2 canal was dug by hands by the Elders of the 5th Ward,

3 and that is the ward that is up on the boulevard, just

4 where the -- up 4th North where the water connects into

5 the canal, temple canal thing, and there are a lot of

6 water users up there. And right now, the temple is

7 using city water because they can't get the canal water

8 to irrigate with, and isn't that stupid, to use culinary

9 water to irrigate when there is canal water.

10 Okay. Now we want to know what is going to

11 happen to our spring and our runoff, if they close that

12 canal up, and our overflow. And, also, last year, they

13 put six inches of water in the canal. We had to go from

14 side to side on the canal, with three-inch high of

15 sandbags, to even get the water up enough that it would

16 run down our gate so we could irrigate. We have about

17 two and a half acres of ground. We did not -- was not

18 able to water our apple orchard. We had to water that

19 with a hose, and that's stupid, too.

20 And the lower pasture that joins, we

21 couldn't get our water down to -- we got it to our upper

22 canal and pear orchard, but, remember, we are on the

23 slope down, so the water should have gone down to it,

24 and we had to water 24/7 to even get the water that far.

25 And I haven't heard anything whether the canal company

D-38.5

NRCS is aware of the historic nature of the canals in the study area. Please see the discussions beginning on page 4-41 and page 5-59 of the Final EIS.

D-38.6

Comment noted.

D-38.7

The Blue Alternative includes construction of a new channel to collect and convey water that has historically flowed into the canal from adjacent seeps and springs. The Blue Alternative would include a separate pipeline that would be used to deliver irrigation water to landowners upstream of the Laub Diversion. This would include service to the commenter's property (assuming the commenter is a LN Canal shareholder).

If NRCS selects the Blue Alternative, Cache County and its contractors would develop more detail about the drainage system. The design would need to consider and reasonably accommodate the needs of adjacent landowners. However, please note that the Blue Alternative is not NRCS's preferred alternative.

The Purple and Orange Alternatives would not affect the flow of water from seeps and springs along the Logan Bluff. These alternatives also include a pipeline to deliver LN Canal water to shareholders upstream of the Laub Diversion.

Comment D-38 (continued)

Response

Public Comments 3/31/2011

[18]

1 is going to reimburse us for not getting our shares of
 2 water or what. Probably they won't, knowing the canal
 3 company.

4 Okay. Now the point of diversion where the
 5 upper canal takes their water out of the river, that
 6 stretch of pipe, their pipe, along there until it gets
 7 by the golf course, is in deplorable condition. So it's
 8 no wonder that the northern canal wants these other
 9 alternatives so they've got a way of getting their canal
 10 fixed and not putting it all on Canyon Road, where the
 11 slide was. They want their canal fixed at our expense,
 12 and that is what you get when you have a father and son
 13 that are president of the two canals.

14 Okay. Now on this historical site, you
 15 know, they are going gung-ho over historical houses,
 16 historical roads, historical parks, and all of this; why
 17 are they trying to destroy a historical site that was
 18 built in about 1860? That is definitely a historical
 19 site for the valley. If they pipe from the -- like from
 20 the water up to Lobbs Diversion, I don't think a
 21 six-inch pipe, it might barely handle it. But you know
 22 what's barely handling it? I think it needs to be an
 23 eight- or a ten-inch pipe because there is quite a few
 24 water users along there that have like three and a half,
 25 or almost four, shares, and why not have a little extra

D-38.8 ▶

D-38.9 ▶

D-38.8

Comment noted.

D-38.9

The Final EIS reflects a pipe diameter of 10 inches for the pipeline that would be used to deliver water to LN Canal shareholders upstream of the Laub Diversion.

Comment D-39

Response

D-39.1 ▶

D-39.2 ▶

Public Comments 3/31/2011

[19]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 RUSSEL GOODWIN: My name is Russel Goodwin.

5 I am a shareholder in the Logan Hydepark Smithfield

6 Canal Company. I am just astounded by the solutions

7 that are being presented. It's just amazing what people

8 can come up with when there are no limitations to their

9 budget.

10 I was recently in Southern California and

11 noticed the California aqueduct extensively piped, it

12 crosses the San Andreas Fault, among several other

13 earthquake prone areas, and it seems to work. I am just

14 amazed that we can't consider piping the Logan Northern

15 Canal through the section that's been experienced the

16 slide. Surely, with the knowledge that we have from the

17 California aqueduct and other such facilities, and with

18 the knowledge available at Utah State University, we

19 can, certainly, find a way to pipe the Logan Northern

20 Canal through the area of the slide, without the

21 monumental disruption that this is proposing would

22 happen, to pipe the Logan Northern Canal. There is no

23 need to pipe that for miles and miles, just through the

24 slide area.

25 The Logan Northern Canal, in the area of the

D-39.1

The Blue Alternative would place the part of the LN Canal that travels through the 2009 landslide zone into a pipe. Please see the description of the Blue Alternative beginning on page 3-20 of the Final EIS.

D-39.2

The EIS recognizes previous use of the canal easements for recreation. Please note that the City of Logan did not manage any recreational uses along the canal and did not maintain the trail along the LN Canal before the landslide.

Please see the discussion regarding public use of the canal easements beginning on page 4-17 of the Final EIS. Potential effects to this type of recreational use of the canal easements are described beginning on page 5-23 of the Final EIS.

Comment D-39 (continued)

Response

D-39.3 ▶

Public Comments 3/31/2011

[20]

1 slide and on up to first damn, is a very poplar
 2 recreational resource. It was essentially impossible to
 3 visit that canal, at any time, and not encounter other
 4 trail users on that bank. Now we need to maintain that
 5 in our recreational inventory, that the City of
 6 Logan -- it's a great asset to the qualify of life to
 7 our citizens.

8 Likewise, I suspect that many of those
 9 preparing the EIS, many of those involved in the NCRS,
 10 as a rite of passage, tubed the Logan Hydepark and
 11 Smithfield Canal that contributes, as well to the
 12 quality of life of the citizens of the valley. We need
 13 to be working towards solutions that preserve and
 14 incorporate these entities, these recreational uses,
 15 rather than catering to a well thought out agenda of a
 16 very select and minority agriculture interests that has
 17 had their agenda getting this Logan Hydepark Smithfield
 18 Canal piped for quite some time. It's well known and
 19 well documented that at the conversion of residential,
 20 it reduces the amount of water required up to half, in
 21 figures that I have seen and that John Meek provided at
 22 the most recent shareholder meeting of the Logan
 23 Hydepark Smithfield Canal, and it does not take any sort
 24 of a genius to comprehend that, in a few short years,
 25 the transplant, between Logan and Smithfield, are all

D-39.3

Comment noted.

Comment D-39 (continued)
Response

| Public Comments | | 3/31/2011 |
|-----------------|--|-----------|
| | | [21] |
| 1 | going to be in residential. | |
| 2 | Mr. Ingels' farm will be gone, and his need | |
| 3 | of the agricultural irrigation will be long gone, | |
| 4 | replaced by residential use. This will actually free up | |
| 5 | anywhere up to half of the current irrigation water that | |
| 6 | that canal is carrying. And it makes absolutely no | |
| 7 | sense, to this person, to invest this amount of money, | |
| 8 | take away tremendous recreational opportunities, to | |
| 9 | cater to a recreational -- or, excuse me, to cater to an | |
| 10 | agricultural use that is only going to disappear in | |
| 11 | short order. | |
| 12 | I think that's about it. it just seems to | |
| 13 | me that with the amount of knowledge that we have Utah | |
| 14 | State University provides expertise and guidance for | |
| 15 | irrigation projects for around the world, that with the | |
| 16 | expertise available to us there, we cannot find secure | |
| 17 | footings, pipe the Logan Northern Canal through that | |
| 18 | portion of the slide, leave the rest as it is, and | |
| 19 | preserve these recreational amenities that are so valued | |
| 20 | by the local citizens. | |
| 21 | In the study done by Logan City Parks and | |
| 22 | Recreation Department, a city survey, the public use of | |
| 23 | the canal bank of the Logan Northern Canal, from first | |
| 24 | damn to approximately 6th East and 4th North, is one of | |
| 25 | the highest identified popular recreational uses, and we | |

This space is intentionally blank.

Comment D-40

Response

D-40.1

Comment noted.

D-40.1 ▶

Public Comments 3/31/2011

[22]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 JON MEIKLE: I like the Purple Alternative,

18 the 1500 North. And I don't know what else I need to

19 say but I would definitely support that.

20 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Comment D-41

Response

D-41.1

Comment noted.

Public Comments 3/31/2011

[22]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 RALPH MEIKLE: My comment: This should have

21 the been done 50 years ago. People that want to stay

22 with the old, you know, they don't work with team and

23 horses, anymore, yet, they don't want to improve their

24 water systems. I think most of them have indoor

25 heating, plumbing, air conditioning, everything, but

D-41.1 ▶

Comment D-41 (continued)

Response

Public Comments 3/31/2011

[23]

1 when it comes to irrigation, they want to stay with the
2 1810 version of it.

3 I don't know what else to tell you, other
4 than a few diehards that think it was good enough for
5 granddad, it's good enough for me. I was president of
6 Logan Hydepark Smithfield years ago, and I got our ward
7 to approve a study to see what we could benefit Logan,
8 if we came out of the hydroline with Logan in the canal,
9 and the people, like some of these diehards that's so
10 against this, I think Logan would have been favorable to
11 it, but he had threatening letters, Logan did, and he
12 shut the proposal down.

13 So I think that's -- I don't want the
14 threatening letters on this one, but that is one reason
15 we never got out of the canyon when Logan put the
16 hydroline out, because the benefits we needed to give
17 Logan then, was three million over 30 years, and that's
18 close to 30 years, and that's what happened. So power
19 rates now have skyrocketed since then.

20 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

This space is intentionally blank.

Comment D-42

Response

D-42.1

Comment noted.

Public Comments 3/31/2011

[23]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 JEFFREY GITTINS: My name is Jeffrey

21 Gittins, and I am the president of Smithfield Irrigation

22 Company. Smithfield Irrigation Company has,

23 approximately, 900 shareholders, maybe slightly less.

24 We provide secondary water for some 800 plus residents

25 of Smithfield City, plus water for, approximately, 3,400

D-42.1 ▶

Comment D-42 (continued)
Response

Public Comments

3/31/2011

[24]

1 acres of farmland. Smithfield Irrigation Company owns,
 2 approximately owns and leases, approximately 200 shares
 3 of the Logan Northern Canal. The primary right is out
 4 of Summit Creek.

5 We also own shares in Logan Hydepark
 6 Smithfield Canal, approximately 46, and we have three
 7 exchange agreements; one with Smithfield City. They
 8 replace water through the Logan Hydepark Smithfield
 9 Canal, one with Logan and northern, and they bring
 10 water -- they take water out of our Summit Creek and
 11 replace it with Logan northern water, and one with
 12 Hydepark City, and they have -- they take water out of
 13 our springs and return it through the upper canal. So,
 14 as you can see, we are heavily vested in this whole
 15 thing.

16 I follow this very closely. Smithfield
 17 Irrigation has had help out, in any way that we can,
 18 including sharing the Summit Creek Canal temporarily,
 19 and now they are suggesting part of the Summit Creek
 20 channel, and they are suggesting, in the long term, we
 21 have shared, utilized some of our water through this
 22 situation, redirected some of our water, to make it
 23 advantageous for the Logan Northern shareholders from,
 24 Smithfield, north to Richmond, try to help out, and
 25 we've even provided our water master to help out. His

This space is intentionally blank.

Comment D-42 (continued)

Response

Public Comments 3/31/2011

[25]

1 water has been dumped into Summit Creek, then
 2 re-diverted out of Summit Creek. So we have been really
 3 involved.

4 After reviewing the alternatives, I think
 5 there is just one real alternative, and it the Preferred
 6 Alternative. I base that statement on the dollars
 7 spent, the potential to create a safety -- a safer
 8 situation with the Logan Hydepark Smithfield Canal
 9 diversion water, as well, and makes some improvements
 10 there. I worry, quite honestly, that is an old canal as
 11 well, and I worry about potential failure there if
 12 something isn't done, especially where we are trying to
 13 crowd two canal waters into one.

14 I think that there's some potential, in the
 15 future, for the company, for the canal companies, to
 16 extend water further north and in, at a higher
 17 elevation, and do away with a lot of pumping costs.
 18 Although, I don't see it happening real quick because of
 19 the economic costs; probably be a slow process. It
 20 looks to me like it's the best option for the dollar
 21 spent, in returning flows to the shareholders, as much
 22 as possible.

23 And my bottom line, my ending statement, is
 24 this: I would hope that they would now get on it, get
 25 something constructed, and restore the water so we can

This space is intentionally blank.

Comment D-43

Response

D-43.1 ▶

D-43.2 ▶

Public Comments 3/31/2011

[26]

1 [REDACTED]

2 VALORIE BYRNES: My name is Valorie Byrnes.

3 I am looking at property in the Purple Zone, and a

4 couple questions: Has the deciding agency, whoever that

5 is, contacted a local damn engineer consultant, named

6 David Bowels, for his expertise? He works for Utah

7 State and has a private consulting firm and lives in

8 Providence and he is a damn engineer. But he is a

9 consultant all over the world. He is English, and I

10 don't know, I just want to know if they have contacted

11 him because if they haven't, they should, to get his

12 opinion.

13 And then, I guess, my other opinion is I am

14 looking at property, I am very interested that they

15 don't bury the waterline from out of Providence

16 Canyon -- up Logan Canyon along the Lindstrom Park, that

17 people purchase property there, and it seems to be safe,

18 so I would hope that they would not divert that. There

19 are lots of water life there, there's great trails, and

20 it's unique, and if it's not unsafe, they really should

21 consider the continuing a water flow for the ambiance of

22 that area.

23 Because what I understand is there is a

24 possibility that they could not bury it in there later

25 on, and those homes, people bought those homes, paid big

D-43.1

This project does not involve any dams.

D-43.2

Please see the response to comment D-1.2 for information regarding why the LHPS Canal would need to be enclosed along Lundstrom Park/1500 North as part of the Purple or Orange Alternatives.

Comment D-43 (continued)

Response

Public Comments 3/31/2011

[27]

1 bucks for having that ambiance. That is what I would be
2 interested in purchasing it, and there are some homes
3 available on that lot and lots to purchase to build on,
4 and if they don't consider that, then I am really
5 not -- I mean, that is a drawing point, a selling point,
6 if it's safe, and I am sure they can make it safe
7 because it's going through a golf course. There is
8 not -- like people that would die like, unfortunately,
9 did on the other section. That's it.

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25

This space is intentionally blank.

Comment D-44**Response**

This comment number is not used.

Comment D-45

Response

From: [REDACTED]
 To: LNC-EIS
 Subject: Draft EIS Comments
 Date: Monday, May 02, 2011 10:11:31 AM

Date: 5/2/2011

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

From: Lucy Peterson Watkins
 [REDACTED]

The reconstruction of the Logan Northern Canal:

I am including the following taken from the Draft EIS regarding storm water benefit to North Logan City of the preferred plan 1500 North.

"Enclosing 2.4 miles of the LHPS Canal would provide secondary benefits related to water conservation, water quality, stormwater conveyance, and public safety in this stretch. There would be additional water conservation and water quality benefits associated with conveying water in about 1 mile of pressure pipe and additional irrigation efficiencies associated with shareholders' ability to change from flood irrigation to sprinkler irrigation.

- Similar to the No-Action and Orange Alternatives, would not cause a risk to life and property associated with using the section of the LN Canal along Canyon Road between the LN Canal POD and 400 North/600 East for irrigation purposes.
- The 2009 landslide site at about 970 East on the LN Canal would be abandoned and left unrepaired.
- The Cities of Logan and North Logan would be able to use the LN Canal alignment to convey stormwater between the LN Canal POD and 1500 North."

The NRCS must be aware that the preferred route (1500 North) ends prior to North Logan City's boundary. The combined canal Logan Hyde Park Smithfield (upper canal) will be open from 1500 North and provide no storm water benefit. The existing Logan Northern Canal will be open from 1400 North and about 750 East and will provide no storm water benefit.

I brought up this issue to Bronson Smart at the Draft EIS open house. I asked him to clarify the storm water issue for North Logan and to correct the Draft EIS as it was misleading in factual relevance. His response was the covered canals (re: the original preferred plan 3100 North) was not the benefit for storm water control but that a automatic warning system would be constructed in Logan Canyon to control the shutting down of the diversion gate for the combined system if a substantial weather event was forecasted. Therefore North Logan City and other communities would have the benefit of an early warning system.

I have studied the draft EIS and have found nothing to indicate this system or the cost of construction of such a system. I also am perplexed that Mr. Smart indicated that this was always the benefit to our communities. I would not think this expense would be necessary as I have not heard of the upper canal (Logan Hyde Park Smithfield Canal) ever over flowing. Shareholders would also be a the mercy of this automatic apparatus if it shut down when not really necessary.

D-45.1

The commenter is correct in that the Draft EIS did not contain any information about upgraded system controls for the Purple Alternative. The final engineering design of the new conveyance system would consider options to modify operations of the canal system in the event of an emergency.

As noted in the response to comment D-29.3, although the Purple Alternative would not construct additional stormwater capacity downstream of Lundstrom Park/1500 North, cities through which the canals pass would still benefit from the alternative.

D-45.1 ▶

Comment D-45 (continued)**Response**

I ask this to be addressed by the NRCS as it was presented to me by their lead engineer in this process.

Thank you, Lucy Peterson Watkins

This space is intentionally blank.

Comment D-46

Response

Comments on Draft EIS Statement for
L&N Canal Reconstruction
By Jack Keller – May 2, 2011

Comments on Draft EIS Statement for Logan Northern Canal Reconstruction by Jack Keller

General Comment

D-46.1 ▶

The ethical thing to do is very simple, the NRCS should be compelled to do a careful study, along the lines of the Yellow Alternative, but more creative and less costly, that focuses on restoring the service of the Logan & Northern Canal and cleaning up the mess left by its rupture a couple of years ago.

There's too much politicking, too much greed, and too little ethical concern for the intent of the Emergency Watershed Protection Program funding. All of the jockeying around and lobbying to take advantage of a disaster to maximize benefits while there are so many unmet legitimate EWP funding needs due to recent weather related disasters is disgusting.

D-46.2 ▶

If you study the Guidelines in the Final Rule document (December 2004) for use of Emergency Watershed Protection Program funds, you will clearly see the purpose of the EWP funds is to restore services to the L&N Canal stakeholders resulting from the "natural disaster". There is no evidence 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 and provides additional benefits beyond what is necessary to restore the impacted services.

In accordance with Section 624.6 (b) (4) of the Final rule 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."

D-46.3 ▶

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 L&N Canal would require the sponsor to pay 100 percent of the addition work.

This does not rule out the viability of the Purple Alternative, but 100 percent of the difference in cost between it and a simpler, lower cost, alternatives for restoring the L&N Canal should be borne by the Sponsor. (However, the EWP guidelines do provide for the NRCS to design and assist with this upgraded alternative.)

1

D-46.1

Please see the discussion beginning on page 3-31 of the Final EIS regarding the alternatives screening process. NRCS determined that the alternatives studied in the EIS present a range of reasonable alternatives and that its analyses provide enough information to make a project decision.

Please also see the response to comment D-2.2 for information regarding how NRCS considered new options suggested through Draft EIS comments, such as variations of the Yellow Alternative.

D-46.2

NRCS is not proposing to provide 75% of the project funding based solely on a benefit/cost analysis. Please see the discussion beginning on page 3-53 of the Final EIS regarding why NRCS has identified the Purple Alternative as the preferred alternative.

D-46.3

NRCS assumes that "Element 13" refers to 7 CFR 624.6(b)(4), which states that "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."

NRCS evaluated the action alternatives and determined that they meet the eligibility requirements for assistance through the EWPP. Although NRCS did study an alternative that focused on repairing the existing system (the Blue Alternative), it did not identify this alternative as the preferred alternative because the remaining risks to life and property could be avoided by choosing a different option. The Purple and Orange Alternatives would require improvements to the LHPS Canal; these alternatives could not be constructed without the improvements. NRCS's focus is not on improving the LHPS Canal; rather, it is on restoring water delivery in a safe manner. In the case of the Purple and Orange Alternatives, restoring safe delivery would require modifying the LHPS Canal.

Modifying the LHPS Canal would not directly address the problems associated with the Logan Bluff. If the SLO were to propose additional stabilization of the bluff as part of the Purple or Orange Alternatives, then NRCS would indeed consider this an increase in the level of protection and would not provide EWPP funding for the improvement.

Comment D-46 (continued)

Response

D-46.4 ▶

Comments on Draft EIS Statement for
L&N Canal Reconstruction
By Jack Keller – May 2, 2011

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 L&N Canal’s shareholders.

It is clear the Utah NRCS’s reluctance for to studying economically efficient alternatives for doing this is based on a misunderstanding of the guidelines for the use of EWP funds. The funds are for restoration not betterment projects.

Draft EIS Erroneousness

There are serious misleading computations/statements (or errors) in NRCS's Draft EIS. These need to be addressed and fixed. Here are examples of some of the most serious ones.

Errors in Comparison of Initial Alternatives (from Chapter 3 Alternatives Page 34)

Table 3-6. Comparison of Initial Alternatives (for the Purple and Yellow Alternatives with my comments highlighted in yellow):

1. More beneficial than adverse in the extent and intensity of its environmental and economic effects: Y and M (the yellow is at least as good as the purple so should have a yes here or neither should have a yes)
2. In compliance with Federal, State, and local laws: Y and Y
3. Acceptable to affected individuals and communities: M and M
4. Complete with all necessary components included: Y and Y
5. Efficient in achieving the desired outcome: M and M
6. Emphasizes measures that are the most economical and are to be accomplished using the least-damaging practical construction techniques and equipment that retain as much of the existing characteristics of the landscape and habitat as possible (a): M and M (based on the fact that the 14 additional houses will be removed, in any case the yellow should be considered as rating a Y here)
7. Could be implemented consistent with USFS standards and guidelines (b): Y and NA (the NA for the yellow is as good as a yes)
8. Avoid and minimize impacts to waters of the U.S.: N and N (the yellow should have a yes here)

Total "Yes": Purple: 4 and Yellow: 2 But based on the above the Yellow Alternative should have at least 4 if not up to 6 yes answers.

Total "No": Purple: 1 and Yellow: 1

Misrepresentation of Water Savings Purple and Orange Alternatives

D-46.4

The entry in Table 3-6, Comparison of Initial Alternatives, has been modified to give the Yellow Alternative a “yes” designation for item 2.

For item 6, the Yellow Alternative was assigned a “maybe” designation because the extent to which the utility impacts and dewatering could add to construction cost and complexity is unknown. NRCS did not complete any detailed engineering analyses for the purposes of initial alternative evaluation.

For item 7, the Yellow Alternative would not affect any land administered by USFS. This item does not apply to the Yellow Alternative.

For item 8, the Yellow Alternative is assigned a “yes” designation because it would affect the Logan River at the LN Canal POD. The Logan River is a water of the U.S. Effects at the POD could not be avoided.

With the change as a result of the commenter’s first item, the Yellow Alternative has been revised to have 3 total “yes” designations.

Comment D-46 (continued)

Response

Comments on Draft EIS Statement for
L&N Canal Reconstruction
By Jack Keller – May 2, 2011

D-46.5 ▶

Chapter 3 Alternatives, page 3-47 it states that: "Recent studies show that about 20% of the water diverted at the LHPS Canal POD is lost due to seepage through the 1.6-mile section of the canal in the Logan Canyon (Board of Water Resources 2009; Utah Division of Water Resources 2010). The volume of water that could be conserved by reducing the loss due to seepage would average about 8,800 acre-feet annually (Board of Water Resources 2009; Utah Division of Water Resources 2010). The total value of this conserved water is difficult to predict because no entity has identified a specific use, or mix of uses, associated with this conserved water."

This statement, which is provided in the DEIS to justify the Purple Alternative is misleading, because it is obvious the water that returns to the Logan River is already being "saved". So why was this included other than to deceive the public!

D-46.6 ▶

Ignoring and Misrepresenting Logan City's Renewable Power Losses Resulting from the Purple and Orange Alternatives

Logan City's renewable power losses resulting from the Purple (or Orange) Alternative was not properly computed and included in the economic analysis. The expected escalation rate for the cost of power must be taken into account to estimate the real cost to Logan citizens due to the loss of hydro-power that the NRCS's Purple Alternative would entail over the next 50 years. Based on recent studies, the expected escalation rate for the cost of electric power is 6% and for renewable power it is even higher.

Equations for life cycle costing to compute the present value of a stream of revenues where the value of the revenues is increasing due to escalating energy costs are presented in: Pearson GF. 1974. "Life Cycle Costing in an Energy Crisis Era." Professional Engineer 44(7):26-29, July 1974 (and other places). Using these equations with the expected 6%/year electric energy escalation rate and the same \$218,000 present cost for the power loss and discount rate of 4.125%/year assumed by in the Draft EIS (see Table C2-2. Estimated Lost Hydropower Revenues), the net present value of the lost power is: **\$16,752,377.51**.

This is a very long way from the Net Present Value of \$4,592,214.16 arrived at in the Draft EIS (see Table C2-2. Estimated Lost Hydropower Revenues). This is because it was assumed the yearly cost of replacing the renewable electric power Logan City would lose will remain the same for the next 50 years!

Furthermore, in the analysis even the low ball Net Present Value was glossed over and ignored in the impacts and costs of the Purple (or Orange) Alternative.

Draft EIS Needs Revision Focusing on L&NC-Only Alternatives

D-46.7 ▶

It is clear the NRCS is reluctant to consider restoring service to Logan Northern Canal without resorting to combining it with the Logan Hyde Park Smithfield Canal, i.e. L&NC-Only Alternatives. The NRCS has spent considerable taxpayer money studying several alternatives for the combined canal solutions that fall outside of the guidelines for the Emergency Watershed Protection Act. The public are due the full respect of having the results of a "least cost" L&NC-

3

D-46.5

NEPA requires an analysis of impacts to water resources. The loss of canal seepage would reduce the amount of groundwater recharge. Please note that NRCS completed an analysis of seepage losses for all of the action alternatives using the best available data. Refer to Chapter 9, References, and the following entries:

- Molina, Katerine N. (2008)
- Weber, Ryan (2004)

The data in these reports do not suggest that all water lost to seepage returns to the Logan River or is otherwise "saved."

D-46.6

The commenter is correct. The cost estimates presented in Appendix C2, Alternatives Development Cost Estimates, and the economic analysis in Section 5.2.4, Economics, of the Draft EIS did not incorporate different escalation (inflation) rates for power revenue due to increased diversion of water at the LHPS Canal POD. The discount rate used by NRCS is mandated, and it is speculative to assume that power rate inflation will outpace crop and water values and general inflation over a 50-year study period. Please see the response to comment D-26.10 for a discussion of the methodology used to determine the present value of the potential loss of hydropower produced by the City of Logan.

Please see the revised energy discussion beginning on page 5-37 of the Final EIS for a detailed discussion of the action alternatives' effects on hydropower generation. The effect of the potential lost hydropower is considered an operating expense and would not be added to the capital cost of the Purple or Orange Alternatives. Since the Draft EIS was published, CHWUA and the City of Logan have established an agreement that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple and Orange Alternatives. This agreement is included in Appendix D3, Water Rights and Water Use Information, of the Final EIS.

Comment D-46 (continued)

Response

Comments on Draft EIS Statement for
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Only Alternative that would restore the service of the Logan Northern Canal, otherwise there is no option but to confront the NRCS Draft EIS accordingly.

D-46.8 ▶

The Yellow Alternative was rejected out of hand and based on: a) the weak argument that the public comments wanted the Logan Northern Canal replaced in its old footprint; b) a biased analysis of: Table 3-6. Comparison of Initial Alternatives; and c) misleading cost analysis and statements about its cost. The public simply wanted a least cost alternative that was close to the Logan Northern Canal not necessarily in it. Rejecting the Yellow Alternative without carefully considering it or other similar lower cost L&N-Only Alternatives is inexcusable and I firmly contest this irresponsible decision.

D-46.9 ▶

Examples of Biases against L&N-Only Alternatives:

1. In Table 3-6. Comparison of Initial Alternatives, it can easily be argued that the Yellow should have at least 4 yes answers and if the Purple deserves a Y for item 1 so should the Yellow. Also perhaps the yellow deserves a yes for item 6 as well. Therefore, clearly, the Yellow Alternative should not have been dropped and a more careful economical analysis of an alternate option along Canyon Road is fully warranted. (See yellow highlight in Table 3-6 above.)
2. The layout of the Yellow Alternative given in Chapter 3 Alternatives Page 33 is not at all consistent with the cost estimates and description given in Appendix C2. Here is part of the brief description of it (copied directly from page C2-6): "Diversion Pipeline. L&N Canal water would be diverted into a 72-inch-diameter pressure pipe to convey water (at a maximum flow rate of 80 cfs) west for about 8,600 feet under Canyon Road. Pipeline construction would require cutting and disposing of the existing roadway material, digging deep trenches for the pipeline, installing pipe bedding, compacting backfill, and replacing roadway asphalt."

D-46.10 ▶

It is interesting to note the following which was taken from the description of the Purple Alternative: (copied directly from page 3-11): "About 1.2 miles of new 42-inch-diameter pressure pipe to convey 40 cfs of L&N Canal water from the LHPS Canal to the L&N Canal. The pipeline, which would require air vents and a flow meter, would be routed under city streets and through and under a field to connect to the L&N Canal at 1500 North."

The cost of the Yellow Alternative is based on using a 72-inch pipe to carry 80 cfs, while the Purple Alternative only calls for a 42-inch pipe carrying 40 cfs to supply the Logan Northern Canal. This is interesting, do you think HDR Engineering simply made a mistake, or did they oversize the pipe for the Yellow Alternative to make it more expensive or undersize it for the Purple Alternative to make it less expensive?

D-46.11 ▶

In addition, the length of the pipe in a NLC-Only Alternative could be considerably reduced by using the sections of the Logan Northern Canal on either side of the slide prone areas along the

D-46.7

Please see the response to comment D-46.3 regarding eligibility under the EWPP.

NRCS did consider an alternative (the Blue Alternative) that would restore service using only the LN Canal system. However, as described in the response to comment D-46.3, NRCS did not identify this alternative as the preferred alternative because the remaining risks to life and property could be avoided by choosing a different option.

NRCS evaluated the action alternatives studied in the EIS and determined that they represent a range of reasonable alternatives.

D-46.8

NRCS received many comments supporting re-establishing the LN Canal on its historic alignment during scoping and therefore included the Blue Alternative on its list of initial alternatives. NRCS conducted a thorough alternatives screening process. Please review all of Section 3.4, Alternatives Eliminated from Detailed Study, for information regarding why NRCS chose to evaluate the Blue Alternative as an action alternative.

NRCS disagrees that Table 3-6, Comparison of Initial Alternatives, presents a biased analysis. The text that follows the table explains the ratings in the table. Please see the response to comment D-46.4.

NRCS prepared the cost estimates in Appendix C1, Action Alternative Cost Estimates, based on an equal level of limited engineering considerations; preparing very detailed cost estimates for all of the initial alternatives was not needed for NRCS to identify the action alternatives. It would not be in NRCS's interest to prepare "misleading" cost estimates. NRCS prepared the preliminary cost estimates for consideration during the alternatives screening process.

D-46.9

NRCS disagrees that Table 3-6 presents a biased analysis. The text that follows the table explains the ratings in the table. Please see the response to comment D-46.4.

Comment D-46 (continued)

Response

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Logan Bluff, i.e. the upstream area between the Logan Rive and the Laub Diversion and the downstream area from 750 East to 400 North where slides are not a problem. Also the pipe size could be reduced to a 60-inch pipe. Another option would be to connect the pipe to an inlet that took advantage of the additional pressure head afforded by the First Dam Reservoir so it could be reduce to a 48-inch pipe.

The point is that with some creative engineering, a L&NC-Only Alternative could be done for about half the cost of the Purple Alternative and the renewable eclectic power generating capacity of the Logan City's Power plant on the Logan River would not be affected. It appears there has been an overt attempt to make the Yellow or Blue or any L&NC-Only Alternative appear expensive and difficult in order to justify the Purple Alternative!

Additional Background for Above Comments

Following are some quoted portions of the Draft EIS study that are pertinent to the above comments. Some important portions are highlighted in **turquoise** and added comments are highlighted in **yellow**.

S.4.4.2 Yellow Alternative

This alternative would use the L&N Canal POD below First Dam and carry L&N Canal water in a pipe. The pipe would generally follow Canyon Road to 400 North. L&N Canal water would be discharged back into the existing canal at about 400 North/600 East. This alternative would include continued delivery to L&N Canal shareholders between the L&N Canal POD and the Laub Diversion using a 6-inch-diameter pipe. The Yellow Alternative would include purchasing structures from 14 properties located in the historic landslide zone at the toe of the Logan Bluff as described for the Purple, Orange, Blue, and Green Alternatives.

NRCS decided that the Yellow Alternative would not be carried forward for further study because it would not provide substantial benefits over the Blue Alternative, which was suggested and supported by comments received during scoping. The Yellow Alternative is in the same general area, would use the same POD, received only moderate support during scoping (especially compared to the Blue Alternative), and would deliver water to the same location. The Yellow Alternative would include the same number of structure acquisitions in order to remove the risks to life and property in the historic landslide zone (as would all alternatives) but would not address the stability of the 2009 landslide site. The Blue Alternative would provide the benefit of addressing some of the risk associated with the unstable area, although it would not completely remove future risks to life and property.

Lastly, the construction impacts of the Yellow Alternative would be much greater than those from the Blue Alternative and would require relocating a sanitary sewer line, temporarily relocating residents living in and near the construction area during construction, and closing local streets to traffic for an extended time. For these reasons, NRCS eliminated the Yellow Alternative from further study.

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D-46.10

For the Blue and Yellow Alternatives, NRCS conceptually sized the systems to convey 80 cfs from the LN Canal POD. This amount of water is consistent with the existing water rights associated with the LN Canal POD.

The Purple and Orange Alternatives were sized to convey LN Canal and LHPS Canal water from the LHPS Canal POD to shareholders. The flow rates used to size the conveyance system accounted for conveyance of water rights and operational flexibility to deliver water to shareholders. This operational flexibility would provide options for shareholders who own shares that were historically delivered using both canals. For example, if a shareholder historically diverted some water from the LN Canal and some water from the LHPS Canal, the combined flow under the Purple and Orange Alternatives would give the shareholder flexibility for delivery to his or her property.

Please note that NRCS considered then eliminated the Yellow Alternative from further analysis and therefore did not develop further detail about this option. Please see Section 3.4, Alternatives Eliminated from Detailed Study, of the Final EIS for a description of the alternative screening process.

D-46.11

The modification to the Yellow Alternative suggested by the commenter (moving the LN Canal POD to First Dam and reducing the pipe size due to increased pressure) would be a new option. The alternatives NRCS considered and presented in the Draft EIS were based on using existing system features, to the extent possible, and the avoidance of impacts to new areas. NRCS considered this new option, and others, during the review of Draft EIS comments but did not include any new options in the Final EIS because the existing action alternatives already meet the project purpose and need and objectives. The option suggested by the commenter would not better achieve the project purpose, need, and objectives.

The Blue Alternative, which NRCS studied in detail, uses the existing LN Canal POD, would deliver water to the same location as the Yellow Alternative, is in the same general area as the Yellow Alternative, and received broad public support during the NEPA scoping process. Because of this, NRCS did not consider any additional options in the Canyon Road area.

D-46.12 ▶

Comment D-46 (continued)

Response

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From Chapter 3 Alternatives Page 44

D-46.13 ▶

The Yellow and Blue Alternatives would avoid any effects to natural landscapes and habitats in Logan Canyon. Because most of the Yellow Alternative would be under Canyon Road, it would have minimal long-term effects to the landscapes of adjacent residential areas. The Yellow Alternative would likely be one of the more economical solutions because it would have the shortest length of pipe and would cover a smaller area. However, construction would result in utility impacts and might require extensive dewatering during construction because of the relatively shallow groundwater in the area. Temporarily relocating people who live along Canyon Road would also be costly and could inflate the construction cost of the Yellow Alternative. However, because the work area would be much smaller compared to the Orange, Purple, and Green Alternatives, the temporary relocation might not add to the project cost such that the Yellow Alternative would be substantially less economical.

D-46.14 ▶

From Chapter 3 Alternatives Page 52

As mentioned in Section 3.4.1.2, Step 2: NRCS Objectives, the Logan & Northern Irrigation Company does not support the Yellow or Blue Alternatives because of liability concerns and concerns about its inability to secure funding for the project without the participation of other stakeholders (This is not a legitimate reason to reject the Blue or Yellow option.). NRCS decided that the Yellow Alternative would not be carried forward because it would not provide substantial benefits over the Blue Alternative. The Yellow Alternative is in the same general area, would use the same POD, would cost about the same amount (I don't think \$25,300,000 is about the same as \$21,800,000, but it is about the same as the Purple Alternative, \$21,400,000), would deliver water to the same location, and received only moderate support during scoping.

The Yellow Alternative (as well as all other alternatives) would include the same number of structure acquisitions in order to reduce the risks to life and property in the historic landslide zone but would not address the stability of the 2009 landslide site. Some future risk to residents related to the instability of the Logan Bluff would remain under any alternative in this general area. However, The Blue Alternative would provide the benefit of addressing at least some of the risk associated with the historically unstable area along the canal alignment.

Finally, the Yellow Alternative would cause substantial impacts to the local community during construction by requiring residents to be temporarily relocated because of interruptions to utility service. The Blue Alternative might cause some short-term utility interruptions, but they would not require residential relocations or long-term service interruptions that would affect the quality of life of residents near the construction area. (I think placing all of those seventy five 75-foot deep by 3-foot diameter piles and placing the 130,000 cubic yards of soil buttress would end up being at least as disruptive.)

NRCS chose to evaluate the Orange and Purple Alternatives because they are different in location and somewhat different in delivery method. For the Orange Alternative, there are two

D-46.12

The commenter correctly states that the Yellow Alternative, as presented in the Draft EIS, would also require structure acquisitions.

D-46.13

The EIS has been modified to include this correction.

D-46.14

Comment noted.

Comment D-46 (continued)

Response

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potential routes (which are in the same general location in the northern part of the study area) for the connecting pipeline that would deliver water from the LHPS Canal to the L&N Canal. This EIS considers both of these potential routes (about 3100 North or about 2900 North) as part of the Orange Alternative.

NRCS considered the public comments received in support of the Blue Alternative and decided to analyze this alternative in this EIS. By reconstructing the canal on its historic alignment, the project would stabilize some but not all of the Logan Bluff area. Therefore, the future risk to residents from the instability of the slope along Logan Bluff would remain with or without this alternative.

From Chapter 3 Alternatives Page 55

As indicated in Table 3-8, the Blue Alternative is the action alternative that would cause the least damage to the biological and physical environment. Considering only the action alternatives, the Blue Alternative would be the environmentally preferable alternative. (And the Yellow Alternative would be even more environmentally preferable than the Blue Alternative.)

From Display Boards Slide # 6

Yellow Alternative

- Modify existing L&N Canal POD structure
- Install a new pipeline under Canyon Road to 400 North
- Discharge L&N Canal water back into the existing canal at about 400 North/600East

This alternative was not carried forward because it would not provide substantial benefits over the other alternatives. When compared to the Blue Alternative, the Yellow Alternative is in the same general area, would use the same POD, would cost about the same amount. (I don't think \$25,300,000 is about the same as \$21,800,000, but it is about the same as the Purple alternative, \$21,400,000) and would deliver water to the same location. Furthermore, the Yellow Alternative would cause substantial construction-related effects to people living along Canyon Road. I think placing all of those seventy five 75-foot deep by 3-foot diameter piles and placing the 130,000 cubic yards of soil buttress would end up being at least as disruptive.

7

D-46.15

NRCS did not consider the Yellow Alternative in its identification of the environmentally preferable alternative because it eliminated this alternative from detailed analysis. It would be inappropriate to discuss the Yellow (or Green) Alternative in Section 3.6, Environmentally Preferable Alternative, of the EIS since NRCS did not study this option in detail and therefore could not make an equal comparison.

D-46.16

Comment noted.

D-46.15 ▶

D-46.16 ▶

Comment D-47

Response

Alana Spendlove
 HDR, Inc.
 3949 South 700 East, Suite 500
 Salt Lake City, Utah 84107

To whom it may concern;

D-47.1 ▶

Please incorporate the following comments into your final Logan Northern Canal Reconstruction Project Environmental Impact Statement (EIS) and the decision making process for determining the final selected alternative. I would like to thank NRCS for taking a serious look at the Logan canal reconstruction in the current EIS. Given the limited timeframe given to produce this document it covers the topics it needs to address. The document reflects many of the public comments gathered during the scoping period – although I think there is a bias toward reflecting the water users rather than the community at large. Although this is a good document a reading of the analysis within of this EIS and its purpose and need would lead most individuals to determine the best alternative is the blue alternative. It will be this theme that I follow throughout the rest of my comments. In order for you to more easily address my numerous concerns with this document I have numbered each of major concerns then provided bullets to describe the rational for these concerns. This should not be taken to suggest a given concern does not cross topics but that this was the easiest way for me to avoid being redundant.

D-47.2 ▶

1) There is an unfair comparison of costs among alternatives. The purpose and need includes cost as a decision criterion so it is imperative you fairly compare cost among alternatives. This document consistently understates the cost of the purple alternative while overstating the cost of the blue alternative. It is easy to show that the total cost to the community of the blue alternative is less than any of the alternatives you describe in detail. If all costs to the entire community were compared in the overview section the blue alternative would likely be 20% cheaper than any of the other alternatives

D-47.3 ▶

- You underestimate the cost of purple and orange alternative. The most glaring oversight is you fail to incorporate the cost of foregone energy production caused by diverting more water further upstream. Based on your estimates the cost of lost energy at first dam is 4.6 million dollars (Table C2-2). You also have to add the cost to pump water under the purple or orange alternative (\$483,000 per year). Over a 50 year planning horizon this would add over 10 million dollars to the cost of the purple and orange alternative. This makes the blue alternative less expensive than purple alternative. It is inappropriate to hide these costs in an appendix; you need to include these costs upfront in the comparisons of the costs of the alternatives.
- You overestimate the cost of the blue alternative. Your explanations of cost in Appendix C1 are poorly defended so there is no way for me to determine if they are reasonable. The two most costly items in the blue alternative are the fill material and drilled shafts. The estimate of needed fill material seems to be a serious overestimate. You suggest it will take 130,000 cubic yards of fill to stabilize 2900 feet of irrigation canal. This means that each foot in length will require 48 cubic yard of fill. Isn't that a bit much? Why do you need so much fill if you're also going to construct shafts to tie the canal to hillside? Doesn't the one reduce the need for the other? Why is a 72 inch pipe needed in the blue alternative? This pipe has about the same capacity of the 6 ft by 6 ft box culvert used to get water out of Logan Canyon (4071 square inches vs. 5184 square inches) under the purple alternative which is expected to carry twice as much water. Why does the blue alternate

D-47.1

Comment noted.

D-47.2

Please see the response to comment D-46.6.

D-47.3

The cost estimate for the soil buttress included as part of the Blue Alternative is based on creating a soil structure an average of 40 feet tall with a 20-foot width at the top and a slope of 1.5 to 1 (horizontal to vertical). These details are provided in Figure 3-9, Proposed Soil Buttress, on page 3-26 of the Final EIS. See the response to comment D-12.2 for a photo simulation of the soil buttress.

Foundation shafts would be installed along the canal alignment upstream and downstream of the buttress, not along the buttress. NRCS based its cost estimate for the Blue Alternative on a steel pipe being supported by the foundation shafts. NRCS did not consider a box culvert because it would require a more continuous substructure support.

Comment D-47 (continued)

Response

replace the canal over the entire distance along Canyon Road? Only a mile (5000 vs 9000 ft) is within the slide area. I suggest you consider a modified blue alternative where you only replace the canal in the areas of concern. Your Figure 2.3 shows where all the slides have occurred since 1900; this distance is not 9000 ft but 5000 ft. It appears you are making this alternative more costly so that the purple alternative is cheaper by comparison. It would only cost 20 million to construct a new four lane new highway along this entire distance.

http://www.arkansashighways.com/roadway_design_division/Cost_per_Mile_JULY_2009.pdf. I don't know much but I do know the blue alternative can't cost as much as a four lane highway. Overall you must do a better job of documenting the cost of the blue alternative

- You need to consider a modified blue alternative which doesn't include the fixing the entire length of the LN canal. What is your rationale for fixing the entire length? If you just worked in the slide area, the cost for the blue alternative would be cut by 1/3.

2) The comparisons among alternatives fail to properly account for safety. Your comparisons simply compare the offer to buy houses in the affected areas; this makes the effects on safety the same across alternative. This is not the case. Any honest comparison would show that the blue alternative is safer and poses less risk to the community than the other alternatives.

- As you state you can never totally remove risk. I agree that buying the 14 lots on the north side of Canyon Road is the best step towards meeting the goal of safety. Under the purple and orange alternative, however, many of the residents will choose not to sell these houses since the canal will no longer be there and they will feel they are no longer at risk. This is not true within the slide zone where slides have occurred unrelated to the presence of the canal. The wider base under of the blue alternative will force the condemnation of most of these 14 properties (so fewer people will be left in the slide prone area) or provide a wider buttress so that they are indeed safer. The other alternatives will not see the same benefit unless all the houses are condemned under the different alternatives. The way you state it in the EIS, the choice to sell is up to the owner. Therefore safety, even related to this single activity of buying houses, is not the same among alternatives.
- The blue alternative includes instruments that will monitor for canal failure so water can be shut off quickly if there is a breach. The equipment will not be installed (at least as I can tell) in the other alternatives. This despite the fact that the new cutoff between LHPS and LN canals will be down 15th North within the purple alternative. Since 15th North is in a populated area, the purple alternative will put more people at risk than canal failure in the reconstructed blue alternative. Although loss of life is the most tragic outcome of a failed irrigation canal, a more common loss is due to flooding. The purple alternative will certainly increase the likelihood of flooding due to canal failure within the community.
- The failure to commit to returning a trail in the slide impacted area under both the purple and orange alternatives will put more individuals at risk. Currently people hiking along this trail try to pick their way across this slide zone. Given the unevenness of this area they could get hurt. Since this is the area where people got killed, the failure to address safety issues in this area (with or without the presence of the canal) in any of the alternatives other than the blue alternative will continue to put people at risk.

D-47.4

With the Blue Alternative, the entire reach of the LN Canal between the LN Canal POD and about 400 North would need to be reconstructed in order to support a piped system. Upstream of the 2009 landslide area, the canal would need to be modified in order to transition to a more secure, piped flow through the historic landslide area. Leaving the canal in its current condition through the Logan Bluff area would not provide an adequate or safe water conveyance. Furthermore, NRCS evaluated the existing system and determined that continuing the canal in a closed system downstream of the 2009 landslide area would more efficiently convey the water up 600 East to 400 North.

D-47.5

The commenter is correct in stating that the Blue Alternative would force condemnation if property owners are not willing to sell. Removing structures from the properties would be required to construct the soil buttress as described on page 3-26 of the Final EIS.

The Purple and Orange Alternatives would be the safest for people living in the historically unstable area *if all of the structures from the 14 properties were acquired*. However, as the commenter points out, some residents might not be willing to sell their properties. NRCS cannot fund the purchase of structures from unwilling parties, so the County and its partners would be required to fund the acquisition of the properties through condemnation.

Although the Blue Alternative would provide some assurance of safer water conveyance across the historically unstable areas of the Logan Bluff, the EIS acknowledges that there would be some remaining risk to life and property due to the canal carrying water across the bluff.

D-47.4 ▶

D-47.5 ▶

D-47.6 ▶

D-47.7 ▶

Comment D-47 (continued)

Response

3) The choice of either the purple and orange alternative fails to meet federal law and executive orders. Failure to address these concerns in the current EIS undermines your statements of consistency with all applicable laws and rules on page 3-38.

D-47.8 ▶

- The choice of either the purple or orange alternative fails to meet the objective listed within the Wasatch-Cache-Uinta National Forests to protect fish resources. On page 4-33 you state “Currently, a short section of the Logan River beginning just below the LHPS Canal POD is dewatered at times during the irrigation season.” ***This statement has to be false if for no other reason than if it were true there would be no additional water available to divert into the upper canal.*** How are you going to divert 65 cfs more water at the LHPS diversion under the purple or orange alternative if the river below this point is currently dry? Luckily there is water below this point of diversion. Data collected at the flow station in the section above First Dam shows this to be true (http://waterdata.usgs.gov/nwis/nwisman/?site_no=10109000&agency_cd=USGS and your Logan River Flow chart 4-2). There is absolutely no data in your document or elsewhere that defends the statement that the reach below second dam gains 100 cfs from seepage (even your document even seems to be in disbelief on the top of page 4-63). Using the USGS data rather than conjecture, it is easy to see that the lowest flows in the lower Logan River (below the point of diversion of the LHPS canal) occurs during fall and winter when no flows are being diverted into the canal. Based on these data diverting more water during summer higher up in the system would reduce stream flows and have a negative impact on the lower river fish and aquatic macroinvertebrates. If an additional 65 cfs were diverted higher in the basin, the flow between the LHPS point of diversion and First Dam would decline by almost two thirds in dry years (hence the reduced power generation). For example in August of both 2003 and 2004, flow in the Logan River as measured at the gauge dropped to as low as 89 during August. If 65 cfs are diverted there would be almost no fish habitat left in this reach. This is already the reach of the Logan River where populations of Bonneville cutthroat are the lowest (Budy, P., G.P. Thiede, C. Meredith, and S. Seidel. 2009. Logan River whirling disease study: factors affecting trout population dynamics, abundance, and distribution in the Logan River, Utah. 2008 Annual Report to Utah Division of Wildlife Resources. Sport Fish Restoration, Grant number XIII. Project F-47-RUTCWFRU 2009(2):1-43). To put this Management Indicator Species (MIS) at greater risk would clearly be in violation of the Wasatch/Cache/Uinta Forest Plan. It is unlawful because the Forest can affect this decision by not issuing a permit to improve the upper canal. This means neither the Purple or Orange alternative should be implemented without another EIS by the Forest Service evaluating the removal of additional water from the Logan River (since these alternative don’t meet the Forest Plan and is controversial).

D-47.9 ▶

- There is no discussion on how this project will affect cutthroat within the affected reach (a Forest Service MIS with low populations known to be in this section of stream). There is no explanation how diverting twice as much water out of the Logan River higher in the system would not affect any fish. How was it determined that a minimum flow of 5 cfs (which is data I don’t believe to be true) would not affect these fish (see page 5-51)? This amount of water wouldn’t even keep the channel wet. You cite no information supporting data for this determination. A similar case with the Forest Service in Colorado (see the decision http://www.dm.usda.gov/oal/decisions/090428_EPAAct_09-0055%20_2.pdf) found the plaintiffs could not make the argument that dewatering a stream had no

D-47.6

The Purple Alternative alignment along 1500 North would not traverse a historically unstable area such as the Logan Bluff. Though this pipeline could fail in the event of a natural disaster such as an earthquake, it would not be damaged by a landslide such as those that have historically occurred along the Logan Bluff. The negative consequences of and damage from a failure of an underground pipeline along 1500 North would likely be less than what might be experienced along the Logan Bluff. Please see Section 5.6, Hazard Potential of Each Alternative, in the Final EIS for a complete discussion of the hazards associated with the Purple Alternative.

D-47.7

The Purple and Orange Alternatives would not address repairing the landslide area along the Logan Bluff. The trail along the LN Canal through this area is not a maintained, legal public trail. Please see the discussion in Section 4.3.4.3, Other Recreation Resources, on page 4-17 of the Final EIS regarding hiking along the canals. People use this trail at their own risk.

NRCS does not propose to repair the landslide area as part of the Purple or Orange Alternatives because of EWPP limitations. Repairing the landslide area (and trail) would not be the most cost-effective way of reducing risks to life and property. Please see Section 511.6(B) of the NRCS EWPP manual. NRCS has identified structure acquisition as the best means to reduce the risks; NRCS does not intend to change its approach if property owners choose not to sell.

D-47.8

The EIS discloses that the Purple and Orange Alternatives would require a change in the water right diversion for the Logan & Northern Irrigation Company and would require a USFS special-use permit. The State Engineer at the Utah Division of Water Rights has approved a change in the Logan & Northern Irrigation Company’s water rights that would allow diverting some LN Canal water at the LHPS Canal POD (see Appendix D3, Water Rights and Water Use Information). Potential effects to and mitigation for effects to the Logan River and flows (that are related to the USFS special-use permit) are discussed beginning on page 5-71 of the Final EIS.

Comment D-47 (continued)

Response

D-47.10 ▶

effects on fish without demonstrating this fact first – which of course they could not. The statement that 5 cfs below the Point of Diversion (in a river with summer flows of near 100 cfs) is enough to protect fish habitat so absurd that you would be unlikely to find any fish biologist that would support this statement. I request your evidence for this statement since you have no fish biologist on your list of preparers. Otherwise this statement is arbitrary and capricious.

- The choice of either the purple or orange alternative goes against Executive Order 1351 section 4f(ii) which states that federal decision should seek “aligning Federal policies to increase the effectiveness of local planning for energy choices such as locally generated renewable energy”. It is certainly within the decision maker’s authority to take how this decision will affect locally generated hydropower into consideration. To reduce the amount of renewable energy available to the community is short sighted and against this executive order. This goes against Logan City public policy to limit the increase of carbon based energy used in the future. Since the use of carbon based fuels will increase, how would these two alternatives affect climate change? The last time I checked there is direction from the Council of Environmental Quality include such analysis in EIS’s.

D-47.11 ▶

4) You come to the conclusion that you must cover the canal to make them safe. However, you provide no evidence for this statement. Based on my reading of the scoping comments there is an overwhelming desire by the community to have open canals and very little stated oppositions. Therefore your failure to consider an open canal alternative was arbitrary and capricious.

D-47.12 ▶

- In section 5.2.2 you state, “People who live along the canal feel that the canal contributes to their quality of life and enjoyment of their properties. These residents and landowners feel that any changes to the canal’s appearance or function would reduce their quality of life. Public safety contributes to quality of life. While many residents value the canals as an amenity, others feel that the existing open canal system poses a hazard to public safety.” The second part of this statement is not true. My scan of the scoping comments could find only one comment related to safety concerns of having open canal with historic flows (50 to 60 cfs). In fact a large number of people stated they wanted open canals. The primary safety concerns stated in the scoping responses were related to the canal failing. There is no evidence that these two canals pose any more risk to people in the community than a swimming pool. In fact 10’s of thousands of people have floated the upper canal; I could not find any evidence of a death in this situation. It is true that canals in general do pose a drowning risk. But a quick Google search on the topic found that these deaths were generally associated with much larger canals (100’s of cfs) than these two (50 to 60 cfs).

D-47.13 ▶

- In section 5.2.2.1 you state, “The NRCS guidance states that NRCS should administer its programs in a way that considers environmental quality equal to economic, social, and other factors in decision-making (General Manual, Title 190, Part 410.3[b][iii]).” It is clear from the comments that many people in the community think that an open irrigation canal improves environmental quality. Given that an open canal would be cheaper to construct (regardless of the alternative) it is hard to see why no serious consideration was given to an open canal alternative. The failure to consider the environmental consequences of an open canal alternative and this undermines the credibility of this document.

The commenter notes that the lowest Logan River flows (below the LHPS Canal POD) occur in the fall and winter when no water is being diverted into either the LHPS Canal or the LN Canal. The primary reason why more flows are present in the river during the irrigation season is that water is being released from Second Dam to meet the downstream water rights.

If the Purple or Orange Alternative is selected, USFS would require a determination of minimum Logan River flows to meet the beneficial use of the stream as part of its special-use permit process. This process and the criteria to be used to determine minimum Logan River flows are discussed beginning on page 5-72 of the Final EIS and on page 2 of Appendix C6, Compliance with the Standards and Guidelines in the *Revised Forest Plan for the Wasatch-Cache National Forest*. USFS is acting as a cooperating agency for this EIS and will issue its own ROD in support of its NEPA process for the special-use permit. NRCS has been working closely with USFS to provide documentation that would meet USFS’s needs if the Purple or Orange Alternative is selected and a special-use permit is required.

Please see the energy discussion beginning on page 5-37 of the Final EIS for a detailed discussion regarding the potential project effects on hydropower generation by the City of Logan. At the time the Draft EIS was released, the Logan City Light and Power Department and the Logan & Northern Irrigation Company, a member of CHWUA, were negotiating an agreement regarding the potential loss of some hydropower generation if the Purple or Orange Alternative is implemented. The Final EIS has been updated to reflect the results of the negotiations, which is an agreement between the City and CHWUA.

NRCS has determined that implementing the mitigation measure on page 5-77 of the Final EIS and the expected USFS special-use permit conditions would adequately address the potential project impacts to the Logan River regarding Logan River flows during the irrigation season.

D-47.9

All of the alternatives would include installing a device to prevent fish from entering the canal system. Maintaining existing fish and riparian habitat is one of the beneficial uses that the Logan River flows requirement would support. Please see the discussion beginning on page 5-72 of the Final EIS.

Comment D-47 (continued)

Response

D-47.14 ▶

- Closing the canals will have a long-term negative effect on neotropical birds. While 5.4.3.2 describes some short term effects of construction it does not describe the effects the loss of trees and water will have to the long-term populations of nesting birds. This is especially true in the area of the LN canal failure. This area is home to numerous bird (western tanager, Bullock's Oriole) and tree species (including cottonwoods)
- In section 5.5.2.5 you state "The loss of the open canals might cause some local effects to wildlife's access to water, but wildlife would move to find other water sources, which are plentiful." There is absolutely no support for this statement. The last time I checked water isn't plentiful water in Utah (hence the need for this project). There are few areas where both water and mature trees are found at some distance from humans. Much of the area above Canyon Road in the area of the LN is full of wildlife. I have seen deer, badgers, rabbits, quail, pheasant, chukar, and almost all species of neotropical birds. To suggest reduce the amount of open water available to wildlife would not have long term effect on wildlife, especially as Cache Valley sees future population growth, is just plain silly.

5) The decisions and statement related to recreation and community always represent the opinions of the people which directly benefit from the canal rather than the public at large than benefit from the canal indirectly. Since the taxpayer is footing most of the bill shouldn't this be the other way?

D-47.15 ▶

- The most obvious example of this is the failure to incorporate an alternative which included open canals. The desire to keep the canal open was found throughout the scoping letters but is discounted by nebulous concerns for "safety". The historic configuration of these two canals, each with approximately 60 cfs poses little safety risk. I had spent the last 5 years walking the trail on the LN canal with my young sons. While I had to be watchful, I was never concerned about their welfare. My oldest son was able to walk upstream in this canal, on his own, by age 5. To be honest I am more concerned with my sons crossing Canyon Road to get to the canal path than the canal itself. I will state again, leaving this canals uncovered is what the majority in the community would want (do a survey if you don't believe me). Given that community support is one of the principles for spending this money I find this document flawed since it did not include an option with open canals.

D-47.16 ▶

- That this document suggests the use of the trails near the canal is unauthorized is incorrect and shows a bias to the canal operators rather than the community. In Utah a prescriptive easement, "is created when the party claiming the prescriptive easement can prove that 'use of another's land was open, continuous, and adverse under a claim of right for a period of twenty years.'" Orton, 970 P.2d at 1258 (quoting Valcarce, 961 P.2d at 311). These lands were not posted and use was open and continuous for more than 20 years. I was a student here during the 1980's and used these trails throughout the valley. Also kids were floating down the canal in inner tubes longer than that. The signs and fences have only shown up the last couple years. These uses are poorly described in your recreation section. The city could easily prove this (regardless of the claims to the contrary). Regardless of the alternative chosen and given the amount of federal dollars to be spent on this canal, requiring the canal companies to formally recognize these easements should be part of any decision. This will save the city and county cost associated with doing this in the future. Fostering

The starting point of 5 cfs is based on discussions with USFS. The final amount required as part of the special-use permit might be more or less, depending on how various water levels meet the criteria specified.

D-47.10

Please see the response to comment D-26.10.

D-47.11

The commenter correctly states that many scoping comments stressed a desire to not enclose the canals. Please see the response to comment D-1.2 for information regarding why NRCS is proposing to enclose the canals.

D-47.12

Please note that the canals are not public property, and the canal operators have no requirement to make them available for public use or enjoyment. Please see the response to comment D-2.6.

D-47.13

Please see the response to comment D-1.2 for information regarding why NRCS is proposing to enclose the canals.

D-47.14

Although parts of the LHPS Canal and/or LN Canal would not be available to wildlife if enclosed, wildlife including birds would still have access to other canals and the Logan River nearby. Enclosing parts of the canal system would not significantly affect local or regional populations of wildlife.

D-47.15

The proposals to enclose parts of the canals with the action alternatives are not related to nebulous concerns for safety. Please see the response to comment D-1.2 for information regarding why NRCS is proposing to enclose the canals.

Comment D-47 (continued)

Response

D-47.17 ▶

the community is one of the reasons to spend this money; getting prescriptive easements on these lands would certainly benefit the community. If you aren't going to consider this at least tell me why.

- At the end of section 5.2.5.3 in the cumulative effects sections it states "Changes to the LHPS Canal and LN Canal would affect unauthorized recreation use, but this change is not expected to contribute to or cause cumulative effects related to the loss of a recreation feature or prevent establishing a trail system along the canal easements in the future. People living in the area could still use existing legal trails and parks and could probably continue to access the canal easement." The person who wrote this section is obviously not from the community. The closing of the LHPS canal will remove forever one of the most common forms of recreation for kids in Logan; tubing the canal. In doing this you will further remove kids connections with the outdoors. Having an activity like this so close to town had been wonderful. To lose these for no obvious reason is sad and will certainly have cumulative effects on the attitudes of young people in our community.

D-47.18 ▶

- There are no discussions of the benefits to the agricultural community of having two canals rather than one. For example, if only the lower diversion existed there would have been no backup to deliver water to agricultural interests when it fail. If either the purple or orange alternatives are chosen and the canal in the canyon fails (as commenter S-56 in Scoping Report Appendix D copies of comment suggested is common), then there will be few options left to convey water to agricultural areas. The agricultural community benefited greatly by being able to provide some water to users even after one of the canals had failed.

D-47.19 ▶

- There are no discussions on the benefits to the community of having two canals rather than one. In years like the current one (2011), having one canal will reduce the capacity to divert flood flows from the Logan River. I brought this up in my scoping comments but this concern was not been addressed in the EIS. I predicted areas in the south part of Logan would flood in part due to the absence of two canals. It is clear now that my predictions will come true sooner rather than later. While this is certainly not part of the agricultural concerns is should be part of a program titled Emergency Watershed Protection. The choice of a single canal puts additional people at additional risk of flooding within the community. This must be addressed in your final EIS.

D-47.20 ▶

- There is no discussion how anglers will be affected by reduce flow between the LHPS point of diversion and First Dam.

D-47.21 ▶

Overall I think this document does a good job it describing some of the effects of the current alternatives. What is done poorly is fairly comparing the alternatives and not using the purpose and need to provide the rationale for the chosen alternative. Given the criteria listed in the purpose and need the only defensible decision would be the blue alternative. In each case – cost, safety and community -- the blue alternative is the by far the best alternative. I show how the true cost (canal plus energy) is really greater for the purple alternative than the blue alternative. I also show that more people likely to continue to live in the unsafe zone under the purple alternative (both along Canyon Road and down 15th North) than the blue alternative. The blue alternative also does a better job of restoring the system the community had historically rather than changing the configuration with either the purple or orange alternative. The purple and orange fail to meet federal laws or executive directions. Both the purple and orange alternatives put cutthroat trout at risk within the lower portions of Logan Canyon. This is not

D-47.16

The Logan, Hyde Park and Smithfield Canal Company has recorded easements on portions of the canal alignment. As the commenter notes, both irrigation companies have posted No Trespassing signs along the alignments in recent years. The Cities of Logan and North Logan and Cache County have not designated any official trails along the canals, although City planning documents show future trails along the canals.

The County has indicated that it would like to consider options to eventually develop a greenway, or linear park, along the LHPS Canal with a footpath and some landscaping, and these options would be possible with the Purple and Orange Alternatives. If a greenway were established in the future, it would be planned and constructed through a process external to the Logan Northern Canal Reconstruction project. Please see the section titled General Vegetation on page 5-50 of the Final EIS. Once constructed, the greenway would legally accommodate pedestrian and bicycle traffic along the canal.

D-47.17

The text of the Final EIS has been revised to more clearly identify effects to unauthorized tubing. NRCS recognizes that enclosing the LHPS Canal would prevent floating in the canal on inner tubes. NRCS and Cache County maintain that this is currently an unauthorized use of the canal.

D-47.18

Both the LN Canal and the LHPS Canal would be used with all of the action alternatives. Both canals would be available to benefit agricultural uses in the study area.

The commenter correctly states that, with the Purple or Orange Alternative, if the LHPS Canal were to fail in Logan Canyon, all of the water allocated to the LHPS Canal POD could not be delivered using the LN Canal POD below First Dam. In the unlikely event the LHPS Canal (which would be in a box culvert) were to fail, the Logan & Northern Irrigation Company and the Logan, Hyde Park and Smithfield Canal Company would need to identify alternate ways to deliver water to their shareholders. Identifying contingency, emergency plans is beyond the scope of this EIS. As noted on page 3-11 of the Final EIS, the Water Conveyance Facilities Safety Act requires preparation of an emergency response plan.

Comment D-47 (continued)

Response

the goal of the Emergency Watershed Protection funding. But even if the blue alternative were to be chosen in the Final EIS I feel the EIS did not explore the full range of reasonable alternatives since it did not seriously examine an open canal alternative. So I think the final EIS also needs to new alternative which evaluates the blue alternative with an open canal. Failure to consider reasonable alternative (especially those identified in scoping) has been the nexus to find many EIS's do not pass legal muster.

The only reason I can see to choose the purple or orange alternative is to continue to provide low cost federally subsidized water to agricultural interest in the valley. This does not meet the purpose and need of this document so should not be chosen. In looking at other EWP projects in the state this project seems to be the only one considering spending the majority of the money outside the directly affected area; I am not sure this is legal but I will let other commenter make that point.

Thanks for your serious consideration of my comments.

Brett Roper, PhD (in Fisheries)



D-47.19

The purpose of the proposed action does not include improving the stormwater system to accommodate stormwater that could cause flooding. The EIS discloses that this hazard could remain. Please see the discussion beginning on page 5-141 of the Final EIS.

D-47.20

Please see the response to comment D-47.8. By providing a process to determine Logan River flows for beneficial uses with the Purple or Orange Alternatives, Logan River's fish and riparian habitat would be sustained below the LHPS Canal POD. None of the action alternatives would affect legal angler access to the Logan River.

D-47.21

Please note that NEPA does not require a lead agency to base its preferred alternative on the project's purpose and need. According to CEQ's *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (46 Federal Register 18026), a preferred alternative is the alternative that a lead agency determines would fulfill its statutory mission and responsibilities considering economic, environmental, technical, and other factors.

The purpose of and need for a proposed action are primary considerations when identifying feasible alternatives. As noted on page 3-1 of the Final EIS, the Purple, Orange, and Blue Alternatives would meet the purpose of and need for this proposed action.

Please see the discussion beginning on page 3-53 of the Final EIS for a thorough description of why NRCS identified the Purple Alternative as the preferred alternative.

Comment D-48

Response

Mayor: Randy Watts



April 29, 2011

Mr. Bronson Smart, Project Manager
NRCS Utah
Wallace F. Bennett Federal Building
125 S. State Street, Room 4402
Salt Lake City, Utah 84138

Dear Mr. Smart:

The City of Logan is submitting the following comments regarding the Logan Northern Canal Reconstruction Draft Environmental Impact Statement.

1. Many people have discussed with us their input regarding the alternatives. The comment we have heard the majority of the time is the yellow alternative is a better solution than the blue alternative. The City of Logan feels the yellow alternative has not been considered since the public scoping meeting and it should be updated and consideration given to evaluating it as an alternative. The specific point we feel needs updated is the yellow alternative does not need to be piped all the way from the point of diversion but could use the existing canal until a point where the canal is near Canyon Road and then the piping would begin. Another suggestion for you to consider is that if the homes along Canyon Road are purchased, the pipe could be installed alongside the road and minimize utility conflicts and replacements.
2. A significant concern for the purple alternative is the intrusion of construction and the plans for revegetation along the back yards of many homes where the existing canal is an aesthetic amenity. The City would like to see some details regarding what the impacts will be during construction on existing yards, if the construction will be confined to the existing easement or if additional temporary construction easements will be required, and what the vision is for revegetating the area. The City would suggest that consideration be given to a well thought out landscape plan including running water in a rocked swale that would provide irrigation for plants as well as some of the aesthetic amenity currently provided by the canal. This water could be provided by City water shares if necessary. We

290 North 100 West Logan, Utah 84321 · ph: 435.716.9002 · fx: 435.716.9003

www.loganutah.org

D-48.1

The Yellow Alternative was not carried forward for detailed analysis in the Draft EIS. NRCS determined that comments provided since the release of the Draft EIS did not provide new information in support of analyzing the Yellow Alternative, or other options presented, in detail in this Final EIS or in an addendum to the Draft EIS.

The modifications to the Yellow Alternative suggested by the commenter would be new options or alternatives. Please note that NRCS considered new options or alternatives during its review of Draft EIS comments. However, NRCS did not include any new options or alternatives in the Final EIS because the existing action alternatives already meet project purpose and need and project objectives. The option suggested by the commenter would not better achieve the project purpose, need, or objectives than the alternatives presented in this Final EIS.

D-48.2

NRCS and Cache County have not developed any detailed designs, such as a post-construction landscaping plan, or finalized the easements associated with the Purple Alternative. Once the EIS process is complete, the County will pursue developing construction plans and finalizing easement requirements for the selected alternative. It would be in the County's interest to limit the easements required and the effects to landscaping that is not within the canal easement.

Please see the discussion on general vegetation beginning on page 5-50 of the Final EIS. NRCS cannot provide EWPP funding for enhancements such as running water in rocked swales, even if the City of Logan does commit some of its water to irrigation. If the City desires to see additional enhancements, it would need to pursue those enhancements outside of the Logan Northern Canal Reconstruction project. Cache County has indicated that it would like to consider options to eventually develop a greenway, or linear park, along the LHPS Canal with a footpath and some landscaping. The City's desire for enhancements might be compatible with the County's interest in establishing a linear park. If a greenway were established in the future, it could be a joint effort that is planned and constructed through a process external to the Logan Northern Canal Reconstruction project.

D-48.1 ▶

D-48.2 ▶

Comment D-48 (continued)

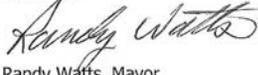
Response

D-48.3 ▶

also suggest that the property owners along the canal be provided an opportunity for input regarding the design of the revegetated strip.

3. For the purple alternative, the City of Logan feels that the alignment of the pipe connecting the Logan Northern Canal and the Logan Hyde Park Smithfield Canal should follow 1500 North and not cut down 1350 North and then jog over to 1500 North.

Sincerely,



Randy Watts, Mayor

RW:krm

D-48.3

The Draft EIS mentioned an option to use 1500 North directly from the LHPS Canal instead of routing the alternative through Lundstrom Park. The Final EIS has been updated to more clearly reflect this option as Lundstrom Park/1500 North.

Comment D-49

Response

April 28, 2011


 REC: MAY 02 2011
 PROC:
 FILE:
 DIST:

TO HDR ENGINEERING
3949 South 700 East Suite 500
Salt Lake City UT 84107

and

Natural Resources Conservation Services
U. S. DEPARTMENT OF AGRICULTURE
125 South State Street Room 4402
Salt Lake City UT 84138

Attn Alana Spendlove
Lydia Embry

mail to [REDACTED]

BRONSON SMART
State Conservation Engineer

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

These statements and queries are submitted as public comment to the March 2011 Draft Environmental Impact Statement (dEIS) for this project.

It's nearing two years since the July 11, 2009, landslide, and temporary delivery of irrigation water from L-N Canal and from LHPS Canal are each -less than full allocation; -insufficient for uses intended when 2009s water season began; and, until restoration/reconstruction solutions are defined, priced and presented for approval to shareholders, -continuing for the undefined future.

D-49.1 ▶ Purple Alt. The dEIS and its Preferred Alternative (PPA) answered some of my 08-26-10 bullets: Missing still are project cost (and our share), begin/end construction, return to water delivery, payment terms. But prior to any analysis of preferred, where are answers to the obvious, such as

How would L-N Canal be restored if the parallel LHPS Canal were not there.

Can LHPS Canal carry 130cfs. At 1500N, can it drop 40cfs into the 42" west-bound pipe.
Can LHPS Canal's open channel carry up to 90cfs north of 1500N.
Will Smithfield City get its contractual allotment.

D-49.2 ▶ Regarding the Alternatives presented in depth: PPA is "between the two", almost splitting (the difference, the baby) but entirely satisfactory to no one: Shareholders of both canals will be subservient to Cache High Line Water Association, the new entity with big responsibility, with control of much but without broad representation. L-N Canal will lose its historic - point of diversion; alignment 'tween POD and 600E/400N; shareholders and delivery on the Island, along Canyon Road, perhaps some between 600E/400N and 1500N. LHPS Canal will lose its historic - original-build lore, annual & operating rocky tales, open channel to 1500N. And both will have to share - POD, pipes, flow - even while having their separate channels at & north of 1500N. County oversight may go on and on. Logan Power and USU Water Lab lose parity. USU retains, even expands, physical burdens of location, involvement, deep pockets. Logan City is responsible from every side, with some advantages in repairs, realignments, stormwater; while the other municipalities have responsibility without hoped-for advantage. UDOT and H-89 avoid looking over the bluff. And Logan River runs...

049_Htr_DEIS Embry -042511

D-49.1

The cost estimate for the Purple Alternative is included in Appendix C1, Action Alternative Cost Estimates, and Appendix C2, Alternatives Development Cost Estimates, of the Final EIS. If the Purple Alternative is selected, project costs would be covered by more than one source. Detailed cost distributions would be developed as part of implementing the project.

The Blue Alternative is an option that would restore delivery using the LN Canal. The Blue Alternative would not rely on the LHPS Canal alignment. Please see the discussion beginning on page 3-20 of the Final EIS for a description of the Blue Alternative.

Please see the response to comment D-46.10 regarding flow rates and the conveyance system.

The purpose of the project is to restore delivery of irrigation water to shareholders. NRCS has determined that the action alternatives would meet the purpose of the project. The canal company's management of the system to meet its obligations is beyond the scope of this EIS.

D-49.2

Canal system management is beyond the scope of this EIS. Operation of the system after construction would depend on existing and new project agreements. Please note that the LN Canal POD would still be used to deliver water to shareholders along Canyon Road upstream of the Laub Diversion.

The EIS addresses impacts to historic resources, including the LHPS Canal. Please see the discussion beginning on page 5-59 of the Final EIS for a summary of impacts to cultural resources.

Comment D-49 (continued)

Response

TO HDR ENGINEERING April 28, 2011
NRCS / USDA Page Two

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

D-49.3 ▶

Orange Alt. Chapter 3 addresses municipal benefits, including Logan and North Logan's interest in 3100N which could allow using the remnant L-N Canal channel for stormwater. However, PPA to 1500N is in Logan City. Not in North Logan and there is no assurance of its participation beyond canal share assessments.* *Is this a good place to ask about numbers, esp. in Appendix C3. These are similar to my requests of Aug.18 and a telcall to HDR re clarification:*

acres 7,000 ref'd in NRCS-County contract *plz confirm source: compares at 73% but*
5,140 Study Area (2.1.1 and 4.3.3.3) *the acres served by both canals is lots more*
than the Study Area's ±8 square miles.

Appendix C3 source of PV at 4.125% *and* lovely calcs but not in PPA – sez 785 ac
under gravity pressure pipe 3100-1400N
NRCS econ calcs Col.1 energy savings 785 ac *plz confirm: savings due to pressuriz*
Col.2 energy savings 4,748 ac *Where is pressurized pipe now; when/*
where installed for max or total savings
Col.3 crop value dry vs irrigated *plz confirm source: water's \$ per ac ft*

Summary Narrative * which canals: where & when *\$120 to \$180 million saved when existing*
no remnants for SW in PPA *irrigation canals used by cities for storm*
water runoff

D-49.4 ▶

Blue Alt. While it describes shaft foundations, tiebacks, subsurface drains, hillside buttress to restore the historic alignment, the Blue Alt. (attributed to popular comment) still leaves L-N Canal midway up, hanging off the hill initial estimate of \$24.1 to \$26.5 million

and yet eliminates restoring L-N Canal from its POD *now from inside* First Dam, piped in its historic bed, then along Canyon Road (perhaps enough north of roadbed to reduce/avoid interfering with Logan City utilities) adjacent/inside the ±20 acquired parcels, west to 600E, uphill to 400N and into L-N Canal. Since the Yellow estimate has not been fully evaluated, it is neither substantiated nor available to challenge. *guesstimate of \$20.8 to \$22.8 million*

You have numerous comments on restoring L-N Canal from its POD (along Yellow or Blue Alts.). They're from academic and in-field professionals, from watermasters and shareholders of each & both Canals: Have you analyzed their expert advice, followed up for their experience.

D-49.5 ▶

Cache County Council spelled out seven objectives, principally to **restore** water for all canal users, plus 2 "promotes" and 4 "minimize". NRCS' Purpose (dEIS S.3.2) and proposed Action (dEIS 2.2.1) are to **restore** safe water delivery capacity to L-N Canal and to address remaining hazards in the 2009 landslide zone. Will PPA meet the County Objectives and the NRCS Purpose with its Action.

LE/bh

D-49.3

The commenter is correct that the area served by the LHPS and LN Canals is greater than the study area. Reviewing the entire service area was not necessary to identify project alternatives that would meet the purpose of and need for the project.

The savings due to using pressurized system delivery for the Orange Alternative assume that all users between 1500 North and 3100 North would convert from pump-based flood irrigation to pressure-based sprinkler irrigation (an estimated potential savings of 1,000 hp; see page 5-40 of the Final EIS). The Purple Alternative does not include a pressurized pipeline system along this same reach, so the same savings would not apply to the Purple Alternative. LN Canal shareholders between 400 North and 1500 North generally use their water on smaller parcels than shareholders downstream of 1500 North and therefore have less-extensive irrigation systems that function well using gravity (flood) irrigation. Because most of these users don't currently rely on pumping, the change in delivery method would not affect energy use between 400 North and 1500 North. The Final EIS addresses this subject for the Purple Alternative on page 5-38.

NRCS conducted a brief survey of water shares offered in the public open market in northern Utah and found share prices per acre-foot ranging from about \$1,250 to \$25,000. The average offering price for shares was \$6,991. The cost of water used in the EIS of \$6,000 per acre-foot is an estimated value based on a combination of market information and anecdotal reports from within the project area.

D-49.4

Please see the response to comment D-2.2 for a discussion of the Yellow Alternative and about how NRCS considered new options presented during the Draft EIS comment period.

D-49.5

NRCS considered the County's objectives as part of its alternative screening process. Please see the discussion beginning on page 3-39 of the Final EIS.

Comment D-50

Response

From: [Kerry Jordan](#)
 To: [LNC-EIS](#)
 Subject: Logan canal comments
 Date: Monday, May 02, 2011 12:13:44 PM

To whom it may concern,

I am a Logan resident with some questions and comments regarding the project-favored proposed Purple alternative for the Logan Canal reconstruction referenced on this website:
<http://www.ut.nrcs.usda.gov/programs/EWP/LNCRP/index.html>

D-50.1 ▶

My primary concern is using public tax dollars for private water shareholder needs on the one hand, and then on the other hand providing no stabilization or improvements to the landslide area (including the hillside and canal footpath) that the public has been using for years. I know the documents provided on the website deem public use of this path "unauthorized", but most of the entry points to this path contain no public signs indicating that access is unauthorized; furthermore, the trail has been used for many years as 'prescriptive easements' (or 'implied easement by prior use') and is now quasi-public land that needs to be restored to public use. In Utah the period of 'adverse use' with these easements must be at least twenty years, which is the case and these lands should be managed as public for public benefit (Utah Common Law; Title 78, Chapter 12). Thus, if the project is going to include subsidizing private water shares, costs of managing these lands for public use (e.g., restoring the footpath and stabilizing the hillside) should be added to the project costs.

D-50.2 ▶

The second aspect I have questions on is the proposed removal of 14 homes along Canyon Road. The average cost of \$157,000 per house seems lower to me than I would expect knowing those homes and properties; also, have these 14 homeowners been notified directly?

D-50.3 ▶

Thirdly, the diversion of water from second dam may adversely impact the city of Logan and its electric ratepayers. There should be no net loss of electricity to the city or an equal amount of financial compensation should be made. If not, there is yet another subsidy transferring from Logan city residents to private water shareholders. There was also no analysis on the environmental impacts of this loss of electricity, i.e. air quality. The emission free hydro electricity will be substituted with open market fuel sources, which in Utah are predominately coal. Has an analysis been done on the increase in air emissions from this potential change of fuel source?

D-50.4 ▶

Finally, additional water will be diverted at second dam as part of the project. I didn't see any analysis on the impact of the river flow during the low periods of the year. Is there a minimum flow requirement for this stretch of river, and what is the impact on species in this stretch of the river due to lower water flows and higher water temperatures?

Any answers and information in future materials on the projects would be greatly appreciated. Thanks!

Kerry Jordan


D-50.1

Please see the response to comment D-47.7 regarding repair of the landslide area along the Logan Bluff.

The purpose of the project is to restore water delivery to shareholders. Managing the water-conveyance alignment for public access is not part of the project purpose, nor is it within the scope of this EIS. As stated in the response to comment D-38.4, NRCS cannot use EWPP funds to stabilize the hillside to prevent landslides.

D-50.2

NRCS has not started negotiations with property owners because the project approval process has not been completed. Negotiations for property acquisition would begin after NRCS files its ROD. Please see the response to comment D-5.2.

D-50.3

NRCS did not complete an analysis of changes in air quality due to replacing hydropower with other sources of energy. However, because the agreement between the City of Logan and CHWUA will address continued hydropower production along the Logan River, the amount of electricity generated at the City of Logan's Hydro 2 plant is not expected to change substantially or require substantial additional power generation using a method that would affect air quality.

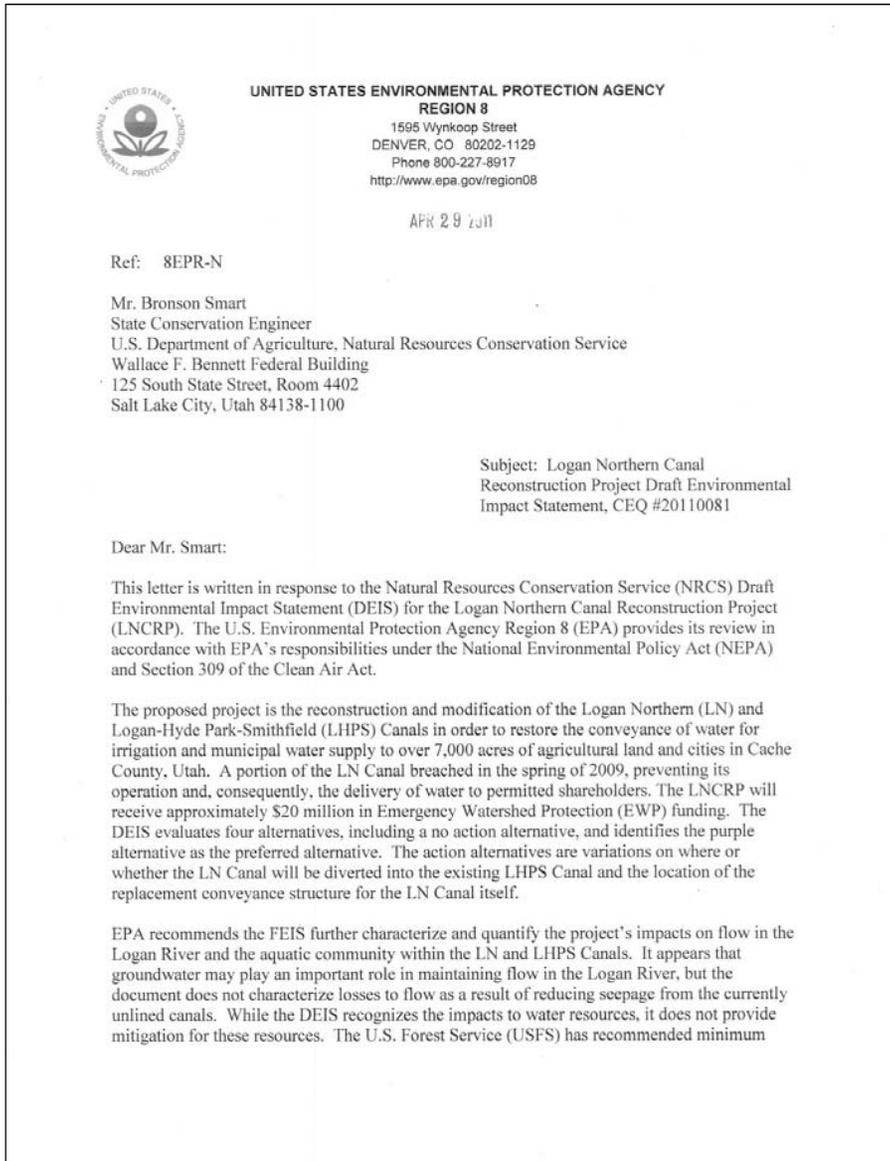
The effect of the Purple Alternative on hydropower generation is discussed on pages 5-38 and 5-39 of the Final EIS (this analysis also applies to the Orange Alternative). The Purple or Orange Alternative could affect the production of a maximum of 1,000 kW of hydropower, which is about 1% of the city's summer demand. Since the Draft EIS was published, CHWUA and the City of Logan have established an agreement that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple and Orange Alternatives. Because the agreement addresses potential effects to downstream water users, NRCS did not conduct further analysis of the effect to City of Logan hydropower generation.

D-50.4

Please see the response to comment D-47.8 for a discussion of the effects to the Logan River from the Purple and Orange Alternatives and USFS special-use permit conditions.

Comment D-51

Response



D-51.1 ▶

D-51.1

The EIS specifies mitigation for potential Logan River flow effects associated with the Purple and Orange Alternatives. This mitigation would be in support of a USFS special-use permit. Potential effects to and mitigation for effects to the Logan River and flows are also discussed beginning on page 5-71 of the Final EIS.

USFS requires a determination of minimum Logan River flows to meet the beneficial use of the stream as part of its special-use permit process. This process and the criteria to be used to determine minimum Logan River flows are identified on pages 5-72, 5-73, and 5-77 of the Final EIS and again on page 2 of Appendix C6, Compliance with the Standards and Guidelines in the *Revised Forest Plan for the Wasatch-Cache National Forest*. USFS is acting as a cooperating agency for this EIS and will issue its own ROD in support of a special-use permit if a special-use permit is required to construct the project. NRCS has been working closely with USFS to provide documentation that would meet USFS's needs if the Purple or Orange Alternative is selected and a special-use permit is required.

The Blue Alternative would not change Logan River flows because the diversion at the LN Canal POD would be the same as it has been historically. This alternative would not affect flows in the Logan River. The Blue Alternative would not require a USFS special-use permit.

The EIS recognizes that canal seepage would be reduced with any of the alternatives. However, the exact amount of water that is currently lost by the canals through seepage and that travels to the Logan River is unknown (please see the discussion on page 4-76 of the Final EIS). NRCS used the best available data to conduct its analyses of seepage losses, but these data do not contain detailed information regarding the final destination of the seepage (either to groundwater or surface water). The proposed Logan River flows determination process, which is included as a mitigation measure in the Final EIS, would ultimately support the beneficial uses in the reach of the Logan River between the LHPS Canal POD and the City of Logan discharge point (see Figure 3-11, Logan River Diversions, in the Final EIS). NRCS does not propose additional mitigation for flow effects related to reductions in seepage.

Comment D-51 (continued)
Response

instream flows of 5 cubic feet per second in the Logan River from the LHPS Canal POD to the USFS boundary to replace the flow lost to seepage. EPA recommends the FEIS further explore this option alongside a more rigorous characterization of impacts as a potential means to mitigate for impacts to flows, aquatic resources in the canal and the river, and water quality. Such an approach may not only be limited to the affected stretch of the Logan River on USFS land; it may also be appropriate for application to the LN Canal POD or further downstream, depending on the extent of effect on flows from reduced canal seepage.

D-51.2 ▶

The DEIS did not include information regarding a total maximum daily load (TMDL) completed for the Middle Bear River watershed and Cutler Reservoir. This TMDL includes an allocation for the Logan River watershed. EPA recommends the NRCS evaluate whether changes to assimilative capacity through a reduction in flow may affect attainment of this TMDL and include that information in the FEIS.

D-51.3 ▶

Consistent with Section 309 of the Clean Air Act, it is EPA's responsibility to provide an independent review and evaluation of the potential environmental impacts of this project. EPA's rating is for the preferred action alternative only. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action, EPA is rating this DEIS as Environmental Concerns – Insufficient Information, "EC-2". The EC-2 rating means EPA identified potential environmental impacts to air quality, water quality, wetlands, and cultural resources that should be avoided or reduced. EPA also concludes that the DEIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment. EPA did identify opportunities for additional information disclosure, characterization of impacts, and mitigation. A full description of EPA's EIS rating system is enclosed.

EPA appreciates the opportunity to provide comments. If we may provide further explanation of our comments, please contact Maggie Pierce at (303) 312-6550, or me at (303) 312-6004.

Sincerely,



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

D-51.2

The Final EIS has been modified to include information about the TMDL analysis for the Middle Bear River watershed and Cutler Reservoir. Because none of the action alternatives would change the amount of flow overall in the Logan River, the project would not affect the assimilative capacity of the Logan River.

D-51.3

Please see the responses to comment D-51.

Comment D-51 (continued)

Response

D-51.4 ▶

U.S. EPA Region 8 Detailed Comments
Draft Environmental Impact Statement
Logan Northern Canal Reconstruction Project

Surface Water

EPA recommends the FEIS explicitly address and quantify reductions to flow in the Logan River as a result of this project. The preferred alternative will reduce flows to the section of the Logan River between the LHPS and LN Canal PODs through two mechanisms. One is transfer of the LN Canal diversions to the upstream LHPS Canal POD, and the second is the reduction of seepage flows into the Logan River from the canals by enclosing 5 miles of the currently unlined, open canal system. It is not clear if a more efficient canal system would result in a decreased need to divert and, consequently, increased flows in the Logan River.

The FEIS should explain whether the Logan River would experience an increase or decrease to flows as a result of this project. If the project will result in a net decrease to flows, the FEIS should at least estimate reductions to monthly average/median flows during wet, dry, and average flow years. An understanding of the changes to the magnitude, duration, and frequency of low-flow and various high-flow classes would provide the highest level of understanding. Additionally, the effects of the reduced canal seepage may be farther afield than those of the transfer of diversion from the LN Canal POD to the LHPS Canal POD. An understanding of the extent of impact from the reduced canal seepage would be extremely useful.

If there is a net reduction in flow, the FEIS should describe and quantify the source of the reduction. Based upon the information contained within the DEIS, it appears that groundwater plays an important role in sustaining flows in the Logan River. A portion of the Logan River beginning just below the LHPS Canal POD to an unknown endpoint is dewatered at times during the irrigation season. Seepage from the canal water in combination with groundwater and springs are identified as sources of flow recovery in the Logan River (Section 4.4.2.2). Moreover, Section 4.4.6.1 describes the Logan River as a gaining river from LHPS Canal POD to the First Dam and estimates that enclosing/lining the canals will lead to total seepage loss of 13,000 acre-feet per year (AF/yr). Of that 13,000 AF/yr reduction in seepage, 7,400 AF contribute to groundwater recharge (p. 5-88). Based upon these numbers, 5,600 AF would be lost from recharge to surface water (i.e., the Logan River unless a portion of the groundwater flow goes to another river). We recommend the DEIS explicitly address how much groundwater is currently contributing under a range of conditions and what portion of the reduced groundwater seepage would be lost from the Logan River, specifically during the irrigation season.

D-51.4

The preferred alternative would not affect the overall flows in the Logan River because it would not change the amount of water diverted, only the location of the diversion. However, as noted in the response to comment D-51.1, this alternative would require a change in the place of diversion of some of the LN Canal water. This change would affect the flow regime and therefore the amount of water in the reach between the LHPS Canal POD and the point where the City of Logan discharges water from its hydropower facility downstream.

As noted in the response to comment D-51.1, NRCS used the best available data to conduct its analyses of seepage losses. These data do not include details about how much of the water lost from the canal due to seepage flows to the river and how much water flows to groundwater. NRCS assumes that both occur and that the directions of flow vary by the locations of the canals (that is, whether the canal reach is in Logan Canyon or along the edge of Cache Valley far from the river).

The Final EIS has been updated to clarify the project's effects on Logan River flow. As noted under the response to comment D-51.1, the Final EIS includes the disclosure of the effects of the Purple and Orange Alternatives on Logan River flow below the LHPS Canal POD and proposes a measure to mitigation the effect. This Final EIS includes a mitigation measure that describes the process that would be used to establish a minimum flow that would pass the LHPS Canal POD during the irrigation season (this information was included in Appendix C6 of the Draft EIS). Appendix C6 also provides detailed information about the flow effects and the methods that would be used to determine a minimum Logan River flow as required by the USFS special-use permit that would be needed for the preferred alternative.

NRCS does not intend to conduct additional seepage analyses on the LHPS Canal. NRCS relied on information available through previously completed research and determined that the research data are sufficient to support its EIS analysis of seepage. NRCS recognizes that the data do not provide details regarding the exact paths and timing of seepage flows; however, NRCS determined that conducting additional analyses to gain this information would not provide new information that would change the effects to and mitigation for effects to the Logan River.

Comment D-51 (continued)

Response

D-51.5 ▶

Water Quality

Impaired Waters

Section 4.4.6.2 incorrectly states that the Logan River has not been identified on the Utah's Clean Water Act Section 303(d) list because total phosphorus is a water quality indicator and not a water quality standard. The Logan River is not identified on Utah's Section 303(d) list because a total maximum daily load (TMDL) for total phosphorus has already been completed for the Middle Bear River watershed, which includes the Logan River, thus removing the Logan River from the Section 303(d) portion of Utah's integrated list.¹ Additionally, please note that although Utah may not have numeric water quality criteria for total phosphorus or other nutrients, its narrative water quality criteria apply and could provide a basis for including a waterbody on a Section 303(d) list for impairment from nutrients such as phosphorus.

The DEIS should clarify Sections 4.4.6.2 and 5.3.6.3 based upon the information above and determine whether this project may affect attainment of the load or wasteload allocations specified within the TMDL. Assimilative capacity could be reduced by the reduced seepage from the canals unless that seepage is offset. We recommend starting by addressing whether the project will result in an overall reduction to assimilative capacity in the system. If this is the case, a pollutant loading analysis would be necessary to demonstrate consistency with the requirements of the TMDL.

Stormwater

D-51.6 ▶

We appreciate the intent to acquire a stormwater construction permit from the Utah Division of Water Quality. However, EPA recommends more detail on how compliance with and implementation of best management practices prescribed by the permit will offset impacts from construction by minimizing sediment runoff. Table 5-8 includes the development of a stormwater management and maintenance program for the LHPS Canal between Logan Golf and Country Club and Lundstrom Park as a potential mitigation measure. We are unclear about the intent of the stormwater management and maintenance program, but support development of a stormwater pollution prevention plan as required by the Utah construction stormwater permit.

Biological Resources

D-51.7 ▶

EPA recommends the DEIS further characterize the impact of enclosing the currently open, unlined canals on the aquatic community in the Logan River and in the canals. The DEIS identifies some aquatic wildlife species that are present within the Logan River (Section 4.4.2.2), but does not characterize the fish or macroinvertebrate community with any quantified metrics to provide insight into ecological integrity of the community.

¹ <http://www.waterquality.utah.gov/TMDL/index.htm#approved>

D-51.5

Please see the response to comment D-51.2. The Final EIS has been modified to include information about the TMDL analysis for the Middle Bear River watershed and Cutler Reservoir. Because none of the action alternatives would change the amount of flow overall in the Logan River watershed, the project would not change in the assimilative capacity of the river from direct diversions or affect attainment of the TMDL.

D-51.6

Cache County or its contractor would ensure compliance with the State's construction stormwater permit requirements, including preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would not be developed until the project moves into the construction phase, after NRCS issues its ROD.

D-51.7

The existing canals provide limited aquatic habitat during the irrigation season (April through October). In the winter and early spring, the headgates at the PODs are closed and the canal systems are dewatered. Because of this, the canals do not provide aquatic habitat when they are not conveying irrigation water. The canals carry runoff during winter storms and some of this runoff water might pond in the canals, but cold winter temperatures cause standing water to freeze. Since there is no reliable, consistent flow in the canals for 6 months of the year, the system cannot sustain any fish or other aquatic communities.

NRCS did not inventory the LN and LHPS Canals for fish or macroinvertebrates because the canals do not continuously convey water and therefore do not provide a stable aquatic habitat. The canals convey irrigation and stormwater through soil- and concrete-lined canals through the study area and the canal owners conduct routine maintenance on the canals, which affects the types of material in the canals and vegetation along the canals (elements that contribute to aquatic habitat in a more natural system). Maintenance includes removing accumulated sediment and debris, lining or re-lining portions of the canals with concrete to increase efficiency, and removing vegetation to ensure that the canals can function at maximum flows.

Comment D-51 (continued)

Response

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NRCS discussed the potential aquatic habitat of the canals with the SLO. The SLO has stated that the canals do not support populations of fish or provide habitat for fish on a yearly basis. Fish can be found in the canals during the irrigation season, but these fish are migrants from the Logan River and not permanent residents.

EPA’s *Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers* (Barbour and others 1999) states that physical stream features can be indicators of the presence of diversity of macroinvertebrate communities. Stream features include streambed characteristics, channel morphology, bank structure, and riparian zone. The canals in the study area do not exhibit diverse substrate characteristics; do not have riffles, runs, and pools; and do not support a permanent riparian zone. Because of the canals’ artificial and interrupted flow regime and the lack of these features, NRCS determined that detailed or rapid assessment of macroinvertebrate populations that might use the canals was not necessary.

Seasonally common insect species that might use the canals for part of their life cycles during the summer months would not be able to use the LHPS Canal between the POD and Lundstrom Park/1500 North if the preferred alternative were constructed. These common insects could use the Logan River and other canals in and near the study area. Enclosing 2.4 to 2.6 miles of the LHPS Canal would not affect regional populations of these types of invertebrates.

As the commenter notes, the EIS recognizes that, without barriers, fish could enter the LHPS Canal at the POD on the Logan River. The canals do not provide suitable habitat for fish populations all year. Historically, any fish that remained in the canal system when the water was shut off in October became stranded. Installing a barrier such as that proposed in the EIS would prevent fish from entering the system and thus prevent them from being stranded when the water is shut off.

Comment D-51 (continued)

Response

Additionally, while the DEIS mentions that fish do enter into the canals, it does not describe what habitat or aquatic organisms would be affected by the enclosure of the canals in box culverts and pipes. While the ecological value of the canals may be low, it is important to justify such an assertion with data and information.

D-51.8 ▶

Environmental Justice

EPA recommends the FEIS describe whether outreach occurred to target the project area's population with limited English proficiency and if the project's impacts to properties represent a potential disproportionate impact to environmental justice communities. Section 5.2.3 discloses that some of the population in the study area has limited English proficiency and that Spanish is the most spoken language among people who speak a language other than English. The DEIS does not indicate whether reasonable measures were taken during public involvement to ensure this population had meaningful access to meetings and information regarding this proposed action.

In addition to identifying if any of these measures were taken, we also recommend clarifying whether residents or landowners of the properties affected by permanent easements/relocations include any individuals with limited English proficiency or if those properties are in low-income or minority-populated areas. The Purple Alternative will require the relocation of people living in 14 structures along Canyon Road (Section 5.2.1.3). If the properties are only within those areas that are low-income and minority, this impact is a potential disproportionate impact - as only low-income/minority persons would be affected or relocated.

D-51.9 ▶

Groundwater

The preferred alternative is estimated to reduce groundwater recharge by 7,400 AF/yr which is characterized as a 3 percent reduction in average annual groundwater recharge (Table 5-8). Section 5.3.6.6 recognizes the potential for cumulative impacts to occur but does not include any details regarding what reasonably foreseeable future actions may further exacerbate reductions to groundwater recharge. We recommend that the NRCS consider what future actions are likely that would also reduce groundwater recharge and, if appropriate, analyze the total cumulative reduction in groundwater recharge.

D-51.10 ▶

Mitigation

The DEIS acknowledges enclosure of the 3.4 miles of the currently open, unlined LN and LHPS Canals as an effect, but does not include any mitigation for this impact (Table 5-8). It does not describe length of the LN Canal that will be dewatered as a result of this project. We recommend that NRCS include additional information to justify the lack of mitigation for these impacts. Data and information describing the ecological value of the canals through metrics to assess community function and a description of what aquatic species are present would be useful.

3

D-51.8

NRCS has not completed project design to a level that could finalize the expected easements required for construction of the preferred alternative. Cache County or its contractor would complete final design after NRCS issues its ROD.

Given the racial and ethnic population distribution along the Purple Alternative, NRCS did not find that construction would cause disproportionate effects to any environmental justice (EJ) populations. People of various races and incomes live along the canal, but data reviewed by NRCS and site visits did not indicate that there are any EJ concentrations or communities along the alternative alignment. Construction effects would apply to all residents regardless of race, ethnicity, language proficiency, or income. The EIS concludes that an effect to an isolated person of limited English proficiency does not constitute a disproportionate effect to an environmental justice community. When Cache County pursues temporary and construction easements, it will determine if language assistance is needed in order to fairly negotiate. The Final EIS has been modified to include this information.

NRCS did not post advertisements in any language other than English. Given the racial and ethnic makeup of the study area, NRCS determined that interpreting scoping materials or materials used to advertise the Draft EIS into other languages was not necessary.

D-51.9

Please see the discussion beginning on page 5-90 of the Final EIS. Long-term groundwater development in and near the project area is managed through the 1999 Interim Cache Valley Ground-Water Management Plan. This plan identifies management policy for groundwater withdrawals in Cache Valley. The EIS recognizes the potential cumulative impacts to groundwater resources as unavoidable. No mitigation is proposed.

D-51.10

The LN and LHPS Canals are seasonally dewatered when the diversion structures at the Logan River are closed (between October and April). Both canals would continue to carry water during the irrigation season. The reach of the LHPS Canal that would be enclosed would still discharge to the open portion of the canal downstream of Lundstrom Park/1500 North.

Comment D-51 (continued)

Response

D-51.11 ▶

EPA recommends further consideration and evaluation of the instream flow requirement recommended by the U.S. Forest Service (USFS) not only for the area on USFS land but also for the reach of the Logan River affected by this project. The USFS has recommended a minimum instream flow requirement of 5 cubic feet per second (cfs) for the portion of the Logan River from the LHPS Canal POD to the USFS boundary. The goal of this instream flow requirement is to replace the flow lost to the reduced seepage from enclosure of the canals. As described above in the Surface Water comments, it appears that groundwater seepage from the canals plays an important role in sustaining flows in the Logan River during critical periods of the irrigation season and throughout the year. Instream flows could offset project impacts associated with surface water, water quality (including TMDLs), and biological resources that may be, in part, attributable to the reduced seepage.

D-51.11

Please see the responses to comments D-51.1 and D-51.4 and Appendix C6, Compliance with the Standards and Guidelines in the *Revised Forest Plan for the Wasatch-Cache National Forest*, of the EIS.

Comment D-51 (continued)

Response

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO -- Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC -- Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO -- Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU -- Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 -- Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 -- Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 -- Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment, February, 1987.

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Comment D-52

Response

Bronson Smart

Dear Mr. Smart,

The Logan Northern Canal Reconstruction Draft Environmental Impact Statement (DEIS) was recently issued. It declared the Purple Alternative as the preferred method. The Canyon Road (yellow) alternative was dismissed without serious consideration although it was estimated to be approximately the same cost as the preferred (purple) alternative. A 72 inch-diameter pipe was selected due to the limited hydraulic head pressure between the river diversion and the hill top on 400 North. There was no consideration given to shifting the POD inside First Dam rather than simply diverting from the river using a 48" diameter pipe resulting in 67% less pipe area. This would in itself substantially lowers the cost of this alternative by several million dollars. This approach was suggested by two different local engineering experts.

This alternative would divert LN Canal water using the existing LN Canal POD just below First Dam. Once the water is diverted, it would be conveyed for about 1.7 miles along the existing LN Canal alignment in a pipeline to a point at about the Laub diversion (a distance of 1 mile), the pipeline would then drop on a decline to the base of the hillside to a point where inclination could be determined, thence connecting to the existing canal at about 400 North. There can be some variance in the yellow alternative within its general parameters to connect from First Dam to 400N. The issue of liability for future land sliding is eliminated by taking the (smaller) pipe along the hill base. The pipe can easily be buried thus eliminating any "slumping" potential should the failed portion of the hillside and proximate area experience a future movement. Additionally, putting a pipe along the hill base avoids the need to deal with laying a pipe beneath the sewer trunk line below Canyon road, utilities, the disruption to the road and traffic, and potential construction problems in dealing with the high water table due to the depth of the pipe.

Each alternative requires the removal of some 14 structures well beyond the failed hill side area both east and west starting with the "Laub" structure. Even though the Purple alternative has no connection with the failed canyon road area, that cost, must be absorbed in this alternative. The rationale for the removal of structures is based upon creating an area along

D-52.1

Please see the response to comment D-2.2 for a discussion about how NRCS considered variations of the Yellow Alternative and other options during the Draft EIS comment period.

D-52.2

Acquiring structures from 14 properties is part of all of the action alternatives. NRCS recognizes that some property owners might not be willing to sell their properties. With the Purple and Orange Alternatives, the project could still be constructed even if property owners are not willing to sell.

D-52.1 ▶

D-52.2 ▶

Comment D-52 (continued)
Response
D-52.3 ▶

canyon road where any potential sliding will not harm or do damage to real property or present a danger to people. This has in effect created a “safe” area in which a pipe could be placed.

The Purple Alternative will divert additional water above the Logan Hydro Power generation plane. It will have a negative impact on the generation of hydro power during the summer months. This alternative must include compensation for this loss and could mean millions of dollars over time. The Yellow alternative will not have any impact upon future hydro plant production in that it will remain as it is now.

D-52.4 ▶

Originally the public matching share for North Logan was estimated at 1.5 million. This was based upon the area traversed of canal reconstruction and connection to the Logan Northern Canal. All other cities involved were considerably less. Now that this option is not viable, there is no direct impact upon North Logan. Our city is committed to help solve the problem of safely re-connecting the Logan Northern. North Logan’s commitment must be equitably shared by each community involved. We cannot support any alternative which brings no direct benefit to the city itself. Our city will make a final determination of how much we will contribute based upon the actual costs of construction, direct benefit, and willingness of all other public entities to contribute in matching funds.

Sincerely,

Lloyd C. Berentzen
Mayor,

c/e Cache County Exec.
Smithfield Mayor
Logan City Mayor
Hyde Park Mayor
North Logan City Council

2

D-52.3

The effect of the Purple Alternative on hydropower generation is discussed on pages 5-38 and 5-39 of the Final EIS. Since the Draft EIS was published, CHWUA and the City of Logan have established an agreement that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple and Orange Alternatives. Costs for mitigation for potential loss of power were not included in the action alternatives cost estimates (Appendix C1) since these are considered annual operating costs. The agreement between the parties is now included in Appendix D3, Water Rights and Water Use Information, of the Final EIS.

The commenter is correct; the Yellow Alternative would not affect hydropower generation on the Logan River.

D-52.4

Comment noted.

Comment D-53

Response

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

May 1, 2011

Dear Ms. Lee,

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 give my support for the "blue" alternative in the Logan Northern Canal Reconstruction Project Environmental Impact Statement. I think the blue alternative most closely addressed my original concerns, as stated during the scoping, but may be improved in several ways to possibly reduce costs and to address the need to preserve the historic canal.

Firstly in order to make a case for the blue alternative, the costs need to be considered carefully. There are likely several ways which to construct a canal that could remain structurally intact along the unstable hillside. I think it would be worthwhile to consider several other methods that could be less costly with less visual impact than using massive earth buttressing. I suggest taking a look at driving deep caissons to a depth below the unstable hillside for the main support in the area of high risk. The canal, whether open or closed, could be suspended with a bridge-like construction. This could be done at grade level, suspended above the unstable soil. One only needs to look to the methods used to construct suspended highways throughout the nation. Also, Romans were constructing raised aqueducts thousands of years ago, and those structures remain in service in some places.

Additionally, the energy costs gained and lost need to be factored into the bottom line. In the blue plan, no energy source is lost or gained. The clean micro-hydro generation may continue uninterrupted. In the orange plan, the micro-hydro (a clean, non-greenhouse gas emitting source) is lost, to the tune of almost \$200,000 per year. And, additional energy costs are added due to the need to pump water back upstream to utilize the SW portion of the Logan Northern Canal. This is not efficient, cost effective, or logical. Let's figure out a way to let water run downhill. And, let's figure the true cost of energy into the project costs.

Secondly, my major concern is that the citizens of Logan will be losing a major part of their heritage with the elimination of a large portion of the Logan Northern Canal. The EIS addresses quality of life concerns

D-53.1 ▶

D-53.2 ▶

D-53.3 ▶

D-53.1

The modifications to the Blue Alternative suggested by the commenter could be a new option. Please see the response to comment D-2.2 for a discussion about how NRCS considered new options presented during the Draft EIS comment period.

The Blue Alternative includes elements that NRCS determined would be needed to ensure the safe delivery of water through the historically unstable area. However, the EIS recognizes that risks to life and property would remain even after implementing the Blue Alternative as described in Chapter 3, Alternatives.

D-53.2

The commenter correctly states that the Blue Alternative would not affect hydropower generation on the Logan River.

Please note that the Orange Alternative does not include pumping water back upstream on the LN Canal. Water would be delivered upstream (to 400 North) using a pressure pipe. There would be no additional energy costs associated with moving water using the pressure pipe. Please see the description of the Orange Alternative's structural features beginning on page 3-17 of the Final EIS.

D-53.3

The EIS discloses that the LN Canal is probably eligible for listing on the National Register of Historic Places and that any adverse effects to the structure would require mitigation. Please see the discussions beginning on pages 4-41 and 5-59 of the Final EIS.

Comment D-53 (continued)
Response
D-53.4 ▶

just briefly, but these concerns need to be considered in more depth. The canal structure needs to be considered a historic structure, just as buildings are. If the canal is removed from the landscape, the State of Utah Historical Society should be contacted and mitigation efforts put in place.

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.

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. 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

D-53.4

Comment noted.

Comment D-53 (continued)

Response

from the community. These values were expressed quite explicitly by the public during the scoping project. These values should not be dismissed, misunderstood, or downplayed in the EIS document. The plan should represent the true cost of this project to the community, fragments of our quality of life that cannot be recovered once gone.

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.

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 Logan Northern Canal will not be abandoned, and that the options considered may seek to creatively restore 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, 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.

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Comment D-53 (continued)

Response

Thank you for consideration of these issues while determining the final plan for reconstruction. We will all benefit from a carefully considered and well researched study to help our community move forward.

Sincerely,

Jordy Guth



This space is intentionally blank.

Comment D-54

Response

D-54.1

Comment noted.

D-54.1 ▶

From: [Redacted]
To: LNC-EIS
Subject: Logan Northern Canal Restoration Project, Cache County, Utah
Date: Monday, May 02, 2011 4:32:37 PM

Alana Spendlove
 HDR Engineering
 3949 South 700 East, Suite 500
 Salt Lake City, UT 84107

Subject: Comments on Draft EIS of Subject Project.

The Preferred Option, Purple, seems the better of Orange and Blue. However, the costs associated with the LHPS Canal should be borne not by taxpayers, but by the private business (Canal Company). Federal Emergency funds are to restore the failed LNC to pre failure conditions and not for improvements to the LHPS Canal which was not involved with the canal failure.

As a resident of North Logan along the east bank of the LHPS Canal we are not shareholders nor water users of the water. We realize no benefits from the canal restoration but will be taxed by the NRCS Sponsor, Cache County to offset 25% of the project cost plus any cost overruns.

As a resident of Cache County, which has the worst air quality in the nation during winter inversions, I think it imperative that we continue to generate hydro electric power from the Logan River and not replace clean power with dirty power from coal fired power plants.

NRCS should revisit the Green and Yellow options to restore the LNC using only the federal emergency funds or proceed with the Preferred Option (Purple) but obtain funding from the Canal Company for any LHPS Canal work. These are considerable capital improvement costs not to be borne by taxpayers in support of private industry.

You cannot use Federal (taxpayer) money to do capital improvements of private industry.

Thank you for allowing review and comments in this major project.

Eric Joffs
 [Redacted]

Comment D-55

Response

Bruce Godfrey

From: Bruce Godfrey [REDACTED]
Sent: Saturday, April 30, 2011 3:23 PM
To: LNC-EIS@hdrinc.com
Cc: Judy Godfrey
Subject: Comments on Draft EIS

Comments on the draft EIS for the Logan Northern Canal Reconstruction Project

By:

E. Bruce Godfrey
[REDACTED]

30 April 2011

The draft EIS addresses many of the issues that are critical to an evaluation of the alternatives. Some questions remain however, that need to be addressed. Some of these questions are noted below.

Water rights

It is not clear to me how water rights might be affected by the proposals. Does the proposed change in point of diversion from below third dam to the point below 2nd dam affect the priority of the water rights of those having shares in the Logan Northern Canal? The draft EIS indicates that the power generation rights held by Logan City are junior to the rights of the LHPS canal (page C2-1) but, are they also junior to the LN canal. If so, will a change in point of diversion (purple or orange alternative) affect these priorities?

Some items or costs are (?) common to all the alternatives

The EIS states that 14 properties are to be acquired and demolished if one of the "action" alternatives (purple, blue, yellow, green or orange) is chosen. This raises two questions. First, the NRCS EWPP manual may allow these acquisitions, but it is not clear why they must be acquired. This is especially true for those that are not in zone 2 (see the last paragraph on page 3-23). Secondly, if the "no action" alternative is chosen wouldn't these properties be acquired for the reasons cited in the draft EIS? It is recognized that a different source of funds may have to be used, but if these properties must be acquired, wouldn't the costs involved be incurred for all of the alternatives (see statement on page C1-4)?

The blue alternative indicates that a number of structural items are to be installed. Wouldn't many (all?) of these structures (drainage channel, top-of slope run-off control, subsurface drains, etc.) need to be installed if one of the other alternatives were selected? If this is true, why should only this alternative include these costs and not the other alternatives? Page S-6 notes that EWPP funds cannot be used to solve problems that existed before the disaster and that NRCS is limited to addressing "remaining hazards". As a result, the cost of these structures should either be included or excluded in all of the alternatives. The statements on page C1-8 suggest that only those costs that would be

1

D-55.1

The current LN Canal POD is below First Dam, not Third Dam as the commenter suggests.

Since the Draft EIS was published, CHWUA and the City of Logan have established an agreement that identifies how potential effects on hydropower generation would be minimized and mitigated under the Purple and Orange Alternatives. Because the agreement addresses potential effects to downstream water users, NRCS did not conduct further analysis of how the Purple and Orange Alternatives might affect hydropower generation by the City of Logan. Please see the discussion beginning on page 5-39 of the Final EIS for a discussion of water rights and the agreement between CHWUA and the City of Logan.

D-55.2

Please see the response to comment D-5.2 regarding why NRCS is proposing to acquire structures from 14 properties along the Logan Bluff.

The No-Action Alternative would not include acquiring the structures because this alternative assumes that nothing would be done to restore safe water delivery or to address the remaining hazards in the 2009 landslide zone.

D-55.3

The structural control measures proposed as part of the Blue Alternative would not be included in the Purple and Orange Alternatives because the control measures have been proposed to protect the conveyance structure, not stabilize the hillside. If the Blue Alternative is not chosen, then none of the structural control measures proposed as part of that alternative would be constructed as part of the project. Future stabilization could still take place if it was funded by another source that allows the use of funds for such work. This work could be pursued by another party that has an interest in stabilizing the hillside.

D-55.1 ▶

D-55.2 ▶

D-55.3 ▶

Comment D-55 (continued)

Response

needed to “stabilize the hillside....needed to construct and stabilize the new pipeline” were included but, it is not clear what costs would be incurred if the blue alternative was not chosen. EWPP funds may not be available to stabilize the hillside beyond that needed for the Blue alternative, if any of these structures will be needed. If the blue alternative is not chosen the structures that may be needed should be outlined even if EWPP funds cannot be used to fund the construction of these structures.

D-55.4 ▶

Improvements needed for the LHPS canal

If the blue or no action alternative is chosen, it is likely that improvements to the “upper” or LHPS canal will need to be made. This may be a major benefit of choosing the purple or orange alternative but, improvement of the upper canal should not be the deciding factor.

Costs of no action alternative

There are a number of costs that would be incurred with the no action alternative that need to be recognized even if they are not quantified. Some possible costs are noted on page S-8 (last full paragraph). These costs need to be addressed to a greater degree but, the following also need to be addressed.

D-55.5 ▶

1. Those who own water shares in the LN canal would have to pay more for water but, they are not the only ones that would be impacted. Households that started to use culinary water provided by one of the cities (Logan, North Logan and Hyde Park) would place demands on these systems that would impact residents of these cities that do not use water from the LN canal.

D-55.6 ▶

2. The discussion on page 3-3 suggests that if water from the LN canal was not available that farmers would have to alter farming practices. A more likely scenario is that land currently in ag production would probably shift to other uses (homes?) at a more rapid pace. This would reduce the amount of “open space” which is viewed positively by many residents of the county as reflected by the number of open space initiatives that have been suggested in Cache County over time. While this impact may be difficult to quantify, it needs to be recognized.

D-55.7 ▶

3. NRCS funds may not be available to address the existing land slide as noted on page S-8 but, this does not mean that these costs will not be incurred.

Blue and yellow alternative comments

D-55.8 ▶

It is my understanding based on comments by Trevor Hughes and Jack Keller (both are current or former members of the faculty at Utah State University with extensive experience in water conveyance systems) that were published in the Herald Journal that a slight change in the POD for the LN canal (close to or above first dam) would require a smaller size of pipe (less than the 60-72 inch pipe suggested in the draft EIS) which would result in a relatively large reduction in the cost of the blue or yellow alternative. This change may also reduce the risks associated with these alternatives. This suggestion needs to be considered and evaluated.

The yellow alternative was dismissed (page S-15) with limited discussion. It is not clear if this alternative was seriously considered.

D-55.9 ▶

Non ag shareholders

Section 4.4.1.5 discussed “water for agriculture”. While water for agriculture dominates the use of LN canal the same cannot be said to the LHPS canal. For example, 76 percent of the canal shares “were used for agricultural production” and that 33 percent of the LHPS canal shares have been used for agriculture (page 4-30). The use of water by non-agricultural shareholders needs to be addressed in the EIS. These users probably have a greater demand for and willingness to pay for water (at the margin) than do those that use water from these canals than those who use the water for growing traditional crops. Water used to produce grass for horses and other animals, gardens and lawns by non ag shareholders needs to be addressed. The need to address this issue is illustrated on page 4-28 where it states that “the largest water-related land-use in the farmland study area was urban.”

D-55.4

As proposed, the Blue Alternative would not include making any improvements to the LHPS Canal. If the Blue Alternative or No-Action Alternative is chosen, then any improvements to the LHPS Canal would need to be funded through another (non-EWPP) source.

D-55.5

Page S-8 of the Final EIS states that the No-Action Alternative could affect municipal systems that rely on canal water exchanges as shareholders in the LN Canal. In other words, if a City relies on canal water exchanges to operate its culinary system(s), then this system, which supplies water to local residents, could be affected with the No-Action Alternative. Assigning a precise cost to such effects would be speculative.

D-55.6

The Final EIS has been modified to recognize potential land-use changes as a result of the No-Action Alternative.

D-55.7

Comment noted.

D-55.8

Please see the response to comment D-2.2 for a discussion of the Yellow Alternative and how NRCS considered other options presented during the Draft EIS comment period.

Please see the discussion regarding alternatives eliminated from detailed study beginning on page 3-31 of the Final EIS.

Comment D-55 (continued)

Response

Comments on specific pages

D-55.10 ▶

Page 5-23. The summary of the orange alternative indicates that “shareholders” could switch to sprinkler instead of flood irrigation. I have no empirical data but, my observation suggests that most of the land that is currently being farmed by water from the LN canal is not irrigated using flood irrigation. This is also inferred by the statements on page 4-25 that indicate that shareholders downstream of 1500 north primarily sprinkle their land. Evidence needs to be provided to support the claim outlined in the summary. It is not clear how a switch from flood to sprinkler irrigation will result in energy savings. The energy savings could occur if sprinkler systems were pressurized by gravity instead of pumping but not from a change from flood to sprinkler irrigation. It should also be noted that it is likely that few of the non-ag shareholders use flood irrigation.

D-55.11 ▶

Page 5-25. How is the 4,000 acre feet “lost” under the no action alternative? It may be “lost” to those along the LN canal but, the water will be used elsewhere. This is a distributional issue (who receives the water) not loss in the aggregate. Is the reduction on groundwater recharge (amounts vary by alternative), a loss to those who would use water from the aquifer?

D-55.12 ▶

Page 3-9. Why would the shares (between the Laub diversion and 400North/600 East) need to be purchased? If purchased why by the Logan and Northern Irrigation company? Couldn't other shareholders (current or potential) make this purchase? If the no action alternative was chosen, would the LN shares need to be purchased?

D-55.13 ▶

Page 4-13. The statement that the market value of irrigated cropland in Cache County is \$342.36 per acre is simply not true. The data in Appendix C3 has nothing to do with “market value”. It should also be noted that the estimated “productive value” (used to compute taxes) of ag land in Cache County is higher than this reported value (see <http://propertytax.utah.gov/faa.html>) and that market values are commonly several times as large as either of these values.

D-55.14 ▶

Page 4-20. This is a minor point but it is likely that most of the “no trespassing” signs are posted by individuals who own land next to the canal not by the canal company(s).

D-55.15 ▶

Page 4-25. Water is pumped more than 8 hours a day by most farmers during the irrigation season.

D-55.16 ▶

Page 4-26. Water requirement is only one of the reasons why farmers have started to grow safflower. Some of the other reasons include profitability and weed control.

D-55.9

The Final EIS has been modified to recognize the effects on shareholders who use the water for nonagricultural purposes.

D-55.10

Please see the discussion regarding energy savings associated with the change to a pressurized pipeline system beginning on page 5-40 of the Final EIS.

D-55.11

“Loss” refers to water that seeps from the canal. As described in the EIS, water that seeps out of the canal contributes to groundwater recharge. Please see the discussion on page 4-76 of the Final EIS.

D-55.12

At the beginning of the project, the Logan & Northern Irrigation Company stated that it intended to purchase the shares that were historically delivered to the reach of the LN Canal between the Laub Diversion and 400 North. However, the irrigation company is currently proposing a different means to meet these shareholders’ needs under the preferred alternative. Please see the discussion beginning on page 3-11 of the Final EIS for a discussion of service to the shareholders located along the LN Canal upstream of 400 North.

D-55.13

The Final EIS has been modified to state that the market value of irrigated crops (not cropland) in Cache County was estimated to be \$346.23 per acre in 2009.

D-55.14

Comment noted.

D-55.15

The 8-hour figure is an average estimate of use over the entire irrigation season. NRCS recognizes that some shareholders might pump for longer periods and that others might not pump at all on any given day.

D-55.16

The Final EIS has been modified to recognize that safflower can be used to break weed and disease cycles in cereal crops.

Comment D-56

Response



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
Date: May 2, 2011

Bronson Smart, Project Manager
NRCS, Wallace F. Bennett Federal Building
125 S. State Street, Room 4402
Salt Lake City, UT 84138

Dear Bronson,

The Forest Service, participating as a cooperating agency, submits the following comments on the Logan Northern Canal Reconstruction DEIS. The Forest interdisciplinary team reviewed the document and provides the following comments which focus on the portion of the canal reconstruction project proposed on National Forest. Of primary interest are the maintenance of in-stream flows in the Logan River and protection of fishery, aquatic, and riparian values. Project effects on Intermountain Region Sensitive species, Forest Management Indicator Species, and consistency with Forest Plan standards and guidelines are also important considerations in our review of the DEIS.

The 2003 Wasatch-Cache National Forest Plan Standard 5 requires "For existing authorized uses and activities, minimum in-stream flows will be established to meet the beneficial use of the stream and will be a condition of any licensing and permit renewal." The Forest Plan directs that water should be maintained in "adequate quantity and quality to provide for in-stream flows and existing downstream uses, including support of healthy riparian and aquatic habitats and stability and effective function of stream channels". Minimum in-stream flows are critical to maintaining fishery habitat, especially during low flow periods (August through October).

The DEIS articulates several items providing for consistency with Forest Plan Standard 5. These include: 1) a site-specific description of the desired fishery habitat; 2) a process for determining and maintaining a minimum in-stream flow for the Logan River between the LHPS Canal POD and the USFS Forest Boundary; 3) monitoring of stream flows to evaluate whether in-stream flow is adequate to maintain minimum fishery habitat; and 4) a means for adjusting the in-stream flow if needed to maintain fishery habitat.

To provide site-specific fishery habitat in this reach of the Logan River, in-stream flows should provide enough water to fill pools, have sufficient water to allow fish movement between pools, and provide enough water circulation for cool temperatures and dissolved oxygen. It is assumed that if there is enough water to maintain a fishery, associated aquatic species and riparian habitats will be maintained, also.

An initial minimum in-stream flow of 5 cfs in the Logan River at the LHPS POD is recommended. Monitoring requirements include observing the depth of pools in the Logan River below the LHPS Canal POD under various discharges above and below 5 cfs (during



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D-56.1

Comment noted.

D-56.1 ▶

Comment D-56 (continued)**Response**

August through October the year after the project is completed) to determine under what discharge level (cfs) fish habitat requirements as described above are provided. This level becomes the minimum recommended in-stream flow for maintenance of aquatic, riparian, and fishery habitats.

Other disclosures in the DEIS reviewed by the ID Team involve: 1) protection of Maguire's primrose which occurs outside the LHPS POD construction area; 2) effect on Threatened, Endangered, or Intermountain Region Sensitive species; 3) effect on Forest Management Indicator Species and their population trend; and 4) consistency with the WCNF Forest Plan, including applicable Forest-wide standards and guidelines, as disclosed in Appendix C5 and C6.

As a cooperating agency, we appreciate the opportunity to provide comment on the DEIS and look forward to continuing the cooperative effort as the environmental analysis proceeds.

Sincerely,

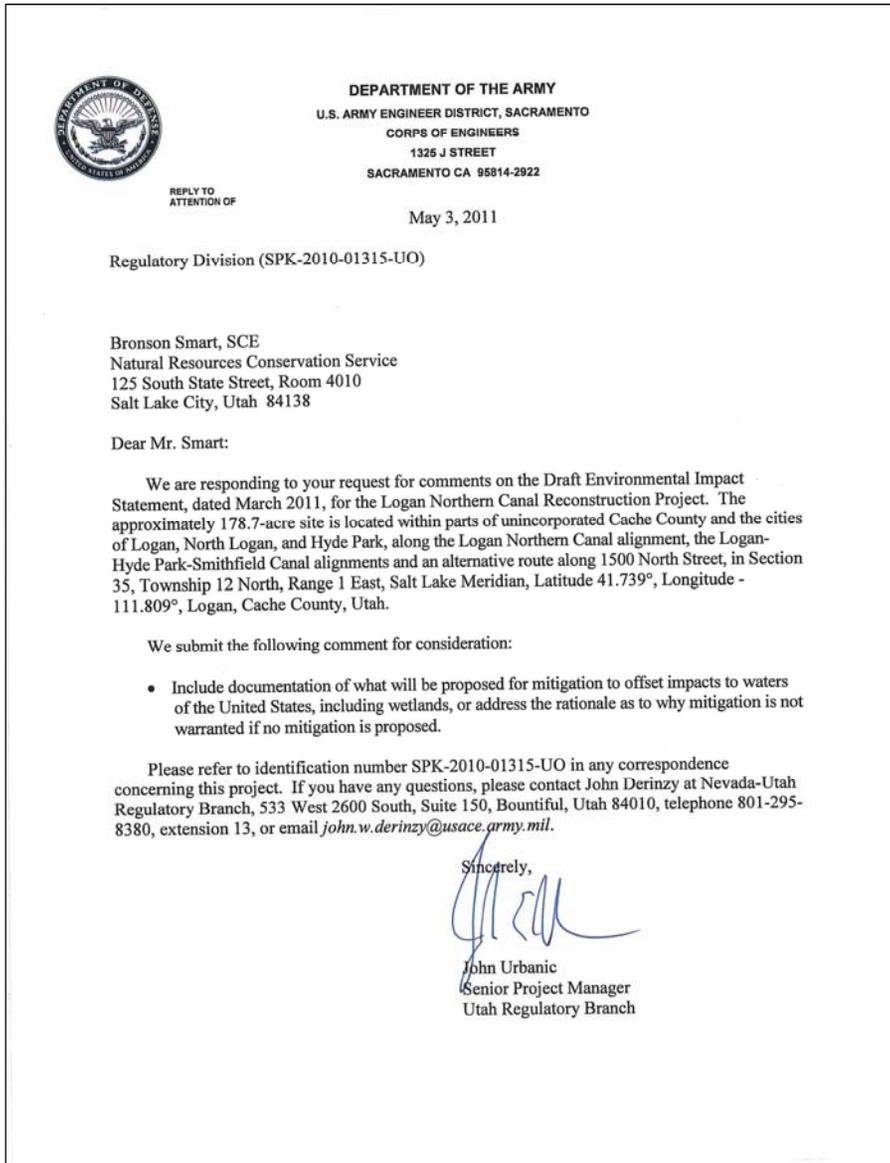


BRIAN FEREBEE
Forest Supervisor

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Comment D-57

Response



D-57.1 ▶

D-57.1

None of the action alternatives would affect wetlands or other special aquatic sites. Please see the discussion beginning on page 5-70 of the Final EIS.

Because impacts to the Logan River at the POD structure with any of the action alternatives would be temporary and no area below the ordinary high-water mark would be filled, no mitigation is proposed for effects to the Logan River. Cache County and its contractors would strive to return the disturbed area to preconstruction conditions as closely as possible, but some area above the ordinary high-water mark would be permanently affected by reconstruction of the POD structure. According to the text of Nationwide Permit 37, which is a general permit intended for work done by or funded by NRCS through the EWPP, the project could be authorized under this Nationwide Permit. Any work at the POD structure will comply with the permit requirements of Nationwide Permit 37.

As described on page 4-60 in the Final EIS, the LHPS and LN Canals meet the definition of waters subject to regulation under Section 404 of the Clean Water Act. The preferred alternative would permanently affect 2.4 to 2.6 miles of the LHPS Canal by converting the canal from an open structure to a box culvert. NRCS is not proposing to mitigate for this effect because the expected impacts are minor (a maximum of 0.03 acre) and because the canal is an artificial structure created in the upland and is not a special aquatic site.

The Final EIS has been updated to include language that clearly summarizes the conclusions about impacts to waters of the U.S.

Comment D-58

Response

LOGAN NORTHERN CANAL RECONSTRUCTION PROJECT Draft Environmental Impact Statement

██████████
May 2, 2011

Natural Resources Conservation Service
United States Department of Agriculture
3949 South 700 East, Suite 500
Salt Lake City, Utah 84107

REC: MAY 05 2011
PROJ: _____
FILE: _____
DIST: _____

ATTN: Alana Spendlove

Re: Logan Northern Canal Reconstruction Project

Ms. Spendlove,

Thank you for this opportunity to offer some thoughts as to the mitigation of the disaster that befell the Logan Northern Canal in Logan, Utah on July 11, 2009. For purposes of simplicity and clarity, I will refer to the Logan, Hyde Park, and Smithfield Canal as the 'upper canal', the Logan Northern Canal as the 'middle canal', and the Logan and Hyde Park Canal as the 'lower canal', otherwise known as the twin ditches.

First of all, some declarations need to be rescinded. As I understand it from media accounts, this disaster has been declared an "act of God." It was not an act of God. It was a consequence of human (mostly manmade) mistakes and folly. Numerous longitudinal studies have documented increased water seepage all along the bluff both above and below the middle canal, mostly attributed to Utah State University. Several landslides have previously occurred in the vicinity. Maintenance failures by the owners of the middle canal have also been documented leading up to the breach of the middle canal bank and consequent landslide.

It was not an Act of God. It was largely a result of the Logan Northern Canal Company shareholders being unwilling to admit that the care and maintenance of the middle canal had evolved into something over time that they were unable to financially sustain. It was a result of the Logan Northern Canal shareholders being unable to challenge the University as to the source of the hillside water. And it was a result of Utah State University not standing tall and taking responsibility for a growing problem of many years creation.

Second, the collapse of the middle canal afforded vested agricultural interests an opportunity to promote an agenda that they have wished for and dreamed about for years. That is the piping of the several canals, especially the upper canal, to deliver more water for their agricultural pursuits. This is clearly seen in the rapidity with which and the

May 2, 2011 1

D-58.1

Comment noted.

D-58.2

Comment noted.

D-58.1 ▶

D-58.2 ▶

Comment D-58 (continued)

Response

LOGAN NORTHERN CANAL RECONSTRUCTION PROJECT Draft Environmental Impact Statement

comprehensiveness of the plan they have put forward and strenuously argued for. This long held agenda is something that the canal companies and agricultural interests have not been able to do on the own as they have not the wherewithal, but the middle canal landslide has accorded them access to public money to fund their agenda. I am a member of that public, and I do not want to fund their agenda with my money.

The so-called Logan Urbanized Area (LUA) is growing rapidly. It has grown exponentially over time, and will continue to grow rapidly. Projections are for a doubling of the population by 2030 or 2040, depending on whose projections are used. It is well known and well documented that conversion of agricultural lands to an urban use reduces the amount of water usage by up to half according to some sources. Testament to this fact is in evidence here in the essential de-watering of much of middle canal. What came to be to service agriculture is no longer needed as such for much of its length.

In 20 or 30 years, the agricultural lands that these vested interests want to serve with the publicly financed increased water delivery will all largely be urbanized. The increased water will then only be a problem as urban runoff and non-point source pollution, which we the public will then be asked again to pay for as in the recently imposed storm drainage fee. We do not fully appreciate the contribution of the open canals in storm water runoff. We have only to visit our sister city, Preston, to witness the deleterious effects of poorly planned canal piping and the resultant flooding, standing water, and reduced quality of life.

Third, a driving force in the continued growth and increased urbanization in the LUA is the quality of life that is available to all. A significant component of that quality of life is the natural setting, the presence of open space, and the immediately accessible recreational opportunities. Numerous testimonials exist of the importance these factors have had in the decision making of individuals and industries in their choice of location and where to live. Adding immensely to that nature and recreation is the presence of the open canals and the concomitant riparian zones slicing through our community. The cooling and calming qualities of flowing water and shade trees is invaluable in the concrete and asphalt jungle that is increasingly the dominant characteristic of modern cities. The natural setting offers vital wildlife habitat, and accords people the opportunity to observe and sustain that wildlife, especially birds and fowl, and serves as a welcome peaceful respite in today's hectic urban life.

On several occasions Logan City has researched quality of life issues in developing Master Plans for the Parks and Recreation Department. Always showing up as among the most valued attributes in research and citizen surveys is the upper portion of the middle canal between 400 North and 600 East and First Dam. The canal bank trail offers a cool and shaded refuge that is (or was) tremendously popular with walkers, joggers, mountain bicyclists, university students, and even equestrians. This was one of the few urban trails in Logan where one always encountered other users. It was that popular. It is simply indispensable in the creation of a comprehensive and efficient urban trail system in Logan. It must be restored.

May 2, 2011

2

D-58.3

Comment noted.

D-58.3 ▶

Comment D-58 (continued)

Response

D-58.4 ▶

LOGAN NORTHERN CANAL RECONSTRUCTION PROJECT

Draft Environmental Impact Statement

To my knowledge the necessary research and studies have not been done to understand the contribution of the open canals to groundwater recharge, wetlands, seeps, springs, and artesian wells throughout Cache Valley. A very serious alternative to surface water storage in reservoirs is the maintenance and replenishment of groundwater aquifers. This is an option that is very feasible here in Cache Valley. It deserves and demands a full and thorough examination before it is unilaterally removed from consideration by this agenda driven proposal. This seems to me fundamental before any endeavor of this magnitude can be undertaken. To augment one persons water might in fact mean reducing or eliminating another's. This is no small consideration.

D-58.5 ▶

Fourth, extremely short shrift has been given the logical and responsible decision of repair and restoration of the middle canal in the face of the well-organized, agenda-driven proponents of canal piping. Consider the California Aqueduct. This traverses a wide variety of terrain and topography including the notorious San Andreas Fault, and does so successfully. Surely we can solve our minor problem. One has only to examine the upgraded water delivery system for the Logan City hydro-electric plant at First Dam. The pipeline is supported at wide intervals by concrete pylons. Surely in the case of the middle canal sufficiently stable soils can be found to effect support of a pipe or box culvert over the short distance of the hillside slide. The hydrologic engineers at USU design and construct irrigation systems all over the world. Surely the expertise is there to solve this relatively small matter in a financial and environmentally responsible way.

The analysis of this option in the draft Environmental Impact Statement (DEIS) is so grandiose and exorbitant, involving piping the whole of the upper middle canal and construction of a huge earthen toe and embankment the entire length requiring extensive property acquisition and structure demolition such that the cost rivals and/or exceeds that of the agenda-driven, so-called 'purple alternative', way beyond anything that is needed or that is financially responsible, that one is irresistibly compelled to the conclusion that it was done deliberately to eliminate the consideration of the repair and restoration of middle canal as reason and common sense suggest. The DEIS analysis of this option is so outlandish, excessive, and profligate that it raises grave and, in my estimation, fatal doubts about the evenhandedness and fairness of the overall DEIS and seriously undermines it's utility in arriving at a socially acceptable course of action.

We have to remember this hillside bluff has existed for ten thousand years and the middle canal for over a hundred. Landslides and water percolation have only recently become problems as a consequence of human activities. We humans can solve this problem in a financial and environmentally responsible way that preserves and promotes nature, recreation, and our precious water resources now and in the future. The so-called 'purple alternative' identified in this DEIS does not do that.

D-58.6 ▶

I would ask you to survey the purple alternative proponents, and any others for that matter, as to how many floated or 'tubed' the upper canal and how formative and impressionable that enjoyable experience was on their overall lifestyle and philosophy. What friendships were created or strengthened? What perspectives on nature and recreation were instilled and intensified? I am quite sure it was significant. We should be

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D-58.4

Please see the discussion beginning on page 5-90 of the Final EIS regarding canal seepage. NRCS used the best available information and did not conduct further studies on how the canals affect Cache Valley wetlands, seeps, springs, and artesian wells. Previous studies note the seepage losses but do not provide detailed information about where the water that seeps into the ground travels. NRCS determined that enclosing short reaches of the LN Canal and/or LHPS Canal would significantly affect regional groundwater conditions.

D-58.5

The City of Logan's diversion and pipeline from First Dam do not travel across the Logan Bluff. The Blue Alternative is in a different location with very different slope stability conditions.

NRCS determined that the Blue Alternative, which is the alternative that the commenter refers to as the restoration of the middle canal, could meet the purpose of and need for the project as proposed. The Blue Alternative includes elements that would be needed for the safe delivery of water through the historically unstable area. These elements are not included to make the alternative grandiose or exorbitant; they are included to ensure that, if the alternative were selected, it would operate as safely as possible. However, the EIS recognizes that risks to life and property would remain even after implementing the Blue Alternative as described in Chapter 3, Alternatives.

D-58.6

NRCS understands that many people living in the project area have enjoyed recreational use of the canal system. However, the canals are not a public recreational resource; they are privately operated water-delivery structures. Addressing restoration of these structures as a recreational resource is outside the scope of activity allowed under the EWPP.

Comment D-58 (continued)**Response**

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working to preserve and promote that recreational opportunity for the young and the young at heart rather than fencing it off and piping the canal as some would have it. It is much too much of a valuable resource to lose.

Thank you for the opportunity of submitting these thoughts.

Most urgently yours,


Russell Goodwin

May 2, 2011

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