Comment 921

Response Section in Chapter 32 ➥

Comment #: 921

Date: 9/6/2013

Source: Email

Name: Mark Biddlecomb

Location:

Comments:

<See attachement on next page, titled Ducks_Unlimited_Letter_9-6-13.pdf>

Comment 921 (continued)

Response Section in Chapter 32 ➥

DUCKS UNLIMITED

Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, CA 95670-6116
(916) 852-2000 Fax (916) 852-2200
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September 6, 2014

Randy Jeffries
Utah Department of Transportation
West Davis Corridor Project
466 North 900 West
Kaysville, UT 84037

Dear Mr. Jeffries:
Ducks Unlimited, Inc. is pleased to have the opportunity to submit comments on the **Draft Environmental Impact Statement** (DEIS) for the West Davis Corridor (WDC) Project in Davis and Weber Counties. Ducks Unlimited, Inc (DU) is a 76 year-old, private, non-profit 501(c)(3) conservation organization dedicated to restoring, enhancing, protecting, and managing wetlands and associated habitats to help fulfill the annual life cycle needs of North American waterfowl. Protection, restoration and enhancement of wetlands has been the primary DU mission since 1937, and today we are known as the world's leader in wetlands and waterfowl conservation.

DU takes a continental approach to conservation and restoration. Utah falls within the Pacific Flyway, the westernmost migration corridor used by millions of waterfowl each spring and fall, which stretches 4000 miles from the Arctic to the west coast of Mexico. DU has conserved more than 984,000 acres of waterfowl habitat within the US portion of the Pacific Flyway. The great Salt Lake Ecosystem is one of the most important waterfowl habitats in this flyway. Annually, millions of birds utilize The Great Salt Lake's vast marshes and plentiful food resources for migration staging, nesting, and rearing young. The Great Salt Lake is so important to waterfowl that it overshadows all of Utah's other waterfowl areas, including those in Utah Lake, the Unitah Basin, and Cache Valley.

32.14.2A
32.14.2H

However, over the last 100 years, much has changed in this critical ecosystem. Habitats have drastically changed, water supplies have become limited, invasive species are rampant, waterfowl production is down, and we may never witness the once vast and impressive flocks that early explorers encountered. Yet, a healthy wetland ecosystem in the Great Salt Lake area remains absolutely critical for large segments of the continental population of many waterfowl species. The Great Salt Lake is of particular importance for Northern Pintails, Cinnamon Teal, Gadwall, Green-winged Teal, Tundra Swans, Redheads, Ruddy Ducks, Common Goldeneyes, Mallards, and Canada Geese (the Rocky Mountain Population). Farmington Bay waterfowl management area (WMA) alone, on the east shore of the Great Salt Lake, contains more than 18,000 acres of protected waterfowl habitat, and is the most important Cinnamon Teal breeding area in the west.

32.14.2I

Therefore, Ducks Unlimited submits this letter in concern over the development of the West Davis Highway, which if built as proposed, constitutes a serious threat to the biological integrity of the Great Salt Lake wetlands. We concur with the assessments done by the Nature Conservancy; numerous direct and indirect impacts have not been fully analyzed in the current DEIS. For example, the DEIS does not adequately

Leader in Wetlands Conservation

Comment 921 (continued)

Response Section in Chapter 32 ➥

32.13B
32.23A
32.13B
32.14.2J
32.14.2H

address the indirect effects of stormwater runoff generated from the highway and from any development that this highway is going to foster in surrounding areas. All runoff from the highway will pass into the Preserve. Stormwater changes the volume and timing of runoff water, affecting flood control and water supply, and increases contaminants in the water, all of which have impacts on habitat and wildlife. Damage to all Preserve properties must be avoided or fully mitigated to prevent significant and irrevocable loss of critical habitats. Additional analyses of impacts, and methods to avoid or mitigate those impacts, must be included in the EIS.

Thank you for the opportunity to comment.

Sincerely,

Mark Biddlecomb
Director

Comment 922

Response Section in Chapter 32 ➥

Comment #: 922
Date: 9/6/2013
Source: Email
Name: Carl & Denise Horne
Location: Kaysville
Comments:

32.2.13B

I am strongly opposed to any decision to allow the West Davis Corridor to use the Shepard Lane Route.

32.2.3A
32.2.13B

There are numerous reasons- However overall the impact to people is too large a cost.
I support the Glover Lane Route to be used - it has the least impact to people, is more cost effective, and better solution for the road itself (congestion/usage).

Denise E. Horne

WEST DAVIS CORRIDOR

Comment 923

Response Section in Chapter 32 ➥

Comment #: 923

Date: 9/6/2013

Source: Email

Name: Warren Hatch

Location: Farmington

Comments:

32.2.13C
All: We appreciate this opportunity to voice our opinion regarding
UDOT's preferred alternative for the West Davis Corridor freeway. In short, we strongly oppose UDOT's
position, particularly as it relates to the Glover Lane alternative. We agree with the positions expressed in great
detail by Robert F. Steward, Regional Environmental Officer, United States Department of the Interior, in his
August 14, 2013 letter to James Christian, Division Administrator, FHWA Utah Division, and by Dave Millheim,
Farmington City Manager, in the city's September 6, 2013 letter to Paul Ziman, FHWA Utah Division. Among
our many shared concerns: The Glover Lane alternative is not the least environmentally damaging practicable
alternative. UDOT hasn't fully considered both direct and indirect environmental impacts to the shores of
the Great Salt Lake (and its occupants). UDOT has undervalued the significance of conservation easements
in and around Farmington. UDOT and FHWA must recognize the irreplaceable resource of the Great Salt
Lake ecosystem and select the least damaging alternative. All build alternatives would cause significant,
permanent impacts to the wetland and wildlife resources associated with the Great Salt Lake ecosystem.
UDOT should fully vet the â€oeShared Solution. Of the build alternatives, Alternative B would have the least
overall impact to wildlife and wildlife habitat, because the impacted wetlands are more fragmented, surrounded by
more development, and of lesser wildlife value than those of Alternative A. The wildlife buffer zone analysis
should be extended from 1,300 feet to 4,000 feet (a distance supported by current road ecology science) to more
clearly highlight the difference between the alternatives. The Glover(s) Lane alignment would cause greater
impacts than the Shepherd Lane alignment due to the high value shore land habitats of Farmington Bay west of
Glover(s) Lane, especially if the buffer zone is extended to 4,000 feet. The shore land habitats north of the
Farmington Bay Waterfowl Management Area and west of and immediately adjacent to the Glover(s) Lane
alignment are primarily high value and would incur substantial impacts from a new road corridor. Because the
shore lands of the Great Salt Lake are a unique and irreplaceable resource, the alignment furthest from the Great
Salt Lake shoreline should be selected. The Glover(s) Lane option would result in the construction of a 4-lane
freeway adjacent to the lake shore which would permanently and irreparably degrade the wildlife values of the
shore land habitats. Alternative B1 isn't the Least Environmentally Damaging Alternative under Section
404 of the Clean Water Act. The Draft Environmental Impact Statement doesn't provide any commitment
to mitigate the impacts on the unique resource of the Great Salt Lake shoreline habitat. Construction of a
new 4-lane freeway adjacent to the Great Salt Lake shore lands would have significant, irreparable impacts to the
wildlife populations that rely on those habitats, would substantially degrade the value of that habitat, and would
permanently alter the composition of the wildlife community in the area. UDOT's determination that the
Glover(s) Lane option would have de minimis impact on the Great Salt Lake Shorelands Preserve (with no
adverse impacts to its features, attributes, or activities) is dubious, at best. The size and traffic volume of the
proposed West Davis Corridor Glover(s) Lane option far exceeds that of the existing Glover(s) Lane and would
introduce a suite of impacts very different from that of the current road and transmission line, including: noise,
light, visual disturbance, habitat degradation from pollution, invasive plant species, decrease water quality,
onroad
mortality, and barriers to movement. The Draft Environmental Impact Statement doesn't provide the
public with sufficient relevant information to allow meaningful feedback and discussion regarding whether such a
road is needed, whether the trade-offs required are worth it, and whether less damaging or more feasible and
prudent alternatives have been fairly analyzed. The Glover(s) Lane alignment frustrates Farmington City's
intention to remain a rural community with planned areas of functioning commercial development, will injure the
quality of life of its residents, will injure the quality of the environment, will create economic losses and create
other environmental injuries. â€¢ It currently isn't clear whether this Project is needed at all for the Region in
2040 and it clearly isn't needed by that time (if ever) in Farmington City. The assumptions regarding
future North/South travel demand are doubtful, especially in view of the noted preferences of the younger

32.31R
32.14.2H
32.3F
32.27A
32.14.2H
32.2.1G
32.14.3L
32.14.2H
32.14.3E
32.14.2J
32.14.2H
32.27B
32.27C
32.31Q
32.2.13C
32.1.2A
32.1.2F
32.1.2G

Comment 923 (continued)

Response Section in Chapter 32 ➥

workers
in the Region to find local employment and to not become commuters. If a Need can be demonstrated for the
West Davis Corridor, Centerville, Farmington, and Kaysville should be excluded from the Study Area, as so little
Need appears to exist there. Farmington City's Conservation Easements (trails and their destinations)
haven't been given appropriate consideration. The problems with this Draft Environmental Impact
Statement are significant and far reaching enough that a new or revised one must be taken before a final EIS
may
be prepared. Further effort must be invested in the Alternatives Analysis to include the roads located in the
entire corrected Study Area and allowing for a full review of an alternative or alternatives that don't require the
West Davis Corridor. If it is concluded that a portion of the currently contemplated West Davis Corridor is
required based on a revised effort on the Need for the Project, then interchanges located north of Farmington
City
must be studied. Due to the bottleneck created by the Great Salt Lake and the Wasatch Mountains in the
Farmington/Kaysville area, construction of additional freeways in this area should be avoided. Insufficient
effort was made to understand local Farmington needs. The Glover(s) Lane alignment isn't compatible with
the Farmington City General Plan, nor it's Master Transportation Plan, and it doesn't improve mobility (or
safety) in this area, nor does it enhance peak-period mobility over the no action alternative. â€¢ The Glover(s)
Lane option doesn't fully support a continuous future Great Salt Lake Shoreline Trail (shown in the
Farmington City Trails Master Plan), and detrimentally impacts the trails that access Farmington City's
Conservation Easements along the shore of the Great Salt Lake and will destroy the Conservation Easements,
the Purposes for which they were entered and the numerous conservation values they are designed to protect.
UDOT's preferred alignment curtails the regional movement of automobile traffic from the West Davis
Corridor to one of the largest regional transportation hubs on the entire UDOT system (the existing Park Lane/I-
15/US 89/Legacy Highway interchange). UDOT's preferred alignment has no east to west connectivity for
the Farmington Front Runner commuter rail service. UDOT's preferred alignment provides no access to a
major (500 acre) Regional employment and shopping center (Farmington Station). UDOT's preferred
alignment limits bicycle and pedestrian trail opportunities under Farmington City's Master Plan, detrimentally
impacts current and future trails, and destroys the destinations for a number of trails. UDOT omitted from the
cost of its preferred alternative a multi-million dollar interchange planned for I-15 at Shepard Lane, while including
it in the costs of other alternatives, skewing the costs in favor of the preferred alternative. There is no traffic
advantage within the Farmington City area to any of the build alternatives in comparison to the No-Action
Alternative. The Glover(s) Lane option, while encircling west Farmington with freeways, provides no local
connections to Farmington. UDOT must be assuming the primary function of the West Davis Corridor (with the
Glovers Lane option) is to move vehicles past Farmington. The bridge structures in the Glover(s) option are
clearly longer than those in the Shepard option, increasing maintenance and motorist exposure to icy/snowy
conditions. The Glover(s) lane option clearly results in a greater loss of developable land and impacts
Farmington City's only light manufacturing area. â€¢ UDOTâ€™s discussion of impacts appears designed to
result in the forgone conclusion that Alternative B1 would be the preferred alignment. UDOT's preferred
alternative basically leaves the west side of Farmington City as an isolated area with no access benefits provided.
It has a large footprint and will create significant noise in a formerly quiescent area. UDOT's preferred
alternative runs counter to Farmington City's land use plans (clustering housing near transit opportunities)
that impacted CNN/Money Magazine's recognition of Farmington City as the 14th most livable city in the
United States. Davis and Weber counties have experienced a significant increase in employment
opportunities, resulting in less need for commuter-based additional freeways. UDOT should ensure that roads
aren't built based on an old paradigm. Impacts on air quality, noise, and water quality haven't been
sufficiently examined. â€¢ The Draft Environmental Impact Statement fails to treat Farmington City's
Conservation Easements as Section 4(f) properties, while Farmington City is legally obligated to protect all of the
conservation values and purposes articulated in those easements. â€¢ The Draft Environmental Impact
Statement
also fails to treat The Nature Conservancy Conservation Easements as Section 4(f) properties. We appreciate
this opportunity to express our concerns and hope this process will result in a better solution for Davis and
Weber County traffic needs.

Sincerely,
Warren L. Hatch

32.2.1C
32.3F
32.31Q
32.2.1M
32.2.1Q
32.2.13O
32.10H
32.3F
32.1.2F
32.2.13O
32.10H
32.31H
32.24A
32.1.2F
32.31H
32.2.13C
32.3E
32.1.2F
32.11.1A
32.12A
32.13A
32.27A
32.27B

Comment 924

Response Section in Chapter 32 ➥

Comment #: 924
Date: 9/6/2013
Source: Email
Name: Brett Neville
Location: farmington

Comments:

32.14.2B

I live in farmington and have enjoyed the farmington bay area with all the wildlife and birds. The eagles have been very impressive. I have tried to find out if any studies have been done on the roosting areas with
the new freeway and nobody seems to know. Will we see fewer eagles with the new road? Will it affect other raptors? What does the Farmington Bay management team say about it? We have heard nothing from them
Thanks

Comment 925

Response Section in Chapter 32 ➥

Comment #: 925
Date: 9/6/2013
Source: Email
Name: Steve Meyer
Location: Salt Lake City

Comments:

<See attachment on next page, titled UTA_Letter_9-6-13.pdf>

Comment 925 (continued)

Response Section in Chapter 32 ➥

UTAH TRANSIT AUTHORITY

UTA

669 West 200 South
Salt Lake City, UT 84101

September 6, 2013

Mr. Randy Jeffries, PE
Utah Department of Transportation
Region 1
166 West Southwell Street
Ogden, Utah 84404-4194

Re: UTA Comments - West Davis Corridor Draft Environmental Impact Statement

Dear Mr. Jeffries:

The Utah Transit Authority (UTA) appreciates this opportunity to comment on the Utah Department of Transportation's (UDOT) Draft Environmental impact Statement for the West Davis Corridor. UTA has been a participating agency since the inception of this project and will continue to participate through construction and operation of the proposed facility.

UTA's 2013 mission statement: *Utah Transit Authority strengthens and connects communities enabling individuals to pursue a fuller life with greater ease and convenience by leading through partnering, planning, and wise investment of physical, economic, and human resources.*

32.1.2B

As per the above statement, UTA supports transportation improvements as identified in *Utah's Unified Transportation Plan 2011-2040.* The Unified Plan is a compilation of statewide transportation and transit needs for the next 30 years through the coordinated efforts of transportation, transit, and planning organizations and agencies. West Davis Corridor is listed in Phases One and Two of the plan.

UTA offers the following comments to the Draft EIS with respect to the UTA owned facilities and our operations in the project corridor:

FrontRunner Commuter Rail

The FrontRunner commuter rail system began its environmental process in October 2002 and opened for revenue service in April 2008. Approximately 13 miles of the FrontRunner right-of-way is abutting the I-15 right-of-way.

To address the issues associated with the design, construction, operation and maintenance of the I-15 freeway and FrontRunner in such close proximity, UDOT and UTA commissioned the "*I-15 North and Proposed Commuter Rail Collaborative Design Planning Study*" (Study), dated September 28, 2007. The Study addresses the impact and actions of the two parties associated with the future reconstruction of I-15 and the future double tracking of FrontRunner.

ISO 9001: 2000 and ISO 14001: 2004

1-888-RIDE-UTA www.rideuta.com

Comment 925 (continued)

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32.2.4D

The West Davis Corridor alternatives A1, A2, B1 and B2; as shown in Figure IV-194 of the DEIS, impact the area in the Study identified as 'Conflict Zone (issue) #12 – Centerville to Farmington' (Appendix A, pages 11-16 of the Study). The proposed ramp connecting the West Davis Corridor with I-15 appears to occupy the space needed for the future double tracking of FrontRunner. This would be an unacceptable impact to UTA because the future double tracking of the FrontRunner system is critical to providing future ridership capacity increases and increasing operating speeds and on-time reliability.

32.2.6F

The West Davis Corridor alternatives A3, A4, B3 and B4; as shown in Figures IV-197 and IV-198 of the DEIS, impact the areas in the Study identified as 'Conflict Zone #13 and #14; Farmington Station and Oakridge Country Club, respectively. Significant track relocation of both FrontRunner and Union Pacific Railroad would be required as shown in the figures. This appears to be feasible if construction is phased to minimize disruption of train operations and the design allows for the future double tracking of FrontRunner.

Denver and Rio Grande Western (DRGW) Rail Corridor

32.27I

The DRGW Rail corridor was purchased by UTA from the Union Pacific Railroad in 2002. Union Pacific Railroad filed a Notice of Exemption with the United States Surface Transportation Board (STN) seeking to abandon approximately 23.69 miles of the DRGW corridor. UTA filed a subsequent letter requesting that the STB issue a Notice of Interim Trail Use (NITU) regarding the DRGW corridor pursuant to the National Trails Act (16 U.S.C. §1247(d) and 49 CFR § 1152.29). The STB granted the NITU, suspending the abandonment proceedings and designating an interim use of the DRGW corridor as a public trail. The NITU, and therefore the use of the trail, is subject to future restoration of rail service on the DRGW corridor. UTA has a legal obligation to maintain the rail corridor alignment in a configuration that allows for future rail use. In addition, UTA may have a yet undetermined need in the future to provide a transit use in the DRGW corridor.

32.2.4E

The West Davis Corridor alternatives A1, A2, B1 and B2; as shown in Figure IV-195 of the DEIS, appear to pass over the DRGW on a fill section with the DRGW corridor in a structure underneath. In order to meet UTA's legal obligation with respect to the DRGW corridor, UTA would require that the entire width of the DRGW right-of-way be maintained in the structure under the roadway with 23.5 feet of vertical clearance.

32.2.6G

The West Davis Corridor alternatives A3, A4, B3 and B4; as shown in Figure IV-198 of the DEIS, adversely impacts the DRGW rail corridor. In order to meet UTA's legal obligation with respect to the DRGW corridor, UTA would require an alignment of the DRGW rail corridor that meets the horizontal and vertical requirements for freight rail operation.

32.16C

The Section 4(f) analysis in the DEIS identifies the Denver & Rio Grande Western (D&RGW) Railroad as an NRHP-eligible linear historic site. UTA agrees with this designation. The analysis says that Alternatives A3, A4, B3, and B4 would have an Adverse Effect on the D&RGW railroad and UTA concurs. The DEIS states that Alternatives A1, A2, B1, and B2 would have No Adverse Effect on the D&RGW railroad because the new road would cross the railroad via a bridge. If, as stated previously, the bridge would accommodate future

9001:2000 and ISO 14001: 2004

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Comment 925 (continued)

Response Section in Chapter 32 ➥

Mr. Randy Jeffries, P.E.
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Page 3

transit use, then UTA concurs with this determination. If not, then UTA does not concur with the finding of No Adverse Effect.

32.27I In addition to its designation as an historic resource, the Section 4(f) analysis in the DEIS also identifies the D&RGW Trail as a public recreation area Section 4(f) resource. While the trail is publicly owned and currently opened to the public for recreational use, it should not be designated a Section 4(f) for this purpose.

32.27I 23 CFR 774.11(h) states that "When a property formally reserved for a future transportation facility temporarily functions for park, recreation, or wildlife and waterfowl refuge purposes in the interim, the interim activity, regardless of duration, will not subject the property to Section 4(f)." This is the case with the DRGW trail. As noted previously, UTA received a Notice of Interim Trail Use from the STB on December 31, 2002. This type of interim use protects the corridor right-of-way from being treated as "abandoned" for railroad purposes. Consistent with the Railroad Revitalization and Regulatory Reform Act's provisions to preserve established railroad rights-of-way for future reactivation of rail service, UTA worked with local municipalities to preserve the corridor for future transit use through the interim development of the trail.

UTA Bus Service

32.2.13D 32.31I 32.2.13O None of the alternatives have significant impact to existing UTA bus routes. The West Davis Corridor would likely serve as part of future bus routes as the area surrounding the West Davis Corridor develops. It would be beneficial to UTA to use the West Davis Corridor to provide bus connections to FrontRunner stations. Alternatives A3, A4, B3 and B4 would provide a convenient connection to the Farmington station with the connection to Park Lane. Alternatives A1, A2, B1 and B2 do not have a convenient connection to Farmington Station because of the long distance proposed between interchanges (Glover Lane to 200 North). An additional interchange that would provide a connection to Clark Lane would improve future bus transit access in this area.

We appreciate the opportunity to provide these comments.

Sincerely,

W. Steve Meyer
Chief Capital Development Officer

9001:2000 and ISO 14001: 2004 1-888-RIDE-UTA www.rideuta.com

Comment 926

Response Section in Chapter 32 ➥

Comment #: 926
Date: 9/6/2013
Source: Email
Name: Jennifer Diehl
Location: Farmington

Comments:

32.1.2A 32.2.13C 32.2.13C 32.31R 32.2.1F 32.31R 32.2.3A 32.2.1G 32.2.2H 32.2.1J 32.31O 32.2.1G

Dear Governor, I am a relatively new resident of the Farmington area, and though I grew up in Logan, have spent most of my adult years in various cities around the country. My husband and I recently moved to Farmington because of the quality of life we can enjoy here including close proximity to Salt Lake where my husband works. We have become appalled with the apparent disregard for this quality of life enjoyed here in Farmington by what appears to be special interest groups, the Utah Department of Transportation (UDOT) and the State of Utah. The West Davis Freeway is an absurdity at best, fraudulent and irresponsible at worst. The idea that what is most beneficial to residents of West Davis County and the taxpayers of Utah is to run a Legacy extension parallel to the existing Legacy Highway starting at Glover Lane is clearly being driven by irrational or dishonest motives. The existing Legacy Parkway doesn't even end until Park Lane, north of where the Glover Lane interchange would constructed. Not to mention the idea that feeder roads would be constructed at Clark Lane where Eagle Bay Elementary School is located. There can be no financial or other rational justification, particularly considering the amount of wetland and wildlife the freeway would displace were it put in at Glover Lane. Yesterday, I read the report produced by the United States Department of Interior which also clearly disputed the claims made by UDOT regarding the eviability of the Glover Lane alternative. Farmington City has also recently taken a stand against the West Davis Freeway. Farmington residents already enjoy to I-15, the existing Legacy Highway, I-89, and FrontRunner. There is no need for this extension in Farmington. I would argue, alongside the Department of Interior, that there is no need for this freeway at Shepherd Lane in Kaysville either. West side residents of both Farmington and Kaysville can never build far west enough due to the same wildlife and wetland issues to justify west side access to a Legacy extension. Clearly residents of Syracuse, Roy, and potentially Layton, may be much more interested in this extension and are the only communities to actually be served by the proposed freeway. It would stand to reason that these communities should develop solutions, but ones that don't severely and negatively impact ours. The Shared Solution, proposes to convert existing infrastructure into more efficient throughways. I would urge you to more seriously consider this alternative. Considering the poor air quality along the Wasatch Front, and the promises made by you and your office to create solutions, it is very frustrating that there continues to be no real commitment to transportation solutions that improve the air quality and encourage market-driven incentives to drive less, increase FrontRunner ridership and other public transportation options, and preserve some of the land that makes this state so amazing. It seems that developers and deep pockets are driving much of the decisionmaking regarding this freeway and many of the growth policies in the state. I understand that growth needs to occur and that progress sometimes means new roads, freeways and other public infrastructure, but there needs to be accountability from your office and UDOT with regard to how taxpayer money and resources are utilized. Please urge UDOT to reconsider their position on this freeway and further explore more viable, environmentally friendly, and financially responsible alternatives such as the Shared Solution. Very sincerely yours, John and Jennifer Diehl

Comment 927

Response Section in Chapter 32 ➥

Comment #: 927

Date: 9/6/2013

Source: Email

Name: Boni Peterson

Location: Farmington

Comments:

32.2.1A 32.2.1J 32.1.2A 32.1.2C 32.2.1J 32.2.13D 32.27A 32.14.2H 32.2.13C 32.14.2B 32.14.2A 32.14.2H 32.2.2H 32.2.1A 32.11.1A 32.2.13D 32.2.1H 32.12A 32.18B

I am writing in regards to the West Davis Corridor proposed to be built in Davis County. I feel the $600+ million dollars could be better spent on mass transit and making existing roads more efficient. It is odd to me that as I speak to people about the WDC they feel it is inevitable and it has to be built. Yet, with further discussion they all agree that using money for mass transit is a much better solution. Why is it in our mentality that new roads must be built? Just because that's what we've been told as long as we remember? Why not try to preserve the unique landscapes that Utah has to offer? No other place in the U.S. is there a Great Salt Lake! Yet, we think it wise to put a freeway right on its' shores? What are we leaving for our children and their children? Ugly, noisy roads with more cars to add to the pollution? Last year, my husband and I took a trip to California we had to drive through L.A. and it was absolutely miserable with all their traffic. They continued to build new roads and freeways and it is a polluted mess! Let's learn from their mistakes. We can and should spend money on promoting the use of mass transit. Also, let's make it more affordable and accessible. As of now, UDOT's preferred route for the WDC is to completely bypass Station Park in Farmington, which has the frontrunner station. Yet, they claim their goal is to connect roads to mass transit!!! How is that happening with the WDC? Here are some more reasons as to why the WDC needs not to be built: I am concerned about the violation of Department of Transportation Act, Section 4(f). The lands on the west side of Farmington are conserved for the beautiful recreational trails. They have been maintained by Farmington city for the enjoyment of everyone. These shorelines are amazing and unique to our state. To harm them and rip them up to put in an ugly freeway, would be insanely disturbing. Just to cut someone's commute by 7-10 minutes? What are we leaving behind for our children? Pavement, billboards, noise, pollution! These lands are supposed to be preserved. The Buffalo Ranch easement protects approximately 284 acres. Why is this easement being discarded? Furthermore, UDOT has not sufficiently reported on all the indirect impacts this freeway will have on the wetlands. A more thorough research needs to be done. The fog in west Farmington is downright scary. West Farmington suffers from severe fog, especially in the winter, and mostly during the high traffic times, mornings and evenings. Add on the icy conditions and you have a disaster waiting to happen and it will! The fog can be so bad that it is even difficult to see the homes from the streets. How are emergency crews going to help all these accidents when there are no interchanges? Is this really a safe route? With no interchanges, (which I don't want) then emergency help will be delayed. Who is going to fund this help? Farmington city, which has no access to the freeway in the first place? What happened to protecting the American Bald Eagle? There are hundreds of these eagles that roost at Farmington Bay in the winter months. This area will be destroyed and then what? Not to mention all the other hundreds of birds that depend on this area for feeding all year long. Birds migrate all the way from South America as well as Canada. It would be a shame to destroy what few precious areas they have left, for an unsightful freeway. It is not only noise pollution that will drive them away, but light pollution, air pollution and other factors that were not considered in the DEIS. Utah is unfortunately becoming infamous for its poor air quality. Governor Herbert continues to promote clearing the air. Yet, building another freeway only promotes and encourages more driving. The funds should be put in mass transit. When I was a second grade teacher a few years back, there were several days that the children were not even allowed to go out to recess due to the poor air quality. In fact, there was one full week of not allowing the children to go outside! This is a problem that needs to seriously be addressed and building a new freeway only goes in the opposite direction of what we should accomplish which is to clear the air. As proposed, UDOT wants to build this freeway that doesn't even connect to mass transit. By going with the Glovers Lane option, it completely bypasses Station Park in Farmington. Supposedly one of UDOT's objectives is to connect to mass transit, yet this route is contradictory to that. How does UDOT address this concern? The WDC is proposed to be an elevated freeway with no regulations such as was instated for the Legacy highway. Legacy has special pavement to reduce the noise. Why are not the same regulations being proposed for the WDC? What actions are being taken to help reduce the noise in our neighborhoods? The WDC would also bring light pollution. Light pollution is

Comment 927 (continued)

Response Section in Chapter 32 ➥

32.18B 32.14.2H 32.15A 32.30C 32.2.1H 32.12A 32.2.13C 32.24A 32.31I 32.2.1A 32.2.3A 32.2.1A 32.2.3A 32.2.1G

now being linked to many health problems, including cancer. Is UDOT considering putting in special lighting to not have these problems? Are these included in the costs? Why not? Did UDOT consider how light pollution affects the many different bird species as well? The homes near the Glovers Lane option are required to have flood insurance. Now, UDOT wants to build a freeway even further out west increasing the risk of getting flooded. What precautions is UDOT doing to prevent flooding for the freeway? What about lake effect? Has UDOT considered the variations in weather and the closeness of having cars zoom by 65+ mph on a freeway that will most likely get flooded or at least have some water issues? How is building this freeway going to impact the flood plain and the homes that live near there? As of now, the wetlands help prevent flooding in the areas where homes
are, yet if they are destroyed, then what? Has UDOT thought about this? UDOT has been deceptive in their photo simulations, making it look like another Legacy. The aerial photos they provided at the open house in June 2013 were taken way back in 2008! Thus, making it look less devastating for the homes, parks and schools near the proposed route. This freeway runs through neighborhoods thus I demand that trucks be banned, that there be speed restrictions, that sound-reducing pavement is used, that sound walls are built, and that billboards are banned. Currently, UDOT doesn't have any interchanges in the DEIS report. Is this realistic? This proposes cause for concern when it comes to safety regarding accidents. Why is there not an interchange? Did UDOT not want to show the true costs versus the Shepard Lane option? I demand that a new DEIS report be made including the interchange that no doubt will be built with the new freeway! It has been reported that the interchange would be on Clark Lane, which is right where an elementary school is. Are you kidding me? Who in their right mind would put a freeway interchange on the same road as an elementary school?!? Please reconsider this. The building of a new freeway on the borders of the Great Salt Lake is a horrendous mistake. Let's think about using mass transit, especially since we've already put money into constructing it! Building more freeways only encourages more driving. Just yesterday I heard Gov. Herbert try to promote the use of mass transit. Let's practice what we preach and try a solution that doesn't spew pollutants in the air, that doesn't rip up our natural landscapes, that doesn't destroy precious wetlands (including the American Bald Eagle's winter roosting areas), that doesn't benefit anyone but a few that live out west. By putting more money into mass transit we benefit EVERYONE, not just a select few. We all breath the same air! Let's change our mentality that building new roads is the answer it is not. Let's take a closer look at the Shared Solution. Thanks for your time, Boni Peterson

Comment 928

Response Section in Chapter 32 ➥

Comment #: 928

Date: 9/5/2013

Source: Email

Name: Lionel Trepanier

Location: slc

Comments:

32.14.3E
32.2.1G
32.2.1A
32.2.1G
32.14.2I
32.14.3F
32.2.13C
32.14.2A
32.13B
32.11.2A
32.3E
32.2.1H
32.12A

RE: West Davis Corridor Environmental Impact Study This project proposal does not comply with the law. Consider these issues: LEDPA The steepest hurdle in obtaining a Clean Water Act section 404 permit is complying with the EPA's 404(b)(1) guidelines to select the Least Environmentally Damaging Practicable Alternative. There is no way that the Glover Lane alternative is the Least Environmentally Damaging Practicable Alternative. Explain how UDOT has come to this conclusion. Can UDOT demonstrate that no less environmentally damaging practicable alternative is available? What about the Shared Solution? Isn't that less environmentally damaging and practicable? EXHAUSTING ALL OTHER OPTIONS - Other options, like the Shared Solution, are available that could improve projected transit ridership, including expanded express bus service operating in bus-only or bus/high occupancy vehicle (HOV) lanes, additional park and ride facilities, commuter rail operating at greater frequencies, subsidized or free fares, rail transit combined with local shuttles to provide additional access to employment sites and midday destinations, rail transit combined with land use measures (such as density requirements near station locations), and combinations of these options. Can UDOT honestly say that these options, and others like them, have been fully examined in order to satisfy the test that all alternatives to building West Davis Corridor have been exhausted? EPA SAYS AVOID WETLANDS TO MAXIMUM EXTENT POSSIBLE - According to a letter from the EPA to UDOT January 6, 1999, the wetlands along the shore of the Great Salt Lake . . . are part of the Western Hemispheric Shorebird Reserve Network, providing resting, feeding, breeding, nesting, and rearing habitat for numerous species and millions of individual shorebirds, wading birds, and waterfowl. Many of these are migratory, while some are year-round residents. In addition to those avian species that are commonly recognized as specifically requiring wetlands and other aquatic habitats, the project area wetlands and playas serve the needs of many passerine and raptor species. The habitat values of the area wetlands alone make it imperative that these wetlands be avoided to the maximum extent practicable. What has UDOT done to avoid these wetlands? DEADLY FOG - West Farmington suffers from SEVERE fog, especially in the winter, and most often during peak traffic hours (morning or evening). Often the fog is so bad that homes are not even visible from the street. Won't it be deadly to have 70 mph traffic driving thru such conditions? WILD LIFE - Species of Concern that have been identified in Farmington Bay, such as the Bald Eagle, the American White Pelican, the Burrowing Owl, and the Ferruginous Hawk etc. will be impacted by the proposed freeway. Has UDOT considered the Ecological and Beneficial Use Assessment of Farmington Bay Wetlandsâ€ study done by Theron Miller, PhD and Heidi Hoven, PhD, and others like it (and if so, which studies) to determine both the direct and indirect impacts to these and other wildlife species? Additionally, the Great Salt Lake will have detrimental impacts as a result of road runoff which will include oil and gas byproducts. AIR POLLUTION HEALTH HAZARDS People living within 2 miles of a freeway live in a zone of increased air pollution. Those within 165 feet are exposed to 25-30 times more fine particulate matter than other people, and studies show this increases heart and lung disease, strokes, mortality rates, affects pregnancy outcomes, leads to cancer and autism etc. Freeways are literally cancer and autism corridors. How many homes will be within a 2 mile corridor of the proposed WDC? What studies has UDOT considered regarding air pollution and health hazards? If none, why not? UDOT'S OWN OBJECTIVES CONTRADICTIONS - One stated objective is to â€oesupport the objectives of the adopted local land use and transportation plans for communities west of I-15 in Weber and Davis Counties. This freeway goes against the transportation plans and land-use plans for Farmington City, so UDOT is clearly not meeting this stated objective. Why not? SOUND POLLUTION Legacy Parkway had special pavement used to reduce the noise associated with that Parkway. The proposed elevation of the freeway will cause sound to carry further into our neighborhoods. This was demonstrated this past winter when fog caused the noise from a bombing exercise on the Great Salt Lake bombing grounds to roll through the entire Salt Lake valley. I do not see that any actions been taken to reduce the noise levels that will impact our neighborhoods perhaps lower speed limits, special pavements, sound walls, etc. These considerations should be made for the benefit of the community and the

Comment 928 (continued)

Response Section in Chapter 32 ➥

32.18B
32.15A
32.2.1H
32.31I
32.2.13C
32.13A
32.14.2A
32.24A
32.31H
32.20B
32.31O
32.2.1G
32.14.2H
32.13B
32.14.2H

costs should be included in the DEIS. LIGHT POLLUTION Light pollution is being linked to increasing numbers of health concerns including sleep issues and certain types of cancers. Specialized lighting for roadways directs the light downward rather than out and into our neighborhoods. Is this type of lightening being considered for the freeway and if so are the costs associated with this specialized lighting included in the cost estimates in the Draft Environmental Impact Statement (Draft EIS)? FLOOD PLAIN DRAINAGE CONCERNS The proposed Glover Lane option runs right through a 100 year flood plain. Homeowners in the area are required by many lenders to maintain flood insurance as a result. Heavy rains in this area cause large amounts of runoff that all drain to the west toward the proposed freeway. What actions will be taken to ensure that drainage in the area does not adversely affect the homeowners in the area? THIS IS NO LEGACY PARKWAY - This is no Legacy Parkway like UDOT's photo simulations depict. Since this freeway runs thru residential neighborhoods, tell UDOT we demand that trucks be banned, that there are speed restrictions, that soundreducing
pavement be used, that sound walls are built, and that billboards are banned, similar to what's been done on Legacy Parkway. Tell UDOT there should also be no associated time limitations with these restrictions i.e. they should not expire in ten or twenty years. POTENTIAL ADDITIONAL OFF RAMPS - The DEIS does not identify Clark Lane as a connection to WDC, but once the record of decision is made, will UDOT change its tune? Has UDOT already considered this as a possible connector road but failed to disclose that information for fear of public outrage and because it would elevate the cost and impacts of the Glover Lane alternative over the Shepard Lane alternative? Making Clark Lane a connector road would be a disaster for the Ranches. It would divide the neighborhood, be a safety hazard for our children and would have a severe negative impact on Eagle Bay Elementary. ELEVATED FREEWAY CONCERNS - An elevated freeway has more impacts than a non-elevated road. The costs are huge, there will be more noise pollution, sight pollution (western views are GONE), and it will surely alter the hydrology system. What are the direct and indirect impacts to the hydrology system and how will those changes affect wildlife and biological species? COST CONCERNS - Why did UDOT double-count the costs of the Shepard Lane interchange in the Shepard Lane alternative? Isn't that a sneaky way to elevate the costs of the Shepard Lane alternative and make it look more expensive than the Glover Lane alternative? COSTS AND IMPACTS OF FILL DIRT - In many areas fill will be placed to elevate the roadbed to a height above potential flooding. This will be very large amount of material and will increase as the alternatives move west. What this fill material will consist of and where it will come from need to be documented. The direct and indirect impacts resulting from fill acquisition and especially the numerous trucks which may need to travel local roads to transport the fill need to be evaluated. PERSONAL GAINS - Are there people such as land developer, Senator Stuart Adams, who will benefit from this highway being built along west Farmington, that have influenced UDOT's decisions? How can UDOT expect the public to trust the process in light of questions like this? SHARED SOLUTION This is NOT a no-build alternative but an option that would enhance the existing transportation infrastructure to increase flow, expand east-west arterials, create boulevards to attract local businesses and new employers, implement more mass transit, and preserve quality of life in Davis County. The Shared Solution would actual serve to benefit residents of Davis County rather than being solely another direct transport to Salt Lake City. The Shared Solution would help improve air quality by reducing idle time at intersections, have no environment impacts, protect green space, and protect our current quality of life. Tell UDOT to look at the Shared Solution as another alternative BEFORE they move forward with this project! FRAGMENTATION Fragmentation is the loss of habitat integrity through the creation of barriers to species and ecological processes. Fragmentation will no doubt occur as a result of this freeway. Fragmentation of habitats can have serious consequences, and may include the following: erosion of genetic diversity and amplification of inbreeding, increased probability of local extinction from small population sizes and reduced likelihood of reestablishment, loss of area sensitive species, and increased abundance of weedy species. What has UDOT done to study the impacts of fragmentation and what are UDOT's plans for mitigation? THE "EDGE EFFECT" AND DEGRADATION - Associated with fragmentation is habitat degradation through what is called the "edge effect" or reduction in habitat integrity at the boundary of a highway corridor caused by disturbance, contamination, or other degrading factors that extend into the natural habitat. Numerous studies have been done on the edge effect of highways, and they generally conclude that the effects of
highways extend considerable distances into existing habitats to which organisms have become adapted. The wetlands of Farmington Bay and the Shoreland Preserve will be degraded by this freeway. Fossil fuel runoff will leach into soils and eventually make their way into the wetlands. Litter along the freeway will make it into the wetlands. Both fossil fuel runoff and litter will have impacts on breeding birds in the area. Has UDOT considered the edge effect and degradation of wetlands an â€oeimpactâ€ and if not, why not? FAILING TO RECOGNIZE

Comment 928 (continued)

Response Section in Chapter 32 ➥

32.14.2H

SEVERITY OF IMPACTS - It is clear that UDOT's has underestimated and failed to recognize the significance of the aforementioned impacts on wildlife species, biological species, terrestrial and aquatic habitat, etc. Though these systems may not be immediately or completely lost, the extent to which they perform will be moderately to severely reduced. I Demand that UDOT take these factors into account and identify them in their DEIS. Thank you. ~Lionel Trepanier Salt Lake City UT

Comment 929

Response Section in Chapter 32 ➥

Comment #: 929

Date: 9/6/2013

Source: Email

Name: Emily & Michael Murray

Location: Farmington

Comments:

32.2.3A
32.2.2H
32.11.1A
32.2.2G
32.1.2A
32.2.1J
32.2.1G
32.2.3A

Please do not support UDOT is allowing the West Davis Corridor to be funded. I heard your radio advertisement where you were encouraging us as citizens to use our mass transit to help our horrible air quality. Why on earth then, would you support building a freeway (in my next door neighbors backyard) that will only increase the air pollutants in our already horrible air?! A freeway, that as yet has been estimated to be carrying only 40% traffic capacity at a 40 year projection? Really, it's that desperately needed? Why can we not use the money to subsidize front runner, make that even more convenient and affordable? Use the shared solution; avoid ruining neighborhoods? Do we not want to have a great urban downtown setting? Well then we need to get mass transit running smoothly, like every other major town in this country. Please, do not go forward with this ill thought out, horribly expensive, destructive, freeway. There are better ways.

Comment 930

Response Section in Chapter 32 ➥

Comment #: 930
Date: 9/6/2013
Source: Email
Name: Bruce & Jeanmarie Bassett
Location: Farmington
Comments:

32.2.2H
32.2.13C
32.2.13D

I absolutely can't believe the Governor's office promotes clean air and public transportation, BUT YET when UDOT has the option to connect the West Davis Corridor to Frontrunner - they prefer NOT to connect it but rather choose a LONGER freeway route causing more pollution. Step up and tell UDOT to CONNECT TO FRONTRUNNER on the Shepherd Lane option for WDC!

Comment 931

Response Section in Chapter 32 ➥

Comment #: 931
Date: 9/6/2013
Source: Email
Name: Jacob Walker
Location: Salt Lake City
Comments:

32.1.2A
32.11.1A
32.2.1G

Concerning the West Davis Freeway. Why is UDOT considering a new freeway? What are the air pollution affects of this vs more mass transit? Air pollution is my biggest concern as a Utah resident with a young family. Building more freeways is a proven path to more single occupant vehicles adding to the worst air in the nation. More freeways are a short sighted solution to a long term issue. Please show that Utah is smarter than that. Listen to the voice of the people and consider other alternatives, including the Shared Solution. (http://www.sharedsolution.org)

Comment 932

Response Section in Chapter 32 ➥

Comment #: 932

Date: 9/6/2013

Source: Email

Name: Kristy Powell

Location: Farmington

Comments:

32.2.13C

To Whom it May Concern, My name is Kristy Powell and I am a resident of Farmington. When I tried to figure out why UDOT wants to build the West Davis Corridor when Farmington already hosts, I-15, Highway 89, FrontRunner and Legacy Parkway (not to mention Union Pacific) I was lead to Sen. Adams . . . and then to his real estate developments. I also found a conflict of interest and financial disclosure form signed by Senator Adams. Please note the substantial amount of property listed on page 3, #3. As you can see, Senator Adams has a lot to gain from the construction of the West Davis Corridor. As a Senator, Stuart Adams sponsored Senate Bill 229, which earmarked in excess of $60 million each year for UDOT's highway construction projects, such as the WDC freeway which links Senator Adam's real estate developments with the new freeway he helped finance with Utah taxpayer dollars. It's a fairly simple business model. Buy rural land cheap. Use your political office to influence UDOT to build roads to your land, and then sell the land at many times the price you paid for it. Simple, and according to the legislature's rules, totally ethical and legal. I just can't help but be slightly sickened by this. I discovered a purchase agreement between Senator Adams and Kaysville City. The purchase agreement in and of itself isn't all that unusual, HOWEVER the timing of the agreement is. Originally the West Davis Corridor had two options the Shepherd Lane Option (in Kaysville) and the Glover's Lane Option (in Farmington). In UDOTS original plan the Glover's Lane Option was much more expensive (thus the cheaper, Shepherd Lane was favored), then in October 2012, UDOT suddenly changed their numbers and the Shepherd Lane option became more expensive and the Glover's Lane Option was favored. I find it extremely interesting that a mere three months later Sen. Adams buys this land from Kaysville (now that Kaysville safe from the WDC running through their city.) It just seems that there are some shady things going on between UDOT changing their numbers, Kaysville City not wanting the freeway running through their city and Senator Adams purchasing this large amount of land in Kaysville. UDOT changes their numbers to please whom they want to please. The West Davis Corridor is not the answer for the people of the Wasatch Front. It is fiscally irresponsible to spend $600 million of tax payers when we have so many options that aren't being fully utilized. Why not put that $600 million in to making FrontRunner less expensive and more user friendly. I take ride FrontRunner ONCE a year, and that is when I take my kids, in the summer for their fun activityâ€ for that week. We ride the train! It is too expensive to take otherwise. Please, we already have all the pieces on the on the game board, we just need to play a smarter game.

32.31H

32.31O
32.2.3A
32.2.1J

Comment 933

Response Section in Chapter 32 ➥

Comment #: 933

Date: 9/6/2013

Source: Email

Name: Dave Livermore

Location: Salt Lake City

Comments:

<See attachment on next page, titled TNC_Letter_9-6-13>

Comment 933 (continued)

Response Section in Chapter 32 ➥

The Nature Conservancy
Protecting nature. Preserving life.

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nature.org/utah

September 6, 2013

Randy Jeffries
Utah Department of Transportation
West Davis Corridor Project
466 North 900 West
Kaysville, UT 84037

Dear Mr. Jeffries:

The Nature Conservancy ("the Conservancy") appreciates the opportunity to comment on the **Draft Environmental Impact Statement (DEIS)** for the West Davis Corridor (WDC) Project in Davis and Weber Counties. We also appreciate the amount of access and interaction that Utah Department of Transportation ("UDOT") has afforded to the Conservancy throughout the planning process.

The Conservancy is the world's largest non-profit organization devoted to land conservation. Our mission is to conserve the lands and waters on which all life depends. True to this mission, the Conservancy has over the past 30 years patched together the lands and waters that comprise the irreplaceable ecosystem that is the Great Salt Lake Shorelands Preserve. In June, 2004, with generous donations from numerous private and public sources, the Conservancy constructed the Visitor Center Pavilion and boardwalks at the Preserve, allowing thousands of Utah's school children to enjoy and learn about the amazing diversity of plant and animal life which call the Preserve home. The Preserve is also a place of solitude and quiet reverence - a place one can go to spend time in nature and hear nothing except the birds and wind blowing through the grasses. Such places are precious and few these days, particularly ones that are easily accessible for enjoyment by the public.

32.14.2I

No one can refute the fact that the West Davis Highway, if constructed, will forever alter the Preserve and properties beyond – the relatively intact ecosystem for migratory birds and other species, and the peace and quiet that define the Preserve – will be no more. The DEIS, for all its volume and "analysis", fails to provide the Conservancy and the public with sufficient information and assessment regarding direct, indirect and cumulative impacts of this massive highway. Others have called into question the basic need for the highway, in well-reasoned comments on the DEIS. As a science-based organization, the Conservancy wishes to focus on the lack of relevant scientific data included in the DEIS to determine impacts to wildlife. The lack of such data fundamentally undermines the DEIS as a basis for informed decision-making and public comment, which are basic goals of the National Environmental Policy Act ("NEPA").

Comment 933 (continued)

Response Section in Chapter 32 ➥

Our comments on the DEIS are as follows:

I. Background and Importance of Great Salt Lake Shorelands Preserve

Great Salt Lake with its wetland and upland habitats is arguably Utah's greatest natural treasure. As a spectacular home and stop-over for hundreds of avian species (an estimated 6-8 million birds annually) migrating from South and Central America north to Canada and Alaska and back again, this "oasis" in the arid western U.S. is an absolutely critical link in the Pacific Flyway. Great Salt Lake has received recognition and designation as a Western Hemispheric Shorebird Reserve Network Site due to its exceptional congregations of birds, that for certain species surpass those of any other migratory site in the world (see Appendix A). Over 2,000 acres of the Great Salt Lake Shorelands Preserve ("GSLSP" or "the Preserve") has also received State of Utah designation as a Migratory Bird Production Area (see Appendix B) and is a part of National Audubon Society's Farmington Bay Globally Important Bird Area. The DEIS, in 14.3.2.1 Great Salt Lake, acknowledges the hemispheric importance of Great Salt Lake.

The Preserve is the largest intact, protected wetland/upland shoreline complex of naturally-functioning avian habitat remaining on the eastern shore of the Great Salt Lake. Stretching from the Antelope Island Causeway south along the west side of Syracuse, Layton and Kaysville, the border of the Preserve extends for 11 miles (see Appendix C). As a result of 30 years of conservation work by the Conservancy, the Utah Reclamation Mitigation and Conservation Commission ("URMCC"), and dozens of public agencies, private foundations, corporations, non-profit conservation organizations, and hundreds of members and private individuals both within and outside of Utah, the Preserve has grown to over 4,400 acres today. Over $25 million in public and private funds was raised by the Conservancy to purchase the 44 separate land parcels that make up the Preserve and to manage the Preserve as one ecological unit (see Appendix D). Our pledge to these constituents and contributors was that the Conservancy would manage and protect the important natural values of the Preserve ***in perpetuity***. Any loss of currently-protected properties and the creation of significant negative impacts due to a major new highway are extremely serious issues for our Board, staff, members, donors and partners.

The Great Salt Lake Shorelands Preserve is a composite of natural saline shoreline, fresh water pools and emergent wetlands, wet meadows, adjacent uplands and agricultural fields - all managed as an intact ecosystem to provide prime avian habitat for migrating, nesting, and foraging birds. Influenced by the lake's continually shifting water levels, this habitat functions as a dynamic ecologically whole system that, with its upland habitats, provides a scarce, critical habitat alternative to the impounded open water wetlands of state and federal waterfowl refuges, management areas, and duck clubs (even more so at high lake levels).

Not only an essential hemispheric stopover site for tens of thousands of migratory birds, the Preserve also provides important benefits for the surrounding communities through its visitor facilities and property ownership – education, open space, recreation, wildlife viewing and solitude - at no cost to the public. Additionally, the wetlands are economically important to the County and residents by providing nutrient recycling and contaminant filtering, as well as providing storm drain and flood control services.

Comment 933 (continued)

Response Section in Chapter 32 ➥

We will discuss Great Salt Lake Shorelands Preserve bird use, diversity and abundance within the Preserve in Sections VIII and IX.

II. Key Partners and Contributors to the Preserve and Property Use Restrictions

As is outlined in Appendix D, the Conservancy has had many generous partners in assembling the Preserve, with taxpayer contributions from Federal and State agencies as well as private sources that allowed a number of Preserve purchases to be completed. Our written agreements with the public agencies obligate the Conservancy to manage lands acquired with their funding strictly for conservation purposes in perpetuity. Obviously, construction of a highway on these properties is inconsistent with the purpose and intent of these agreements. Two examples are worth mentioning here.

32.14.2J

In 1999 and 2001, utilizing partial funding ($1,378,399) from the federal North American Wetlands Conservation Act ("NAWCA") administered by the U.S. Fish & Wildlife Service and Ducks Unlimited, the Conservancy purchased six properties within the Preserve totaling 771 acres. These properties provide key wetlands and uplands within the Preserve and qualified to receive funding in a very competitive nationwide grant process authorized by the North American Wetlands Conservation Act ("NAWCA"). Portions of these properties fall within the proposed highway footprint and other areas will be affected by indirect impacts. The NAWCA funding agreement contains language prohibiting uses other than conservation. These restrictions are memorialized in a NAWCA Notice of Grant Agreement recorded as an encumbrance on the properties in Davis County. The DEIS does not contain any analysis of the special status of these properties as a result of the federal interests documented by the NAWCA Notice of Grant.

32.14.2H

An additional property acquired by the Conservancy was purchased with Environmental Protection Agency settlement funds, provided pursuant to a court-approved consent decree and disbursed by the National Fish and Wildlife Foundation ("NFWF"). This 106-acre parcel is located outside of the highway footprint, but will sustain significant negative indirect impacts due to the highway location. Our agreement with NFWF states that we must manage the property for conservation purposes, with no latitude to allow degradation of the habitat.

32.14.2H

Most importantly, the Conservancy acquired and then transferred over 1,316 acres to the Utah Reclamation Mitigation and Conservation Commission under the authorization of the federal Central Utah Project Completion Act. URMCC has invested over $14.9 million of public funds in the Preserve, which the Conservancy manages under an agreement with URMCC. A more thorough discussion of this collaboration is provided in the separate comments of URMCC, which the Conservancy supports and endorses.

Due to the substantial public and private financial investment and associated management restrictions imposed on the properties, UDOT must conduct a thorough analysis for potential direct/ indirect impacts and of the legal implications of converting their status away from conservation to transportation purposes.

Comment 933 (continued)

Response Section in Chapter 32 ➥

III. The West Davis Corridor and the Great Salt Lake Shorelands Preserve

All proposed highway alignments, which contain no alternative alignments in the "middle section" of the WDC, will have permanent, negative impacts on the Great Salt Lake Shorelands Preserve wetlands, uplands and their associated wildlife.

32.14.2H
32.14.2I
32.14.2J

A high-speed, noisy 4-lane highway within and adjacent to our properties is a serious threat to the biological integrity of the Preserve, which functions as a large single ecosystem of habitat for tens of thousands of birds annually. Direct loss of property and habitat, a hardened and dangerous barrier along the Preserve's northern boundary and separation from important agricultural foraging areas are just a few of the results of building a new highway in the proposed alignments. Damage or loss to the Preserve due to serious indirect impacts to birds and their habitat reaches well beyond the actual footprint of the corridor. The entire ecosystem of the Great Salt Lake Shorelands Preserve will be permanently impaired. These impacts are inadequately addressed in the DEIS.

IV. UDOT Locally Preferred Alternative B1

32.2.1G

As stated in our past comments to UDOT, the Conservancy strongly supports thorough consideration and analysis of the locally-generated "Shared Solution" as a potential additional alternative that might lessen negative impacts on wetlands, uplands and wildlife habitat throughout the Corridor's length.

The Conservancy does not support selection of the Glovers Lane segment as the Locally Preferred Alternative. We believe that the Shepard Lane alternative will produce the least damage to key wetland and upland habitats, and avoid damaging lands that have already been protected for years for their wildlife values in the Glovers Lane area (Farmington Bay Waterfowl Management Area and publicly-owned conservation easements). Tables 14-31 and 14-37 illustrate that impacts within 1,300 feet of the alignments produce a negative effect on 323.3 acres from the Shephard Lane alternative, and 829.5 acres from the Glovers Lane alternative (both totals consist of adding medium and high value habitat). The significantly higher cost alone for the Glovers Lane alternative should add considerable weight to the selection of the Shephard Lane alternative.

32.14.2H

In the "middle" segment of the WDC, no alternatives are proposed that avoid damage to the Conservancy's and URMCC's Great Salt Lake Shorelands Preserve and its critical wetlands and associated upland habitat. Direct destruction of habitat (highway footprint) and "isolated" habitat (GSLSP lands that would be isolated on the north side of the highway) would be irreversible. This section of the Preserve will also bear the brunt of the effects of indirect impacts to adjacent lands due to noise, artificial light, fragmentation, collision mortality, water pollution, movement barriers, invasive species, water quality, and edge effects. **This places increased importance on a careful analysis of indirect impacts and a clear statement of mitigation measures (see comments in sections V Indirect Impacts, VI Mitigation and XI Comments Summary).**

Comment 933 (continued)

Response Section in Chapter 32 ➥

From Gentile Street northwards, the Conservancy strongly opposes selection of Alternative A, which includes contact with, and negative effects on, the very rich, high quality wetland area of the Preserve adjacent to the Alternative A alignment. Alternative A also will cause the loss of the Black Agriland open space/agricultural easement – the first in Utah using state taxpayer money through the LeRay McAllister Fund. Though there may be more wetland acres affected by Alternative B, those wetlands are of much lower habitat value than the Preserve wetlands because they are already fragmented, have questionable sources of water and low potential for long-term viability because of their close proximity to anticipated development and the future reduction of water due to conversion of water from agricultural use to culinary uses. Alternative B has been included in all city plans for many years and apparently over $8 million of public money has already been spent on acquiring sections of this corridor. The increased cost of the highway if Alternative A is selected (roughly $60 million) should also be weighed as a significant deterrent to its selection.

32.14.2H

V. Indirect Impacts

The importance of accurately calculating indirect impacts of the WDC is of supreme importance to the Conservancy. The highway will run near or adjacent to the GSLSP for at least one-half of the Preserve's 11 miles (see section 14.3.2) – easily making the Preserve the most directly and indirectly affected property, and the Conservancy the most affected landowner, in the entire WDC project area. We strongly disagree with, and recommend reconsideration of UDOT's decision that Conservancy properties within the Preserve are not subject to protection under Section 4(f) of the Department of Transportation Act of 1966. Damage to all Preserve properties must be avaoided or fully mitigated – either with full Section 4(f) designation or as mitigation of a "constructive use" of URMCC properties.

32.27B

The DEIS includes some analysis of indirect impacts, yet conspicuously omits significant other indirect impacts such as introduction of invasive plant and animal species and obstacles to wildlife movement. Furthermore, the DEIS lacks any cumulative analysis of the entire suite of direct and indirect impacts, and provides no clear and meaningful conclusions regarding damage to the Preserve.

32.14.2H

More importantly from the Conservancy's standpoint, the DEIS overall remains silent on UDOT's detailed plans to mitigate indirect impacts and lacks any commitment to provide such mitigation.

32.14.2J

One of the most serious indirect impacts associated with WDC and of great concern to the Preserve's natural values is noise. The DEIS proposes to use conclusions found in the Legacy Avian Noise Research Program ("LANRP") study completed for the Legacy Parkway project. The Conservancy strongly believes that using the LANRP as the single source for evaluating noise impacts from the WDC is scientifically unsupportable. The Conservancy's analysis of the LANRP shortcomings prompted the attached peer review of the LANRP commissioned by the Conservancy from a respected, arms-length GSL academic and researcher, Dr. John F. Cavitt, Ph.D. Dr. Cavitt is a professor of Zoology and head of the Avian Ecology Lab at Weber State University. Among other conclusions, Dr.

32.14.2H

Comment 933 (continued)

Response Section in Chapter 32 ➥

Cavitt reported flaws and significant scientific shortcomings in the LANRP study design, implementation, analysis and conclusions.

> Because of the significant problems identified with the design, implementation and analysis of the LANRP, very few conclusions can and should be drawn from the study. The authors themselves identify several weaknesses and also caution the use of the data (LANRP Discussion pg. 28). The selection of study sites and the subsequent analyses did not take into consideration known and significant confounding variables. Lack of attention to these factors reduces the value of the study and calls into question the results obtained. These confounding variables are detailed above but include the confounding effects of habitat, management and size of each study location. The authors' statement that a "lack of significant relationship between distance to highway and bird density suggests that birds are able to inhabit areas close to highway corridors" (LANRP Discussion pg. 28) is imprecise and misleading. The authors have failed to account for significant confounding variables and significant sources of variation that likely reduced the ability to detect differences. In addition, the authors only compared the 10 most abundant species, which in itself biases the data set toward the most widespread species. Widespread and common species may not be the ones most likely affected by highway noise.
>
> The selection of focal species for the productivity analyses was not explained and appears to have ignored important aspects of their life histories, and behaviors which suggest they may not have been appropriate choices for study. In addition, the extremely high proportion of nests monitored with unknown fates (20% overall and over 40% at one site) effectively eliminates the information provided by this portion of the study.

32.14.2H

Dr. John F. Cavitt, Ph.D. – Review of the "Legacy Avian Noise Research Program: Final Report", page 10, attached as Appendix E.

The conclusions in the Review reached by Dr. Cavitt comprise the Conservancy's position and recommendation that the primary source for determining noise effects should be peer-reviewed, published scientific literature on the subject. The USFWS has already provided UDOT with an excellent compilation of peer-reviewed research - *Indirect Effects of Roads to Wildlife - USFWS 2013*, and that document provides a number of studies that would be more appropriately used to determine indirect effects of the WDC.

In the DEIS, in Chapter 14: Ecosystem Resources, Page 14-33, UDOT states that "Any noise interference or other effects on wildlife should be within these buffer distances" (0-800 feet of the right-of-way). On Page 14-42, UDOT also states that "The distance at which a species could be affected by noise can extend from less than 125 feet to much greater than 3,500 feet from the highway (Benitez-Lopez and others 2010). Peer reviewed research

32.14.2K

Comment 933 (continued)

Response Section in Chapter 32 ➥

found in *Indirect Effects of Roads to Wildlife - USFWS 2013* indicates, and the Conservancy recommends that 1,200 meters from the highway footprint be used as the outer limit of impact zones in calculating indirect impacts to wildlife in the WDC.

32.14.2H

We are aware of the West Davis Corridor Wildlife Working Group and commend its efforts to arrive at common agreement on the methodology, model and inputs to calculate the indirect impacts of this project. Should this group reach consensus at some point before the FEIS is released, we recommend that Wildlife Working Group results be endorsed and included in the FEIS. Should the Wildlife Working Group not come to consensus on recommendations, then UDOT should outline in the FEIS exactly and in detail how it proposes to mitigate for indirect damages associated with the Preserve. Not to include a decisive and clear statement on the philosophy and details of how mitigation for indirect impacts will be handled would be a very serious shortcoming of the FEIS.

VI Mitigation

32.14.2J

The construction and operation of the highway as proposed will result in the direct loss of Preserve land and critical habitat, either under the highway footprint or through loss of properties isolated on the north side of the proposed alignment. The Conservancy understands that it will receive monetary compensation for the loss and value of those properties. Monetary compensation, however, will not replace the direct on-the-ground net loss of habitat to the Great Salt Lake Shorelands Preserve.

The loss of wetlands included in these lost properties will require UDOT to provide mitigation as part of their Army Corps 404 permit. However, mitigation for the indirect losses to other critical habitat that is part of the Preserve ecosystem is not addressed in the DEIS.

In the DEIS, Section 3.4.5 *Mitigation for Impacts to the Great Salt Lake Shorelands Preserve,* UDOT mentions that it "is developing a Memorandum of Agreement with TNC and URMCC that lists the necessary measures to minimize impacts to the Preserve consistent with the intent of the 1996 Wetland Conservation Plan and the 2001 Davis County Shorelands Master Plan and in accordance with state and federal property acquisition laws". On Page 14-114, it is generally stated that "The WDC Team expects that wetland impacts from the WDC will have to be mitigated (through creating, restoring, or enhancing wetlands) within the general vicinity of the WDC to satisfy the federal policy of no net loss of wetland acres and/or function."

32.14.2J

Other than these brief sentences and other generalized statements about mitigation elsewhere in the DEIS, **the DEIS is vague on how UDOT will actually mitigate for real losses within the GSLSP, leaving The Nature Conservancy unable to evaluate what the net impact will be specifically to the GSLSP and its habitat from the WDC project. Our position and recommendation is that UDOT should prepare a detailed mitigation plan addressing all impacts (wetland, upland, direct, indirect) to the GSLSP.**

Comment 933 (continued)

Response Section in Chapter 32 ➥

VII. Calculating Mitigation and Baseline Avian Data for Affected Preserve Lands

A fundamental shortcoming of the DEIS is the omission of any information on historic or current bird use of the GSLSP that will be essential to determining indirect highway impacts for mitigation. The Preserve has very different habitat components, use patterns, noise profile, and suite of bird species than does the Legacy Parkway - bird and response to noise data from the LANRP is not transposable to the GSLSP.

32.14.2H

When determining mitigation for direct or indirect impacts to avian species and habitat, one needs to have information on avian abundance, species diversity and utilization on the affected lands. It was UDOT's responsibility to collect this baseline data and develop an analysis of the WDC indirect impacts, however, that analysis did not occur and avian wildlife data from the Preserve is not included in the DEIS. Therefore, to collect current avian data, the Conservancy initiated its own Great Salt Lake Shorelands Bird Survey in the spring of 2013, which is further discussed below along with other relevant and available bird surveys.

VIII. Bird Surveys Providing Significant Data to the Ecosystem Impact Analysis Area

Great Salt Lake Waterbird Survey (1997-2001)

32.14.2L

In section 14.3.2, the DEIS states that "a few studies have been conducted regarding numbers of shorebirds that use GSL" (Paul and Manning). The GSL Waterbird Survey, omitted in the DEIS, was in fact an extensive survey conducted over five years (1997-2001) by Utah Division of Wildlife Resources using their personnel and experienced volunteers over spring, summer and fall seasons. The GSL Waterbird Survey results are available as an interactive pdf (http://wildlife.utah.gov/gsl/waterbirdsurvey/surveys.htm) and contain data quite pertinent to the WDC impact area. Great Salt Lake levels averaged 4201 feet above sea level (range of 5 feet), at the more normal average lake level. Important changes in shoreline habitat were clearly demonstrated as a result of the effects of Great Salt Lake elevation shifts. The survey establishes that at more average GSL levels, shoreland wetlands and uplands become even more critical avian habitat. The GSL Waterbird Survey documented 52 species, and included 66 snowy plover, a state sensitive species. "Consistently high numbers of birds in all survey periods were seen in the West Layton wetlands", which included the north end of the Preserve (Site 18, Page 110).

Also identified as part of the GSL Waterbird Survey were points along the entire southwest shoreline of the Preserve (Site 17a) documenting 48 avian species and large nesting colonies of American Avocets and Black-necked stilts. The Waterbird Survey revealed an impressive abundance and diversity of bird species existing in the lower elevations and southern parts of the Preserve.

We are now in a period of low GSL levels, moving the saline water/shore line interface away from the Preserve. Figure 1 below shows the range of GSL elevations from April to August

Comment 933 (continued)

Response Section in Chapter 32 ➥

2013 - a dry period with record-breaking heat in July. Until now data has been lacking for avian species abundance, diversity, and utilization of the Preserve at current low GSL levels.

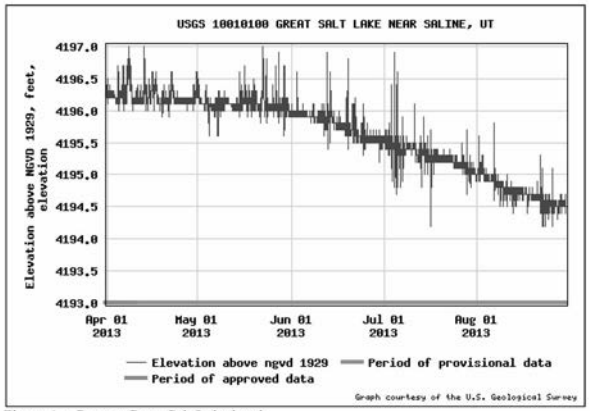

Figure 1 – Current Great Salt Lake level.

Great Salt Lake Shorelands Bird Survey (2013)

In order to document the critical importance of the upland and fresh water wetland habitat throughout the Preserve, the Conservancy initiated the Great Salt Lake Shorelands Bird Survey April 12, 2013. Surveys are being conducted to demonstrate bird species richness (diversity) and abundance, as well as habitat use during migration, nesting and foraging.

32.14.2I

The Great Salt Lake Shorelands Bird Survey was designed using Utah Division of Wildlife Resources' GSL Waterbird Survey protocols (see Appendix F) with the additional inclusion of all land birds using the Preserve. The surveys are conducted by experienced birders returning to the same site at two week intervals from April through September. A total of 18 point count locations were randomly selected in six areas within the Preserve accessible to survey volunteers (see Appendix G). The habitat is composed of dry and wet uplands with lush native grass, emergent wetland vegetation, and pools of fresh water from creeks and irrigation ditches. The majority of these sites are within 3200' of the footprint of the highway (*Indirect Effects of Roads to Wildlife - USFWS 2013*). Within the ¼ mile radius of each point, surveyors noted bird species identity by sight and sound, and recorded numbers, activity and habitat use. The Great Salt Lake Shorelands Bird Survey represents a carefully planned and skillfully performed snapshot of bird

Comment 933 (continued)

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life at the Preserve during spring, summer and continuing into the fall of 2013. The survey will ultimately document the fall arrival of migrants seen in September.

2013 Bird Survey Results (as of August 27, 2013)

Survey periods shown on the graphs and charts below are the following:
1 Early April, **2** Late April, **3** Early May, **4** Late May, **5** Early June, **6** Late June, **7** Early July, **8** Late July, **9** Early August, **10** Late August.

Avian Abundance - Table 1 identifies 139 species counted on the Preserve for a total of 30,374. Species are listed in order of abundance.

Table 1 - Total Avian Abundance

Species	Number of birds
White-faced ibis	9,099
American avocet	3,090
Red-winged blackbird	1,315
California gull	1,296
Yellow-headed blackbird	1,290
European starling	988
Canada Goose	896
Mallard	865
Franklin's gull	829
Barn swallow	707
Bank swallow	669
Green winged teal	614
Black-necked stilt	508
Cinnamon teal	430
Killdeer	422
N. Rough-winged swallow	413
American widgeon	403
Cliff swallow	403
Common raven	346
American coot	317
Mourning dove	292
Western meadowlark	280
Sandhill crane	274
Tree swallow	250
American white pelican*	239
Marsh wren	238

Utah sensitive species

Comment 933 (continued)

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	Species	Number of birds
	Gadwall	237
	Northern shoveler	227
	Western kingbird	202
1	Sandpiper, unidentified	201
	American robin	178
	Savannah sparrow	168
	Brewer's blackbird	166
	Wilson's phalarope	131
1	Duck, unidentified	129
	Black-billed magpie	120
	Ring-necked pheasant	119
	Violet-green swallow	117
	Ring-billed gull	116
	Brown-headed cowbird	95
	Song sparrow	89
	American kestrel	79
	Double-crested cormorant	70
	Common snipe	65
	Great blue heron	65
	Northern harrier	60
	Sora	58
	Forster's tern	54
	Lesser scaup	53
	Bonaparte's gull	49
	Eared grebe	45
	Long-billed curlew*	44
	Red-tailed hawk	43
	Common yellowthroat	41
	Vesper sparrow	41
	Snowy egret	37
	Western grebe	37
	Ruddy duck	36
	House finch	35
	Redhead	35
	Willet	35
	Blue-winged teal	30
	American goldfinch	29
	Virginia rail	29
	Bullock's oriole	27
	Pied-billed grebe	22
	Bobolink*	21
	Greater yellowlegs	20
	Wilson's Snipe	19
	Least sandpiper	18

Utah sensitive species

[1] Not counted as unique species.

Total Avian Abundance as of 8/27/2013

Comment 933 (continued)

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	Species	Number of birds
	Solitary sandpiper	18
	Ring-necked duck	16
	Turkey vulture	16
	Brewer's sparrow	15
	Eurasian collared dove	15
	Swainson's hawk	15
	Horned lark	14
	Lesser yellowlegs	14
	Yellow warbler	14
	American crow	13
	Peregrine falcon	13
	Broad-tailed hummingbird	12
	Eastern kingbird	12
	White-crowned sparrow	11
	Black-crowned night heron	10
	Cattle egret	10
	Northern pintail	10
	Semipalmated sandpiper	10
	Spotted sandpiper	9
	Whistling (Tundra) swan	9
	Caspian tern	8
	Great egret	8
	Willow flycatcher	8
	Black-chinned hummingbird	7
	Short-eared owl*	7
1	Sparrow, unidentified	6
1	Buteo, unidentified	5
	House sparrow	5
	House wren	5
	Northern flicker	5
	Say's phoebe	5
	Bufflehead	4
	Grasshopper sparrow*	4
	Gray flycatcher	4
	Lark sparrow	4
	Red-necked phalarope	4
	Ruddy turnstone	4
	Baird's sandpiper	3
	Black-capped chickadee	3
	Prairie falcon	3
	Stilt sandpiper	3
	Western tanager	3
	Western wood-pewee	3
	Bald eagle*	2

Utah sensitive species

[1] Not counted as unique species.

Total Avian Abundance as of 8/27/2013

Comment 933 (continued)

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Species	Number of birds
Canvasback	2
Cassin's finch	2
Clark's grebe	2
Dusky flycatcher	2
Green-tailed towhee	2
Lincoln's sparrow	2
Long-billed dowitcher	2
Rough-legged hawk	2
Semipalmated plover	2
Yellow-rumped warbler	2
American tree sparrow	1
Barn owl	1
Black tern	1
Chipping sparrow	1
Common tern	1
Cooper's hawk	1
Great Horned owl	1
Great-tailed grackle	1
Hermit thrush	1
Lazuli bunting	1
MacGillivray's warbler	1
Nashville warbler	1
Northern Mocking bird	1
Northern shrike	1
Ruby-crowned kinglet	1
Sage thrasher	1
Sanderling	1
[1] Unknown Empidonax	1
Warbling vireo	1
Wilson's warbler	1
139 <-- Unique species Total Abundance -->	30,374

**Utah sensitive species*

[1] Not counted as unique species.

Total Avian Abundance as of 8/27/2013

Comment 933 (continued)

Response Section in Chapter 32 ➥

Seasonal Peak Counts – Figure 2 lists the most abundant birds by site and by period. Four species are highlighted that each have at least one overall highest count in a survey period.

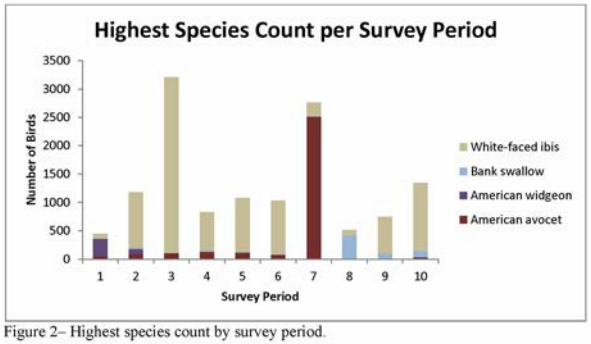

Figure 2– Highest species count by survey period.

Comment 933 (continued)

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Species Richness - To show species richness, we grouped the 12 habitat types defined by the GSL Waterbird Survey into two categories "Upland" and "Wetland". Table 2 shows the results of diversity by habitat type.

	Survey Period									
	1	2	3	4	5	6	7	8	9	10
Species Using Upland Habitat	*26*	*50*	*55*	*47*	*46*	*44*	*32*	*38*	*43*	*35*
Species Using Wetland Habitat	*39*	*33*	*52*	*43*	*58*	*47*	*28*	*28*	*41*	*13*

Table 2 – Species richness by habitat type.

The South Site survey area had the highest overall species richness during the survey with 94 unique species observed between April and August 2013. 98% of the South Site is within 3200' of the proposed highway.

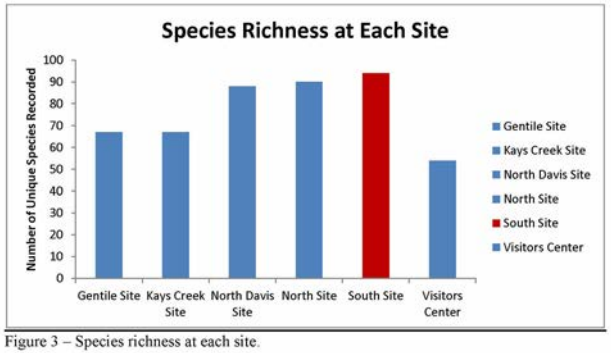

Figure 3 – Species richness at each site.

Comment 933 (continued)

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State and Federal Sensitive Avian Species - There were 317 sightings of sensitive avian species on the Preserve during the survey. Table 3 lists the six species and the numbers sighted. Figure 4 – shows location of sensitive species within the 3200' highway impact zone.

Figure 4 - State and federal sensitive avian species.

Species	Number of birds
*American white pelican**	*239*
*Long-billed curlew**	*44*
*Bobolink**	*21*
*Short-eared owl**	*7*
*Grasshopper sparrow**	*4*
*Bald eagle**	*2*
	317

Table 3 - Sensitive species abundance.

Comment 933 (continued)

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Utilization of Habitats During Survey –Table 4 and Figure 5 show utilization by White-faced ibis, the most abundant avian species counted.

Survey Period	Utilization Feeding	Loafing, roosting, nesting	Flying	Grand Total
Early April			4	4
Late April	200		483	683
Early May	219		822	1041
Late May	12		51	63
Early June			704	704
Late June	150		345	495
Early July	6		151	157
Late July	3		26	29
Early August	240	1	267	508
Late August			588	588
Grand Total	**830**	**1**	**3441**	**4272**

Table 4 - Utilization of uplands by foragers (using White-faced ibis as indicator).

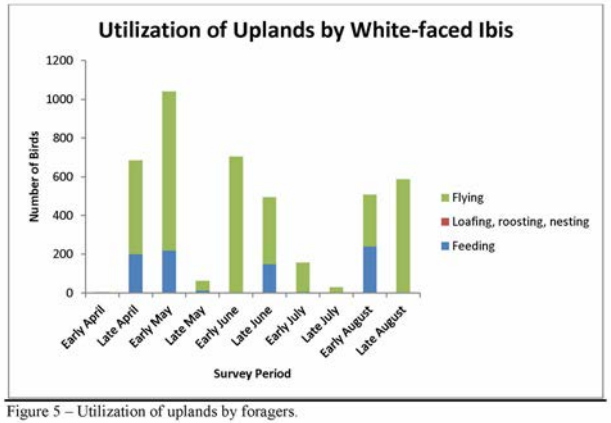

Figure 5 – Utilization of uplands by foragers.

Comment 933 (continued)

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32.14.2I

Conclusions from Great Salt Lake Shorelands Bird Survey

The Conservancy has documented at the Preserve current avian numbers of more than 30,000 individuals and 139 species from April 2013 through August 2013. All birds counted are within the DEIS Ecosystem Impact Area. The 2013 bird survey data reflect the avian habitat impacts from falling Great Salt Lake levels, which move the shoreline further away from the Preserve.

Under more normal historic GSL levels, shorebird counts in the Preserve would be higher and upland habitat even more critical, as seen in the GSL Waterbird Survey (1997-2001).

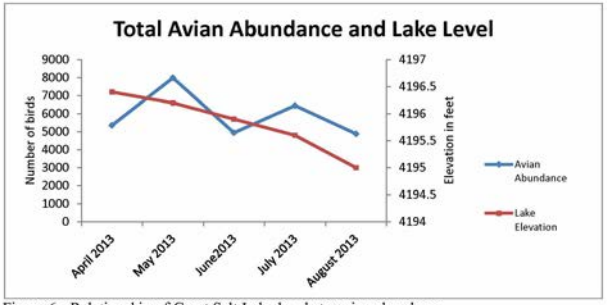

Figure 6 - Relationship of Great Salt Lake levels to avian abundance.

Species richness is documented by the identification of 139 unique species. **The survey presents accurate and current data documenting 317 sightings of 6 State and Federal sensitive species, all within the DEIS Ecosystem Impact Area.**

The single most abundant species is the white-faced ibis. Their populations are in most cases much greater than the next most numerous species. The most frequent use of the Preserve by white-faced ibis was flying into and feeding within uplands and agricultural zones, reinforcing that these areas are of critical importance. This upland habitat is entirely within the DEIS Ecosystem Impact Area, and is the dominant habitat type that will suffer significant adverse impacts by its close proximity to the highway for a number of miles

32.14.2I

Lastly the report, Forman, R. T. T., B. Reineking, and A. M. Hersperger. 2002. Road Traffic and Nearby Grassland Bird Patterns in a Suburbanizing Landscape. Environmental Management 29:782-800 documents effects to avian distributions within different zones from 2-lane and multi-lane highways and concluded that none of the five species studied were present within 700m of 2-lane highways, and presence and breeding were reduced within 1200m of multi-lane highways. Bobolink, Grasshopper sparrow and Western

Comment 933 (continued)

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meadowlark (this study looked at Eastern meadowlark which is the same genus and has similar life history as Western meadowlarks) are present at the preserve. From the Great Salt Lake Shorelands Bird Survey (2013), there are sixteen locations at the Preserve with Bobolink, Grasshopper sparrow or Western meadowlark species observed. Based on the conclusions from the Forman study, twelve locations are expected to be abandoned and all but two locations will have reduced use.

IX. Water Quality Impacts

32.13B

The DEIS mentions that two contaminants of concern to Great Salt Lake are selenium and mercury and that the highway will not contribute to the total discharge of these pollutants to the Lake. In fact, a number of other heavy metals and contaminants may reach the lake by way of the highway's stormwater collection system of pipes, gutters, swales, ditches and detention basins – all of which end up in "receiving waters" and potentially the lake. Algae, brine shrimp, brine flies, migratory birds and other biological ecosystem components could be damaged by many of the pollutants listed in Table 13-5 -. Typical Highway Runoff Contaminants. Such an influx of contaminants has the real potential for negatively impacting the biological components of the Preserve's ecosystem. The DEIS should analyze these water quality impacts to the Lake as well as streams and other waters sources.

32.13D

In addition, UDOT fails to identify specific plans on how to handle potential chemical or contaminant spills resulting from traffic accidents on the highway. Failure to properly contain contaminants from such accidents will cause runoff into the surrounding habitat, resulting in wildlife mortality. As outlined, it appears that pollutants from these events will enter the same run-off delivery systems used by stormwater. We ask that UDOT more clearly address containment of spills from the inevitable hazardous waste accidents on the highway.

XI. Summary

32.14.2H
32.14.2I
32.14.2J
32.14.2K

1) The Great Salt Lake Shorelands Preserve is a world-class ecosystem and natural area. Efforts to acquire and **permanently** protect this ecosystem have been in progress for over 30 years, with several million dollars of public dollars expended. The West Davis Corridor represents a direct threat of net loss of property and habitat, and the negative effects of noise and other indirect impacts to Preserve property and wildlife that reach well beyond the footprint of a new highway and into the Preserve.

32.14.2I
32.14.2J
32.14.2K

2) **At the very beginning of the West Davis Corridor EIS process, the Conservancy and URMCC met with and conveyed to UDOT our standpoint that, until we knew exactly what the mitigation for direct and indirect damage to the Preserve would be, we could not calculate the balance between loss and compensation – and therefore we could not endorse any alignments that would cause damage to our properties. We have reiterated this point many times during the last three years. Disappointingly, as written, the DEIS does not include clear, detailed information on mitigation that would allow us to make an informed opinion on whether the Conservancy will be fully compensated for direct and indirect loss**

Comment 933 (continued)

Response Section in Chapter 32 ➥

and damage to the Preserve. Until that information is provided by UDOT, we consider the DEIS incomplete, and cannot endorse any alignment that impacts the Preserve negatively.

32.14.2J

3) UDOT has not evaluated the monetary and legal impact to the project represented by public investment and the related property restrictions under federal and state funded programs such as the North American Wetlands Conservation Act, EPA, National Fish and Wildlife Foundation and the LeRay McAllister Fund. As currently written, the DEIS fails to consider impacts to wildlife.

32.14.2H

4) The Conservancy does not support the Glovers Lane alignment.

32.14.2H

5) The Conservancy does not support Alignment A north of Gentile Street.

32.14.2H

6) The Conservancy does not support use of the LANRP for extrapolating indirect impacts and its mitigation on the GSLSP, but supports use of appropriate studies included in *Indirect Effects of Roads to Wildlife – USFWS 2013*. The Conservancy supports 1,200 meters as the outside impact zone for calculating indirect impacts.

32.14.2J

7) The Conservancy endorses continued efforts by the Wildlife Working Group to arrive at a common methodology, model and inputs for calculating indirect impacts of WDC, and if successful, the results should be accepted by UDOT and included in the FEIS. If the Wildlife Working Group fails to agree, UDOT has the responsibility to clearly outline the details and conclusions of a methodology and plan of mitigation for indirect impacts in the FEIS.

32.14.2J

8) Mitigation guidelines, philosophy and details for mitigating GSLSP losses of wetlands and uplands are missing from the DEIS. As in 2) above, until more detail is forthcoming on mitigation for all purposes, we cannot support alignments that will have any impact damage to Preserve properties and investments.

32.14.2I

9) The Conservancy's Great Salt Lake Shorelands Bird Survey (2013) shows the Preserve provides extremely productive wetlands and uplands as evidenced by the documentation of more than 30,000 individuals and 139 species from April 2013 through August 2013. Uplands are very important to avian species with an average of 41.6 species using upland habitat and 38.2 species using wetland habitat throughout the survey period. The habitat interface most abundant to the alignment is upland habitat and White-faced ibis, the most abundant species observed during the survey period, were utilizing primarily uplands. Past data suggest that at higher, more "normal" lake levels upland habitat use increases.

32.14.2I

The Preserve provides essential habitat for the six sensitive species that occur there – and a number of the sightings are in very close proximity to the preferred alignment itself. The DEIS lists and discusses the likely presence of State sensitive avian species and potential for impacts of the WDC on pages 14-53 and 14-54, Vol. 2. The conclusions reached are "No impacts or no adverse impacts" expected for every listed species. These conclusions are primarily based on "No recent sightings or no recent nestings reported". We provide current sightings data of 317 State sensitive species individuals. This information refutes the statement of no recent sightings. We recommend the inclusion of Great Salt Lake Shorelands Bird Survey (2013) data in the

Comment 933 (continued)

Response Section in Chapter 32 ➥

"Evaluation of Effects from WDC" analysis on sensitive species, and elsewhere in the analysis as appropriate. As currently written, the DEIS fails to consider impacts to bird populations.

32.14.2I

10) In calculating negative indirect effects, the Conservancy does not support conclusions of the LANRP due to its shortcomings (Appendix E) and to the fact that the GSLSP's character, habitat types, noise profile, suite of birds, use of habitats, and a number of other factors, are much different than the Legacy Parkway. We believe that calculations for indirect damages to the GSLSP should be based on baseline and current data collected on abundance, species diversity and utilization ***on the affected lands themselves***, rather than using the Legacy Parkway as a surrogate. We recommend that data and results from the Great Salt Lake Shorelands Bird Survey (2013) be incorporated into the analysis that will be used to determine indirect impacts to the Preserve and elsewhere in the analysis as appropriate. As currently written, the DEIS fails to consider impacts to bird populations.

32.13D
32.13B

11) The DEIS should include more detailed explanation of measures taken to respond to chemical or other accidental contaminant spills that will end up in the stormwater system. Selenium and mercury are not the only contaminants of concern for Great Salt Lake. The FEIS should also include an analysis of other pollutants/contaminants (heavy metals, etc.) that will be generated by the highway and could end up in Great Salt Lake by way of the proposed stormwater delivery system.

The Nature Conservancy stands ready to clarify and assist in any way to implement its recommendations during the upcoming comment evaluation period. Questions regarding points raised in this letter and/or other matters related to the proposed West Davis Corridor should be addressed to Chris Montague, Director of Conservation Programs,

Thank you again for this opportunity to comment.

Sincerely,

Dave Livermore
Utah State Director

Appendices

Appendix A: Abundance of Selected GSL Bird Species
Appendix B: Migratory Bird Production Area
Appendix C: Map/Ownership of The Great Salt Lake Shorelands Preserve
Appendix D: Partial List of Donors to the Preserve
Appendix E: Review of the "Legacy Avian Noise Research Program: Final Report"
Appendix F: Great Salt Lake Shorelands Bird Survey (2013) protocols
Appendix G: Map of survey sites and survey areas, survey calendar, and sample data forms

Comment 933 (continued)

Response Section in Chapter 32 ➥

Cc: Michael C. Weland, Executive Director, URMCC
Richard Mingo, URMCC
Jennifer Speers, Chair, The Nature Conservancy in Utah
Maunsel Pearce, Chair, Conservation Committee, The Nature Conservancy in Utah
James Christian, Division Administrator, FHWA Utah Division
Karen Hamilton, Chief, Aquatic Resource Protection & Accountability Unit, EPA
Julia McCarthy, EPA, Region 8
Martin Hestmark, EPA Region 8
Philip Strobel, EPA, Region 8
Members, Board of Trustees, The Nature Conservancy in Utah
John Urbanic, ACOE
Chris Bonsignore, Manager of Conservation Programs, Ducks Unlimited
Betsy Herrmann, USFWS
Pam Kramer, Utah Division of Wildlife Resources
Lynn de Freitas, Director, FRIENDS of Great Salt Lake
Wayne Martinson, National Audubon Society
Ella Sorensen, National Audubon Society
Roger Borgenicht, UBET
Tim Wagner, Sierra Club

Comment 933 (continued)

Response Section in Chapter 32 ➥

Appendix A: Abundance of Selected Great Salt Lake Bird Species

The Great Salt Lake is ornithologically the most impressive salt lake on the continent."
Dr. Joseph R. Jehl

500,000 Wilson's Phalaropes / World's largest staging concentration
10,000 Snowy Plovers / World's largest assemblage
7,500 White-faced Ibis / World's largest breeding population
160,000 California Gulls / World's largest breeding population
250,000 American Avocets / Largest concentration in the Pacific Flyway
65,000 Black-necked Stilts / Largest concentration in the Pacific Flyway
18,000 White Pelicans / One of the largest colonies in North America
400,000 Eared Grebes / 2nd largest staging population in North America
30,000 Marbled Godwits / Only staging site in U.S.
500 Bald Eagles / 1 of Top 10 winter populations in U.S.
11 Pairs Peregrine Falcon / Endangered species

Waterfowl on the Great Salt Lake

60,000	Tundra Swans
1,000,000	Pintail
100,000	Gadwall
80,000	Cinnamon Teal
500,000	Mallards
60,000	Ruddy Ducks
600,000	Green-winged Teal
50,000	Canada Geese
150,000	Redhead
50,000	Canvasback
100,000	Shoveller

Comment 933 (continued)

Response Section in Chapter 32 ➥

Appendix B: Migratory Bird Production Area

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JUN 25 2010

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11

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RICHARD T. MAUGHAN
DAVIS COUNTY, UTAH RECORDER
06/25/2010 11:04 AM
FEE $59.00 Pgs: 11
DEP RT REC'D FOR NATURE CONSERVANC

AFFIDAVIT AND NOTICE OF DEDICATION OF LAND AS A MIGRATORY BIRD PRODUCTION AREA

STATE OF UTAH)
) ss:
County of Salt Lake)

Pursuant to the provisions of §§ 23-28-101, *et seq.*, Utah Code Ann., the undersigned being first duly sworn, deposes and says as follows:

1. My name is Dave Livermore. I am the Utah State Director and Vice President of The Nature Conservancy ("TNC").

2. TNC is a District of Columbia non-profit corporation whose mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

3. TNC is the fee simple owner of land located in the unincorporated area of Davis County, which land is in excess of 500 contiguous acres, and which it wishes to dedicate as a Migratory Bird Production Area in accordance with Utah Code §§ 23-28-101, *et seq.* The land which is the subject of this Affidavit and Notice is more particularly described in Exhibit A attached hereto, and depicted on Exhibit B attached hereto (hereinafter the "MBPA").

4. TNC has continuously used, and continues to use, the MBPA as a wetland preserve and manages and enhances such land for migratory bird habitat. The MBPA designated herein is now and has historically been actively managed for migratory bird habitat, including maintenance of structures and improvements historically and customarily used in conjunction with the foregoing. The activities and uses on the MBPA include, but are not limited to:

(a) planting, transplanting and management of vegetation to provide suitable migratory bird habitat;
(b) managing water levels, terrain features, vegetation, mammal and fish populations to promote migratory bird habitat;
(c) agriculture generally, including the grazing of cattle and raising, chopping and baling of hay, and planting and harvesting of grain and other types of crops;
(d) construction and maintenance of garage-type buildings, sheds, and similar structures used in connection with management of the MBPA;
(e) construction and maintenance of canals, ponds, waterways, water control structures, dikes, trails and paths for pedestrian and motorized access for the purposes of management, restoration and enhancement of migratory bird habitat; and

Comment 933 (continued)

Response Section in Chapter 32 ➥

Affidavit and Notice of Dedication of Land as a
Migratory Bird Production Area

(f) weed spraying, controlled burning, and other forms of invasive plant eradication to manage and improve migratory bird habitat.

5. All of the activities described in paragraph 4 above are compatible with TNC's management of the MBPA for migratory bird habitat, as required by § 23-28-201 of the Utah Code.

6. TNC hereby designates the land described on Exhibit C, which land is less than one percent (1%) of the total acreage within the MBPA, upon which the landowner may build and maintain structures or improvements historically or customarily used in conjunction with the MBPA.

DATED this 23rd day of June, 2010.

THE NATURE CONSERVANCY,
A District of Columbia non-profit corporation

By: _____
Dave Livermore
Title: Utah State Director and Vice President

SUBSCRIBED, SWORN TO AND ACKNOWLEDGED before me this 23rd day of June, 2010, by Dave Livermore, the signer of the foregoing instrument, who acknowledged to me that he is the Utah State Director and Vice President of The Nature Conservancy, and is authorized to execute, file and deliver this Dedication as stated herein.

KARA M. BUTTERFIELD
NOTARY PUBLIC • STATE OF UTAH
My Comm. Exp. 02/02/2013
Commission # 577464

Kara Butterfield
Notary Public

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Comment 933 (continued)

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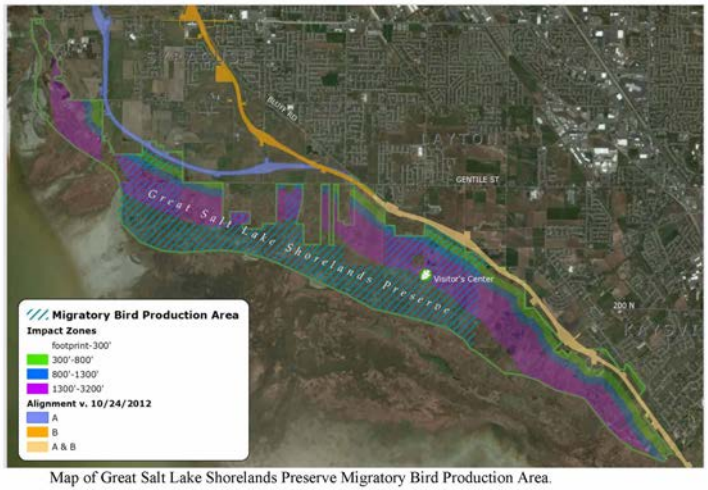

Map of Great Salt Lake Shorelands Preserve Migratory Bird Production Area.

Comment 933 (continued)

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Appendix C: Map/Ownership of the Great Salt Lake Shorelands Preserve

Map of Great Salt Lake Shorelands Preserve ownership.

Comment 933 (continued)

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Appendix D: Partial List of Donors to the Great Salt Lake Shorelands Preserve

Public Agency Contributions
National Fish and Wildlife Foundation
State of Utah
Davis County
Environmental Protection Agency (EPA)
North American Waterfowl Conservation Act (NAWCA)
Intermountain West Joint Venture

Foundation Support
Alfred and Frances Ross Foundation
Val A. Browning Foundation
Coalition for Utah's Future
Cultural Vision Fund
Cumming Foundation
Ducks Unlimited
Katherine W. and Ezekiel Dumke Foundation
E.S.R.R. Vision Trust
George S. and Dolores Dore' Eccles Foundation
Willard L. Eccles Charitable Foundation
ERM Foundation
Fanwood Foundation
Fidelity Foundation
Fieldstone Foundation
Four Daughters Foundation
William H. and Mattie Wattis Harris Foundation
William and Flora Hewlett Foundation
Key Bank Foundation
L.T. & Janet T. Dee Foundation
Lund Foundation
PacifiCorp Foundation
David and Lucille Packard Foundation
Perkins Charitable Foundation
Leigh H. Perkins Foundation
R. Harold Burton Foundation
R.E. & J.E. Bamberger Memorial Foundation
Ralph Nye Charitable Foundation
Richard K. and Shirley S. Hemingway Foundation
S.J. & Jessie E. Quinney Foundation
S.D. Bechtel, Jr. Foundation
Simmons Family Foundation
Thiokol Foundation
Union Pacific Foundation
Utah Wetlands Foundation
Utah Habitat Development Foundation
Wilcox and Smith Foundation

Corporate Support
American Express
Chevron
Coca-Cola
Cypress Amax Minerals Company

(Continued next page)

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Delta Airlines
Diversified Habitats, LLC
Dancing Crane Studios
Harris & Love, Inc.
Ken Garff Automotive Group
Kennecott Land Company
Kennecott Utah Copper
Kern River Gas Transmission Company
Orvis Company
PacifiCorp
Questar
Scoular Company
Tesoro Refining & Marketing Company
Tiffany & Company
Unisys Corporation

+ 81 individual and family donors who contributed over $1,000 @ to the creation of the Great Salt Lake Shorelands Preserve

Funds were also contributed by hundreds of individuals in the $0-$1,000 range

Comment 933 (continued)

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Appendix E: Review of the "Legacy Avian Noise Research Program: Final Report"

Review of the "Legacy Avian Noise Research Program: Final Report"

Submitted to: The Nature Conservancy of Utah
Submitted by: John F. Cavitt, Ph.D.

7/1/2013

Comment 933 (continued)

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Review of the "Legacy Avian Noise Research Program: Final Report"

This document provides a detailed review of the "Legacy Avian Noise Research Program: Final Report" (Biowest 2011; hereafter referred to as LANRP). The review evaluates and provides comments on the LANRP design, implementation, analysis and conclusions (Section 1). In addition, the review also addresses key questions related to the LANRP and the proposed West Davis Corridor (Section 2).

Section 1. LANRP Review

The LANRP is a technical report authored by Bio-West, Inc., an environmental consulting firm operating in several western states including Utah. The LANRP documents the results of a 4-year study to assess the impacts of highway noise on breeding bird communities within the Great Salt Lake (GSL) Ecosystem. Bio-West designed and implemented the study under contract with the Utah Department of Transportation. The LANRP was required as a portion of the mitigation for construction of the Legacy Parkway (UT State Route 67), an 18.5 km, four-lane freeway located in Davis County, Utah.

The study objectives for the LANRP were to assess the potential impacts of highway noise on avian diversity, richness, density and productivity. In order to examine these objectives, the authors established study sites located at varying distances to paved highways (min distance range 0.05 – 23.86 km). A total of six sites were utilized in 2007, seven in 2008 and nine in 2010. Avian diversity, richness and density were determined with a "variable-radius" point count method. Points were distributed within four habitat types – emergent marsh, grassland, playa and wet meadow. Productivity was measured by locating and monitoring nests of two common, semi-colonial shorebirds, American Avocet (*Recurvirostra americana* ; AMAV) and Black-necked Stilt (*Himantopus mexicanus*; BNST) and a small, solitary-nesting shorebird, the Snowy Plover (*Charadrius nivosus*; SNPL). Noise levels at each point-count station and nest were measured in decibels (dB) with sound level meters.

The review of the LANRP is divided into four sub-sections. The first, "Study Design and Implementation", provides comments on the design of the project, as well as methodologies used in the collection of data. The second subsection, "Analysis", includes detailed comments on the statistical techniques used to test hypotheses of the data set. The next component, "Study Conclusions and Limitations", provides comments on the interpretation of the LANRP results provided by the authors and the extent to which the study addressed the stated objectives. Finally, "Minor Comments" are included at the end of the review.

A. Study Design and Implementation

1. The LANRP is an observational study, testing for the effects of highway noise on avian breeding populations. By their very nature, observational studies are limited because investigators have no influence over which subjects (e.g. study areas) receive which "treatments" (e.g. distance to nearest highway). Consequently, observational studies can only identify associations between

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variables and are unable to establish cause and effect (i.e. experimental studies; Whitlock and Schluter 2009). However, when properly designed, an observational study should include all of the features of a good experiment that are used to minimize bias and the impact of sampling error, with the exception of randomization. In an observational study such as the LANRP, the researcher is unable to assign "treatments" (i.e. distance to highway) to subjects (i.e. study sites). Consequently, the greatest challenge in designing an observational study is to minimize bias resulting from confounding variables within the study sites (Whitlock and Schluter 2009). A confounding variable is an extraneous factor, not controlled by the researcher, whose presence affects the key variables being studied so that the results do not reflect the actual relationship between the variables under investigation (Whitlock and Scluter 2009).

Two basic strategies are commonly used to limit the effects of confounding variables. The first technique is called *matching* (e.g. Kupper et al 1981), where sites are paired with a control (or in the case of the LANRP, a distant highway site) having the same or closely similar values for the suspected confounding variables (Kupper et al. 1981, Whitlock and Schluter 2009). The second technique is referred to as *adjustment*, whereby statistical techniques (e.g. Analysis of Co-variance, Sokal and Rohlf 1981) are used to correct for differences between sites.

For studies such as the LANRP, the selection of study sites is critical for providing reliable information free from sampling error (Bibby et al. 2000). Unfortunately, it appears that very little attention was given to this portion of the study design. The authors did not use *matching* or *adjustment* to limit the effects of confounding variables. This greatly reduces the value of the study and the conclusions drawn from it. The following list provides important confounding variables that should have been addressed in the study design phase or during statistical analysis.

- Habitat differences. The study sites selected for the LANRP differ significantly in the type of habitat provided for breeding aquatic birds. These habitat differences are not evenly spread across the sites utilized or in relation to the distance sites are from highways (see Table 1 below). The authors selected six study sites < 1 km from the nearest highway, 2 sites 2 – 5 km and 1 site > 23 km from the nearest highway (see Table 1 below and *LANRP Table 1, 2 pg. 5*). However, the site located furthest from any highway, Locomotive Springs Waterfowl Management Area (LSWMA), contained no data from either the grassland or playa habitat types. Furthermore the two intermediate distance sites, Great Salt Lake Shorelands Preserve (GSLSP) and Salt Creek Waterfowl Management Area (SCWMA), only had 6% and 7% respectively, of points distributed within the playa habitat types. To further complicate the study design, many of the sites within 1 km of highways oversampled playa with roughly 32% of all points located within this habitat type (Table 1). Unfortunately, the authors do not account for this in any of the analyses nor do they even address this potential confounding variable. Because avian communities differ within these habitat types at GSL (Paul and Manning 2008), it is likely that any differences observed (or not observed) could be solely the result of habitat differences across study sites.

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- Site management. The authors indicate that study sites were selected because they were highly managed with regard to water levels. Yet, even the Waterfowl Management Areas (WMAs) receive different amounts of water and manage those allocations differently (J. Dolling, R. Hansen pers. comm.). In addition, the authors included sites with far less active water management such as GSLSP and Legacy Nature Preserve (LNP). For wetland nesting birds, the amount, timing and duration of water within the various habitat types dictates their composition, abundance, and success (Kadlec and Smith 1989, Colwell 2010). The authors do not address this difference in water management nor do they indicate how water levels and precipitation fluctuated during the study. Both the total precipitation received, and GSL water elevations differed significantly throughout the LANRP study. Total annual precipitation measured at the Salt Lake City International Airport varied over 17.8 cm during the four-year study (Western Regional Climate Center 2013) and GSL water elevation decreased from 4196.3' in 2007 to 4194.7' in 2010 (USGS 2013). Consequently, it is very likely that these differences in water management and variation in precipitation/GSL elevations affected the avian communities. However, no discussion of this potential impact is made nor any attempt to measure its effect on the variables studied. A second confounding factor associated with variation in study site management, is the extent to which predators are removed during the breeding season. Predator control is an important management technique that has been shown to increase nesting productivity as well as population sizes of breeding birds (Newton 1998). Farmington Bay Waterfowl Management Area (FBWMA) has a very active predator control program, whereas the Inland Sea Shorebird Reserve (ISSR) does not. The extent to which predator management occurs within all sites should be considered as it can have important consequences not only for interpreting the results from the productivity portion of the LANRP but also the analyses of avian richness, diversity and abundance. Given the important differences in site management, the LANRP should have in the very least discussed these confounding factors and tested for any potential effects.
- Study site area. The concept of species-area relationships is perhaps one of the most well-documented ecological principles in conservation biology (Soulé and Wilcox 1980, Rosenzweig 1996). The species-area relationship (or curve) is the concept that as one samples from larger habitats more and more species are detected. The relative numbers of species also seem to follow predictable mathematical relationships (Rosenzweig 1996). Although the information is not provided in the LANRP, a quick search indicates that the sites used in the study differ significantly in area (Table 2). For example, Timpie Springs WMA (TSWMA) is 12 times smaller than FBWMA. Differences in diversity, richness, and density between large wetland complexes and very small sites could be due solely to species-area relationships. Species-area relationships are not considered or mentioned as a potential confounding factor.

Each of these confounding factors suggests that the selection of study sites in the LANRP is not free from sampling error. The nature of observational studies makes the elimination of confounding variables

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difficult, however the authors did not attempt to reduce the effects of the most important factors nor test for their potential impacts throughout the design and analysis phases.

2. Throughout the LANRP, the authors do acknowledge that their experimental design is unable to account for the confounding effects of non-highway noise (agriculture, industry etc). They do indicate that a negative relationship was observed between distance to the nearest highway and mean noise level. However, the authors do not provide any results for this analysis so that the reader can understand the magnitude of this relationship nor do they provide the amount of variation in noise levels that are explained by proximity to highways (P-values, R^2, df etc.). Without this information it is impossible to understand the impact that non-highway noise may have on the results.
3. One of the most significant sources of bias in surveys of avian communities is the individual observer (e.g. Bibby et al. 2000, Gregory et al. 2004). People differ significantly in their birding skills, survey experience and attention to detail. Consequently, bias can be incorporated into survey results if observer effects are not minimized or adjusted within analyses. Surveys, such as the LANRP, that are conducted three times a year, across nine different sites, and over four different years would be difficult to organize with a single observer. It is thus likely that multiple observers participated in the surveys. However, the LANRP does not provide any information on the number of observers, level of their experience in avian surveys or training they were provided. In the very least the study authors should have addressed this potential source of bias and preferably tested for an observer effect in the data. Without this information it is unclear if any bias is included in this study through variation in observer skill or ability.
4. The authors indicate that individual birds detected by calls or songs were not used in the analyses of species-specific density estimates and noise effects. This is justified for a study such as this examining the impacts of noise on avian populations. One would assume that in sites with greater noise a reduction in species detections would occur, if songs and calls were used. However, the authors did not indicate that this same process was used in the analysis of species richness and diversity. Furthermore, the authors need to explain how the exclusion of data was implemented and what species and proportions of observations were not included in the analyses. It appears from both the text and the data that field observers did record birds detected by both visual and auditory cues. In the analysis section, the authors state "Only visual detections were used to eliminate highway or other noise confounding auditory detections of birds" (*LANRP – Species-Specific Density Estimates, pg. 10*). Furthermore, data provided in Table 4 of the LANRP (*pg. 21*) include several species that, because of their behavior and/or preference for dense habitat, are very difficult to detect without the aid of their songs or calls (e.g. Marsh Wren, Common Yellowthroat, Savannah Sparrow, Sora, Virginia Rail, Brewer's Sparrow, Grasshopper Sparrow, Yellow Warbler). If field observers were using both aural and visual cues to locate and count birds then this could potentially lead to additional bias in the data. No information is provided that ensures the authors were able to distinguish in the data-set between birds only detected via visual cues versus those first detected via vocalizations and then visually located. It is quite possible that observers, unless provided detailed information

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and training, may inadvertently use vocalizations to orient their attention to areas of activity where then, visual identification could be made.

5. The authors utilized a point-count method for comparing the diversity, richness and abundance of wetland birds. They justified the choice of this method because it can provide a robust estimate of breeding bird densities and that "it would be difficult to position line-transect routes within a dominant vegetation community" (*LANRP pg. 3*). However, for a study such as the LANRP, point-counts are likely not suitable for detecting birds. Point counts rely on the observer remaining stationary, detecting birds by both sight and sound (Ralph et al. 1995). Consequently, if only visual observations were analyzed, as reported by LANRP authors, the observer is likely missing individuals and species that are cryptic and secretive (see also A4 above). For this reason, a line transect would be preferred. In this method, the observer walks standardized routes within the study sites and records birds detected along the route. The movement of the observer is important by allowing the detection of birds flushed by the observer that might not otherwise be noticed. Transects are also generally more efficient and accurate than point counts. Given the movement of the observer along the route, transects allow for recording more individuals per unit time (Bibby et al. 2000). They tend also to be more accurate because the impact of bias only rises linearly for line transects but geometrically for point counts (Bibby et al. 2000, Gregory et al. 2010). In addition, double counting is less of a concern for line transects (Gregory et al. 2010). Because transect routes can be either randomly allocated or stratified by habitat type, they are very adaptable to studies of wetland birds. This technique was successfully used to survey SNPL throughout its breeding range including GSL (Thomas et al. 2012), used to monitor and assess the avian population utilizing the LNP (E. McCulley pers. comm) and was the basic technique used for much of the GSL Waterbird Survey (Paul and Manning 2008).
6. Species richness, diversity and abundance was assessed in the LANRP by conducting three surveys per year (May – late July and early Aug) at each site. The authors provide no indication of how these surveys were collected or randomized between sites. In addition, they provide no indication of when each survey was collected other than at least 2-3 weeks apart. This information suggests that some sites had successive visits every 2-3 weeks and perhaps other sites had surveys separated by longer intervals. GSL and associated wetlands experience extremely large temporal changes in abundance and species richness (Paul and Manning 2008), so the methods used for the randomization of site visits and the timing of surveys is critical to avoid introducing bias and/or sampling error into the data.
7. The LANRP provides nest productivity data collected from sites located at varying distances to highways. The authors provide very little insight into the selection of the species used (AMAV, BNST and SNPL) other than they are common nesting birds found in GSL wetlands. The authors also fail to indicate what the study objectives are for examining nesting productivity and how noise may influence nesting success? If the authors are suggesting highway noise may mask predator movements, then they are assuming that 1) adult nesting birds detect approaching predators via aural cues and 2) that they can then dissuade the predator from taking the nest contents after detection. These assumptions may not be valid for the species chosen in the LANRP. Avian predators (e.g. gulls and ravens), for these breeding species are most likely

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detected by visual rather than through aural cues. Mammalian predators (raccoon, skunk, coyote, fox) of AMAV, BNST, and SNPL at GSL are nocturnal (Cavitt et al. 2008) and more likely to be detected via auditory cues. However, several studies have suggested that nesting birds engage in very little nest defense behavior at night (Bradley and Marzloff 2003, Ellison and Ribic 2012), so the ability to reduce the chance of nest predation via nest defense with nocturnal predators is likely small for this suite of breeding birds. Furthermore AMAV and BNST are semi-colonial nesting species and they preferentially select open areas with very sparse vegetation in order to visually detect approaching predators. In this environment, it is far more likely that visual detection of predators is much more important than aural cues. Data from the LANRP study and others suggest nesting success for these species is influenced primarily by nest site selection and colony size. Solitary nesting species that nest in upland or grassland sites may be more sensitive to noise masking predator movements than the species selected for the LANRP.

8. A portion of the productivity study attempted to test the association between noise levels and nesting success. However, due to the study design and species utilized, the authors were only able to measure noise levels after nest termination. The authors do not indicate how long after nest termination this occurred or at what time of day. The reader is left to assume that measurements took place in association with point counts. No information was presented to suggest that noise levels were similar while nests were active versus when the measurements were actually recorded. In addition, since nocturnal predators are important within this ecosystem (see A7 above), noise levels should have been recorded at night for this analysis. It is reasonable to suspect that highway noise exhibits a significant temporal pattern.
9. Within the productivity data presented, the LANRP reports an exceptionally high percentage of nests with an unknown fate (20.9%). This is not typical of nesting studies in general (Martin and Geupel 1993) or of these species in particular (Cavitt 2006, Cavitt et al. 2008). In addition, the percentage of nests with unknown fates appears to vary significantly among sites (*LANRP Table 8, pg. 25*). Some sites had relatively moderate levels of unknown nesting fates however, the GSLSP had over 40% of AMAV and BNST nests classified as unknown. This makes any interpretation of data on nesting success highly speculative. With over 20% of all nests that were monitored for this study not assigned a nesting fate (i.e. failed or successful), it is not possible to make inferences from the data and calls into question all the results of the nesting success analyses. This high percentage of unknowns is likely the result of infrequent nest visits (Martin and Geupel 1993).
10. The GSL and its associated wetlands serve a critical function as staging and wintering areas for millions of aquatic birds during their annual migrations (Paul and Manning 2008). In fact, far more birds utilize these habitats during migration than for breeding (Paul and Manning 2008). The LANRP only provides information on the effects of noise on avian breeding populations and does not account for the importance of GSL at these other portions of the annual cycle. Noise and disturbance are likely to be more important for shorebirds during migration than during breeding (Colwell 2010). Shorebirds have a higher metabolic rate relative to other similar-sized birds (Kersten and Piersma 1987). As a consequence, they require undisturbed foraging opportunities in order to build reserves for long-distance migrations. Human-induced disturbance, such as noise may adversely impact the ability of migratory species to gain

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sufficient body reserves by reducing their daily energy intake (Colwell 2010). Consequently, the most sensitive time for aquatic birds using GSL may have been overlooked by the LANRP.

B. Analysis

1. All of the statistical techniques used in the LANRP analysis, assume that data are a random sample from the population, in which each individual has an equal and independent chance of being sampled (Sokal and Rohlf 1981). Unfortunately the design and analysis of many portions of this study were conducted in such a way that violates this assumption of independence. Pseudoreplication occurs in a study whenever individual measurements are not independent but are analyzed as if they are independent of one another (Hurlbert 1984). "Replication" in a statistical analysis is important and refers to the sampling of multiple independent units from a population. Replication enables one to estimate population characteristics and the precision of those estimates. In general, the greater the replication, the greater the confidence in the results. However, the analysis in the LANRP is plagued by taking non-independent data points and treating them as though they were independent units, thus making a false claim of replication. When we assume that data points are independent of one another we give data points equal credence and weigh its information as heavily as every other point. If two data points are not independent, then the data set is being treated as though it is larger than it really is and as a result calculating confidence intervals that are too narrow and P-values that are too small.
   - Point count data. – The analysis of data derived from point counts was conducted such that the three counts per year are assumed to be independent (e.g. Pendelton 1995). However, counts conducted in May at a given site are not independent of counts conducted later in the same breeding season at the same site (e.g. the same birds will be counted, and the noise levels are not independent of one another). Data collected from the three count periods within a site should be analyzed separately, averaged so that a mean value per site is used, or alternatively time should be included as a factor in the analysis. For example, in the analysis of Yellow-headed Blackbird density and its relationship to "highway noise", the LANRP lists a sample size of 81 for the linear regression analysis (*see LANRP Table 5, pg. 24*). According to the information I could extract from the LANRP[1] the sample size should only be 28; roughly only *1/3* of what was used in the analysis.
   - Nesting success data. – Information provided within the LANRP suggests that pseudoreplication may have occurred in the analysis of nesting success data. Because standards of statistical reporting were not followed (e.g. Sokal and Rohlf 1981, Whitlock and Schluter 2009), it is difficult to infer how each analysis was constructed. It appears that noise levels were obtained at each nest or at groups of nests and then regressed on

[1] Extracting information on the methodologies and specific results obtained is extremely difficult. Very little data is provided that would allow for an assessment of protocols and methodology. The authors do not follow common practices and standards for reporting the results of statistical tests.

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apparent nesting success. However, the noise levels at nests within a given site are not independent of one another. Furthermore, the success of individual nests at a site are also not independent data points and should not be treated as such in the analysis. Each site will likely have noise levels varying consistently within the site (*see LANRP Results pg. 12*) as well as the same suite of nest predators, and management regime.

2. The LANRP did not address or consider the importance of annual variation in diversity, richness, density and productivity. In most studies, this is often the most striking cause of variation (e.g. Frederick and Collopy 1989, McShea 2000, Schmidt and Ostfeld 2003, Cavitt et al. 2008, Paul and Manning 2008) and yet the LANRP does not even test for the importance of annual variation. Clearly by not attempting to understand how these variables change over time, inferences drawn from the results are suspect.
3. Wetland habitats within the GSL ecosystem differ considerably in their vertical structure. Playa habitats are open and expansive areas with little to no cover, whereas emergent marsh, wet meadow and grassland habitats have significantly more vegetative cover and a much higher vertical structure. The attenuation of sound is likely much different in flat open playas relative to an emergent marsh filled with *Phragmites*. Noise is likely to penetrate and affect avian populations differently depending on the habitat type utilized. Data for the LANRP was collected in each of these different habitat types, but was not addressed or included in the analysis. This coupled with the uneven distribution of habitat types within study sites (see A1 above), suggests another confounding factor that can impact interpretation of results.
4. In order to test the potential effects of highway noise (substituting distance to nearest highway) on avian densities, the authors computed a "combined density estimate" for the 10 most numerous species. The rationale for such a "combined estimate" is not provided nor does it follow any standard practices within the literature. The species included in this estimate are vastly different in their behaviors, life histories, and GSL population sizes. In addition, the authors do not provide information suggesting that no interactions existed between densities of these species and sites. Similarly, it is unclear why only two species (Yellow-headed Blackbird and Common Yellowthroat) were singled out to compare the effects of highway noise on their population densities. The authors should have examined densities of each species rather than selecting just two examples for the analysis. It is not clear why density data were collected on each species if the information is not used to inform the LANRP.
5. Throughout the entire LANRP, detailed information is lacking. This makes any understanding of statistical models and results difficult, if not impossible. The format used by the authors does not conform to any known standard practice of reporting statistical test results.

Comment 933 (continued)

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C. Study Conclusions and Limitations

Because of the significant problems identified with the design, implementation and analysis of the LANRP, very few conclusions can and should be drawn from the study. The authors themselves identify several weaknesses and also caution the use of the data (*LANRP Discussion pg. 28*). The selection of study sites and the subsequent analyses did not take into consideration known and significant confounding variables. Lack of attention to these factors reduces the value of the study and call into question the results obtained. These confounding variables are detailed above but include the confounding effects of habitat, management and size of each study location. The authors statement that a "lack of significant relationship between distance to highway and bird density suggests that birds are able to inhabit areas close to highway corridors." (*LANRP Discussion pg. 28*) is imprecise and misleading. The authors have failed to account for significant confounding variables and significant sources of variation that likely reduced the ability to detect differences. In addition, the authors only compared the 10 most abundant species, which in itself biases the data set toward the most widespread species. Widespread and common species may not be the ones most likely affected by highway noise.

The selection of focal species for the productivity analyses was not explained and appears to have ignored important aspects of their life histories, and behaviors which suggest they may not have been appropriate choices for study. In addition, the extremely high proportion of nests monitored with unknown fates (20% overall and over 40% at one site) effectively eliminates the information provided by this portion of the study.

D. Minor Comments

Although the following comments are minor in scope, they are included below.

1. The scientific name for Snowy Plover is incorrect within the LANRP (*LANRP Methods pg. 7*). The correct name is *Charadrius nivosus*.
2. WMAs are misidentified throughout the LANRP as "Wildlife" Management Areas. The correct name is "Waterfowl" Management Areas.
3. The LANRP provides insufficient information on all aspects of the project. This makes it difficult for any interpretation of results. For example, study sites are not adequately described in report. The reader isn't provided with even the most basic descriptive information about each site's size, habitat, and management regime. Unfortunately, this lack of attention to detail is not limited to the study site descriptions. There is a lack of information on all methodology (float schedules for aging eggs, how these were calibrated etc). There is no indication of how the number of point count stations per site was determined. Even though the density of avian populations was a key feature in the analyses, these density estimates were never provided for species and sites.
4. The results of regressions describing the relationships between species diversity, and species richness and highway noise were indicated as significant (*LANRP Results pg 20*).

Comment 933 (continued)

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However, the direction of this relationship is not indicated. This result seemed to be an important finding and yet no discussion of this was ever made.

Section 2. Specific Questions Addressed

1. *Synthesize and critique the LANRP.*
   a. *Comment on the "Suggestion For Future Study" and the significance these reported limitations with the study might have on drawing conclusions about the impact of the WDC on the GSL Shorelands Preserve.*

The review and synthesis of the LANRP is outlined in detail within Section 1 above. The authors provide insightful information within the "Suggestions for Future Study" section of the LANRP. I would also suggest that future studies should address the known confounding variables (either through better site selection or adjustments in analyses), and utilize different methodologies for surveying avian communities.

2. *Can valid conclusions about impacts of the WDC on bird species diversity, nesting and foraging in the GSL Shorelands Preserve be drawn from this study?*
   a. *Can impacts to species that nest along the shoreline of GSLSP, but also use the preserve for feeding, be determined from the report.*
   b. *Can impacts to State sensitive species be identified?*

The LANRP reviewed for this project does not provide adequate information that would allow informed inferences to be made regarding the potential impacts of the West Davis Corridor on avian diversity or productivity within the GSLSP. The rationale for this statement is provided in detail in Section 1 above and summarized below. The LANRP did not consider or evaluate the importance of sites for foraging birds nor populations that rely on sites such as the GSLSP during migration.

In general, the LANRP did not adequately select sites that would eliminate confounding variables. This is most apparent with the inclusion of the GSLSP, which is unlike any of the other sites studied in the LANRP. All of the other sites are managed intensively for water (see Section 1A above), whereas the GSLSP does not manage for open water impoundments. Water management within GSL wetlands requires the use of dikes and water control structures that physically change the landscape from its natural condition. The result of intensive water management is a mosaic of fragmented wetland habitat types within close proximity to one another. The landscape within the GSLSP is very different from this type of managed wetland. At this location wetland habitats intergrade with one another and there is an absence of sharp, harsh habitat edges. In addition, the WMAs have instituted management plans specifically designed to enhance waterfowl abundance and productivity. This is not the case at the GSLSP where waterfowl are considered important but not the focal taxon. WMAs also have an intensive predator management program which is not the case within the GSLSP. Predators are managed within the GSLSP but at a lower level than within the WMAs. The GSLSP is also unique in that a substantial portion of the habitat lies within upland sites (i.e. wet meadow and grassland). These areas are critical

Comment 933 (continued)

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habitat for foraging aquatic birds such as White-faced Ibis, Franklin's Gull, and provide important nesting habitat for upland nesting waterfowl, Long-billed Curlew, and Bobolink.

The LANRP did not address impacts to state sensitive species or those of conservation concern. Although individuals were detected and reported within the LANRP (e.g. Grasshopper Sparrow, Brewer's Sparrow, Bobolink, Long-billed Curlew), no analyses were conducted to determine the impacts of proximity to highways or highway noise on these populations. Productivity data was collected for Snowy Plover, however only 17 nests were located and thus analyses were not possible.

3. *Are the seven study sites used in the LANP, sufficient to make inferences on/in the GSL Shorelands Preserve.*

The design and structure of the LANRP is not sufficient to make inferences to the GSLSP (See Section 2 question 2 above). Significant differences exist between the actively managed wetland sites and GSLSP such that the comparisons are not valid. No other site studied within the LANRP shares habitat and management characteristics with the GSLSP.

4. *Are there any other significant strengths or weaknesses of the report?*

The review of the LANRP is provided in Section 1 above.

Comment 933 (continued)

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Table 1. Proportion of point-count stations located at each site, within each habitat type (# point-count stations) by minimum distance to nearest highway.

Site	Min Distance to Highway (km)	Emergent Marsh	Grassland	Playa	Wet Meadow
Box Elder Creek Restoration Area	< 1	0.50 (1)	0.00 (0)	0.00 (0)	0.50 (1)
Inland Sea Shorebird Reserve	< 1	0.07 (2)	0.27 (8)	0.67 (20)	0.00 (0)
Farmington Bay WMA	< 1	0.53 (19)	0.00 (0)	0.19 (7)	0.28 (10)
Legacy Nature Preserve	< 1	0.08 (3)	0.69 (27)	0.08 (3)	0.15 (6)
Public Shooting Grounds WMA	< 1	0.26 (10)	0.21 (8)	0.26 (10)	0.28 (11)
Timpie Springs WMA	< 1	0.00 (0)	0.00 (0)	0.63 (12)	0.37 (7)
Salt Creek WMA	2	0.37 (16)	0.35 (15)	0.07 (3)	0.21 (9)
Great Salt Lake Shorelands Preserve	4	0.50 (8)	0.25 (4)	0.06 (1)	0.19 (3)
Locomotive Springs WMA	24	0.80 (4)	0.00 (0)	0.00 (0)	0.20 (1)

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Table 2. Approximate area (ha) of each study location. Data could not be located for Box Elder Creek Restoration Area.

Site	Area (ha)
Box Elder Creek Restoration Area	-
Inland Sea Shorebird Reserve	1468
Farmington Bay WMA	7284
Legacy Nature Preserve	890
Public Shooting Grounds WMA	4703
Timpie Springs WMA	576
Salt Creek WMA	2198
Great Salt Lake Shorelands Preserve	1760
Locomotive Springs WMA	4800

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Appendix F: Great Salt Lake Shorelands Bird Survey 2013 Protocols

GREAT SALT LAKE SHORELANDS BIRD SURVEY

PROJECT OBJECTIVE:

The purpose of this survey is to identify and quantify migratory and nesting bird species using habitat within the GSL Shorelands Preserve with emphasis on potential impact zones adjacent to or within the projected UDOT West Davis Corridor.
Important Note: We have relied heavily on the Great Salt Lake Ecosystem Project methods and protocols developed during the GSL Waterbird Survey (1997-2001).

COOPERATORS:

This is a community-based project using volunteers from the public and sponsored by the Nature Conservancy of Utah. Data will be collected and managed by The Nature Conservancy.

SYSTEMATICS:

It is important that participants reduce error and bias as much as possible in carrying out surveys. Try to be as precise and accurate as possible. In particular properly identify the species you are counting and count or estimate their numbers as precisely as you can. Where areas must be measured work on accuracy. The best rule is to do the same procedures the same way each time.

SURVEY TIMING:

Twelve surveys will be conducted from April 12 through September 20, 2013(see attached survey calendar). The survey periods are in 8 day blocks and a Friday target date has been selected. Weather and personal schedules may prevent surveys on the target date but please try to keep the date as close to the target as possible. The surveys should be conducted from in the mornings between sunrise and 1000 hours or no later than noon if possible.

COUNTING METHODS:

Shorebirds can be counted more easily than many birds due to their use of flats and other open habitats. However, due to their habits of aggregating, sometimes in very large, mixed-species flocks, and flying (often unexpectedly during a count!), skill, practice, and experience are necessary to obtain accurate counts. Other birds may inhabit emergent wetlands and adjacent uplands and total numbers or estimates are difficult to make. Make only the counts that are reasonable with the time allotted.

Counting methods vary, depending on the number of birds, their edginess, and census conditions. The number of birds in a flock can be obtained by:

1. **Counting birds individually.** If there are only a few birds in an area, (less than 100 total), they should be counted individually.

2. **Counting birds in groups of some number.** If you are counting larger flocks, say 200 birds, begin at one end of the flock--count the first 10 birds, then the second 10 birds, continuing until you can easily see the birds in groups of 10. At that point, start counting by 10 bird groups. This method can be generalized to counting by 20-bird, 25-bird, 50-bird, or even larger groups, for larger flock sizes. This method can also be used for counting birds in flight.

3. **Estimating the number of birds in a flock without actually counting them.** It is wise to estimate numbers of all the birds in an area quickly, to determine the relative proportions of the most common species, to determine the numbers of the less common species, and to determine whether the species are segregated or homogeneously mixed throughout the flock. Then, if the actual count is interrupted, some

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reasonable estimates of numbers will be possible. Making a rapid estimate of the number of birds may be the only way to salvage a count in which birds fly away before they are counted.

SPECIES IDENTIFICATION

1. **Try to identify all the birds to species.**

2. **Whenever possible, allocate unidentified birds to species groups** (Least, Western, Semipalmated or Baird's sandpipers are referred to as "PEEP"), rather than listing them as unidentified shorebirds. If you have problems separating them then draw a circle around the blocks adjoining them and record the count for the those species together. There are blanks available for other waterbirds not on the list or for grouping birds that you were not able to identify further (i.e., medium or small shorebirds).

APPORTIONING THE COUNT OVER SEVERAL SPECIES

1. **Count out each species separately.** Counting each species separately is time consuming if there are many species to count but can be the least confusing method if there are few abundant species per counter.

2. **Count all species together.** If the group of birds comprises primarily of one species, with a few individuals of other species, it is often easiest to count the total number of birds, then count the more rare species and subtract their numbers from the total to get the number of the abundant species. An assistant, recording for the counter, can aid in this process by either counting the more rare species in the flock or by making the subtractions on the recording form. In cases where there are tens of thousands of shorebirds and several species are very abundant, it may be necessary to count all species together and to sample species composition at many places in the flock in order to determine the proportion of the total made up by each species.

3. **Count several species together.** In a mixed flock, it is often fastest to make a combined count of similarly sized species. For example, say there are five species present: Western Sandpiper, Least Sandpiper, Willet, Marbled Godwit, and Long-billed Curlew. It might be easiest to count the first two species together, by writing down the number of the less common species as they are encountered and keeping a running tally of the most common species in your head until the flock has been scanned completely. Similarly, the Willet, Marbled Godwit, and Long-billed Curlew could be counted together. Counting several species simultaneously can often be done most effectively if there is both a counter and a recorder. The counter can give the recorder the counts of the less common species as they are seen but accumulate the count for the most common species until the flock is completely counted.

SURVEY METHODS:

Most surveys will be done on a line between points on the Shorelands Preserve map. All birds within .25 mile in any direction from the line or point should be included.
Any bird species within the survey area should be counted and recorded on the field tally form. Counting in the morning helps in avoiding the problem of moving birds in the survey area. Do not count flyover birds (as in high flying pelicans). Do count birds that fly from the survey area. Please record the needed weather and observer data along with any field notes you feel would be informative.

Point samples
Point samples are conducted along shorelines of the GSL and some islands. Besides the count of birds at the sample point, birds will also be counted between sample points. The point sample will be compared to the area counts to help refine efforts in future years. Those assigned areas designated for point sample
surveys must follow a specific protocol (it helps to study the point sample survey diagram,
□ point samples are being conducted to make comparisons with the total counts in density estimates.
□ the point sample is taken in a measured area- .25 mile radius circle.
□ points are marked, but the actual sample locations may move as the shoreline fluctuates. Move

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sample location at a 90□ angle to the shore. The sample location is always 100 yards from the shoreline.
□ counts last for no more than 10 minutes
□ an estimate by percentage is made of existing habitat types within the point sample circle (see key)
to survey form for habitat descriptions)
□ after completion of the count, the surveyor takes additional time to assess behavior and habitat use of counted birds.

SURVEY FORM and VOLUNTEER TIME SHEET:

Survey forms will be provided for each survey period. These forms are to be used for field tallies/notes for each of the survey periods. For each volunteer, the Agreement for Voluntary Services form (Volunteer Time Sheet on reverse side) needs to be **filled out and signed prior to working**. If you need more forms, please contact us.

DATA SUBMISSION:

The bird data we collect is time sensitive. The West Davis Corridor Draft Environmental Impact Statement is due to be released to the public in May 2013. We will then have 90 days to comment with bird survey information that is lacking in the EIS. Our data sheets must be completed and turned in as soon as possible. We would appreciate cooperators turning in the field data on a monthly time frame, in self addressed envelopes provided.

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Appendix G: Map of Survey Sites and Survey Areas, Survey Calendar, Sample Data Form.

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TNC Great Salt Lake Shorelands Bird Survey 2013 Calendar

APRIL

S	M	T	W	TH	F	S
	1	2	3	4	5	6
7	8	9	10	11	***12***	13
14	15	16	17	18	19	20
21	22	23	24	25	***26***	27
28	29	30				

MAY

S	M	T	W	TH	F	S
			1	2	3	4
5	6	7	8	9	***10***	11
12	13	14	15	16	17	18
19	20	21	22	23	***24***	25
26	27	28	29	30	31	

JUNE

S	M	T	W	TH	F	S
						1
2	3	4	5	6	***7***	8
9	10	11	12	13	14	15
16	17	18	19	20	***21***	22
23	24	25	26	27	28	29
30						

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JULY

S	M	T	W	TH	F	S
	1	2	3	4	5	6
7	8	9	10	11	***12***	13
14	15	16	17	18	19	20
21	22	23	24	25	***26***	27
28	29	30	31			

AUGUST

S	M	T	W	TH	F	S
				1	2	3
4	5	6	7	8	***9***	10
11	12	13	14	15	16	17
18	19	20	21	22	***23***	24
25	26	27	28	29	30	31

SEPTEMBER

S	M	T	W	TH	F	S
1	2	3	4	5	***6***	7
8	9	10	11	12	13	14
15	16	17	18	19	***20***	21
22	23	24	25	26	27	28
29	30					

Target dates are in bold face italics, e.g., April 12, April 26, May 10, etc.

Shaded blocks are arranged in blocks to show survey periods, e.g., April 8-16, April 23-30, May 7-14, etc.

If surveys cannot be conducted on target day, due to inclement weather or other circumstances, attempt to conduct as close to target days as possible and within the survey period.

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Great Salt Lake Shorelands Preserve Survey Form (Page 1)

Survey pd. 5 Area Name North Site Area No. NA

Date 6/6/13 Start/End Time 8:00 / 9:25 Survey Method Vehicle/Walking

Temp (F) 64°F Wind Sp (mph)/Dir Ø / Cloud Cover % Ø

GPS: 407339, 4546592

Habitats and Behavior

Pt. 1	W			E			M			P		UPLANDS
ELEMENTS	S	F	M	D	R	M	W	D	S	T		DRY
% AREA OF		5%				35%	10%					50%
SUITE/ SPPP												
CAGU												23Y
BNST							23F					
FOTE												3Y
WFIB												250Y
MAWR						3T						
RIPH												1T 2L
SOSP						2T						
BHCO												3Y
AMAV							24L 15F					4T
BASW		2F										
WEME												
COYE						2T						
CITE		13F										1Y
SNEG												2Y
YHBL						2T						9Y
NEKI												2T

Habitats and Behavior

Pt. 1	W			E			M			P		UPLANDS
ELEMENTS	S	F	M	D	R	M	W	D	S	T		DRY
% AREA OF		5%				35%	10%					50%
SUITE/ SPPP												
RWBL						13L 10T						
MALL		3F										1Y
KILL							1L 2F					2L 4T
WISN												2T
SASP												4T
SEOW												1F (Hunting)
DCCO												2Y
AMKE												2F (Hunting/Hovering)

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GPS: 408113, 4546314

Habitats and Behavior

Pt. 2	W			E			M		P		UPLANDS
ELEMENTS	S	F	M	D	R	M	W	D	S	T	DRY
% AREA OF		28%		10%		10%	2%		20%		30%
SUITE/ SPPP											
GADW		3F					1L				
KILL							4T				
SASP									7T		1T
SEOW											1F
RWBL						25L 15T					
YHBL						13L			5F		1Y
BHCO											3Y
WFIB											250Y
CAGU											5Y
WEME									2T		3T
MAWR						8T					
SOSP						2T					
CITE		8F					2L				
AMRO									1F		1L
MALL		11F									
VIRA						1T					
GRFL											1F

Habitats and Behavior

Pt. 2	W			E			M		P		UPLANDS
ELEMENTS	S	F	M	D	R	M	W	D	S	T	DRY
% AREA OF		28%		10%		10%	2%		20%		30%
SUITE/ SPPP											
COYE						2T					
FOTE		6F				2Y					
BWTE		1F									
WEGR		1F									
AMCO		2L 1F									
SNEG						2Y					
BASW		5F									
BNST		2L 8F									
WILL						1Y					
GBHE		1L/F									
WISN											1T
NOHA						1F					

WEST DAVIS CORRIDOR

Comment 933 (continued)

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CONTINUED FROM 6/6/13

Great Salt Lake Shorelands Preserve Survey Form (Page 1)

Survey pd. 5 Area Name North Site Area No. NA

Date 6/6/13 Start/End Time 8:00 / 9:22 Survey Method walk/drive

Temp (F) 64°F Wind Sp (mph)/Dir Ø / Cloud Cover % Ø

GPS: 407870, 4585292

Habitats and Behavior

Pt. 3	W			E			M		P		UPLANDS	
ELEMENTS	S	F	M	D	R	M	W	D	S	T	DRY	
% AREA OF		25%				15%	10%		40%		10%	
SUITE/ SPPP												
HOLA									2T			
SASP						3T						
MAWR						5T						
GRBE						3Y						
PEFA						1N						
CAGU											11Y	
FRGU											16Y	
WFIB							80F		125Y			
LBCU									1T			
GADWI							2F					
BWTE							1L					
KILL							4T				1L	
SORA						1T						
COYE						1T						
SEOW									1F			
AWPE									15Y			

Habitats and Behavior

Pt. 2	W			E			M		P		UPLANDS	
ELEMENTS	S	F	M	D	R	M	W	D	S	T	DRY	
% AREA OF												
SUITE/ SPPP												

Comment 933 (continued)

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Habitats and Behavior

Pt. 3	W			E			M		P		UPLANDS	
ELEMENTS	S	F	M	D	R	M	W	D	S	T	DRY	
% AREA OF												
SUITE/ SPPP												

Habitats and Behavior

Pt. 4	W			E			M		P		UPLANDS	
ELEMENTS	S	F	M	D	R	M	W	D	S	T	DRY	
% AREA OF												
SUITE/ SPPP												

Comment 933 (continued)

Response Section in Chapter 32 ➥

6/6/13

1

GREAT SALT LAKE MIGRATORY WATERBIRD SURVEY FORM (Page 2)

North Site Numbers of Birds by **Point Sample or Area Count**

Species	PS/AC 1	PS/AC 2	PS/AC 3	Birds outside point	Species
Pied-billed grebe					Pied-billed grebe
Eared grebe					Eared grebe
Western grebe		1			Western grebe
Clark's grebe					Clark's grebe
American white pelican			15		American white pelican
Double-crested cormorant	1				Double-crested cormorant
Common merganser					Common merganser
Red-breasted merganser					Red-breasted merganser
American bittern					American bittern
Great blue heron	1	1	3		Great blue heron
Snowy egret	2	2			Snowy egret
Great egret					Great egret
Cattle egret					Cattle egret
Black-crowned night heron					Black-crowned night heron
White-faced ibis	250	350			White-faced ibis
Canada Goose					Canada goose
Whistling (Tundra) swan					Whistling (Tundra) swan
Green winged teal					Green winged teal
Blue-winged teal		1	1		Blue-winged teal
Cinnamon teal	14	10			Cinnamon teal
Mallard	4	10	3		Mallard
Northern pintail					Northern pintail
Northern shoveler					Northern shoveler
Gadwall		4	2		Gadwall
American widgeon					American widgeon
Canvasback					Canvasback
Redhead					Redhead
Lesser scaup					Lesser scaup
Greater scaup					Greater scaup
Ring-necked duck					Ring-necked duck
Common goldeneye					Common goldeneye
Barrow's goldeneye					Barrow's goldeneye
Bufflehead					Bufflehead
Long-tailed duck					Long-tailed duck
Virginia rail		1			Virginia rail
Sora	3		1		Sora
American coot		2			American coot
Sandhill crane					Sandhill crane
Black-bellied plover					Black-bellied plover
Snowy plover					Snowy plover
Semipalmated plover					Semipalmated plover
American golden plover					American golden plover
Killdeer	8	6	4		Killdeer
Ruddy turnstone					Ruddy turnstone
Black-necked stilt	23	10	18		Black-necked stilt
American avocet	37		25		American avocet
Greater yellowlegs					Greater yellowlegs
Lesser yellowlegs					Lesser yellowlegs
Willet		1			Willet
Whimbrel					Whimbrel
Long-billed curlew			1		Long-billed curlew
Marbled godwit					Marbled godwit
Red Knot					Red Knot
Sanderling					Sanderling
Western sandpiper					Western sandpiper
Least sandpiper					Least sandpiper
Baird's sandpiper					Baird's sandpiper

Comment 933 (continued)

Response Section in Chapter 32 ➥

Semipalmated sandpiper					Semipalmated sandpiper
Spotted sandpiper					Spotted sandpiper
Solitary sandpiper					Solitary sandpiper
Pectoral sandpiper					Pectoral sandpiper
Stilt sandpiper					Stilt sandpiper
Dunlin					Dunlin
Long-billed dowitcher					Long-billed dowitcher
Short-billed dowitcher					Short-billed dowitcher
Common snipe	2	1		1	Common snipe
Wilson's phalarope					Wilson's phalarope
Red-necked phalarope					Red-necked phalarope
Red phalarope					Red phalarope
California gull	13	5	8		California gull
Ring-billed gull					Ring-billed gull
Franklin's gull			16		Franklin's gull
Bonaparte's gull					Bonaparte's gull
Sabine's gull					Sabine's gull
Herring gull					Herring gull
Thayer's gull					Thayer's gull
Caspian tern					Caspian tern
Common tern					Common tern
Forster's tern	2	8			Forster's tern
Black tern					Black tern
Turkey vulture				2	Turkey vulture
Bald eagle					Bald eagle
Northern harrier	1	1		1	Northern harrier
Swainson's hawk				1	Swainson's hawk
Red-tailed hawk				1	Red-tailed hawk
Rough-legged hawk					Rough-legged hawk
Golden eagle					Golden eagle
American kestrel	2			1	American kestrel
Merlin					Merlin
Peregrine falcon			1		Peregrine falcon
Prairie falcon					Prairie falcon
Ring-necked pheasant	3				Ring-necked pheasant
Mourning dove					Mourning dove
Barn owl					Barn owl
Great Horned owl					Great Horned owl
Short-eared owl	1	1	1		Short-eared owl
Common nighthawk					Common nighthawk
Black-chinned hummingbird					Black-chinned hummingbird
Broad-tailed hummingbird					Broad-tailed hummingbird
Rufous hummingbird					Rufous hummingbird
Northern flicker					Northern flicker
Western wood-pewee					Western wood-pewee
Willow Flycatcher					Willow Flycatcher
Hammond's flycatcher					Hammond's fycatcher
Dusky flycatcher					Dusky flycatcher
Gray flycatcher		1			Gray flycatcher
Cordilleran flycatcher					Cordilleran flycatcher
Say's phoebe					Say's phoebe
Western kingbird	2				Western kingbird
Eastern kingbird					Eastern kingbird
Northern shrike					Northern shrike
Loggerhead shrike					Loggerhead shrike
Warbling vireo					Warbling vireo
Black-billed magpie					Black-billed magpie
Common raven			4		Common raven
Horned lark			2		Horned lark
Tree swallow					Tree swallow
Violet-green swallow					Violet-green swallow
N. Rough-winged swallow					N. Rough-winged swallow
Bank swallow					Bank swallow
Cliff swallow					Cliff swallow
Barn swallow	2	5			Barn swallow

Comment 933 (continued)

Response Section in Chapter 32 ➥

Black-capped chickadee					Black-capped chickadee
House wren					House wren
Marsh wren	3	5	5		Marsh wren
Ruby-crowned kinglet					Ruby-crowned kinglet
Mountain bluebird					Mountain bluebird
Hermit thrush					Hermit thrush
American robin		2			American robin
Sage thrasher					Sage thrasher
European starling					European starling
American pipit					American pipit
Bohemian waxwing					Bohemian waxwing
Cedar waxwing					Cedar waxwing
Orange-crowned warbler					Orange-crowned warbler
Nashville warbler					Nashville warbler
Virginia's warbler					Virginia's warbler
Yellow warbler					Yellow warbler
Yellow-rumped warbler					Yellow-rumped warbler
MacGillivray's warbler					MacGillivray's warbler
Common yellowthroat	2	2	1	1	Common yellowthroat
Wilson's warbler					Wilson's warbler
Western tanager					Western tanager
Green-tailed towhee					Green-tailed towhee
Spotted towhee					Spotted towhee
American tree sparrow					American tree sparrow
Chipping sparrow					Chipping sparrow
Brewer's sparrow					Brewer's sparrow
Vesper sparrow					Vesper sparrow
Lark sparrow					Lark sparrow
Lark bunting					Lark bunting
Savannah sparrow	4	7	3		Savannah sparrow
Song sparrow	2	2			Song sparrow
Lincoln's sparrow					Lincoln's sparrow
White-crowned sparrow					White-crowned sparrow
Harris' sparrow					Harris' sparrow
House sparrow					House sparrow
Lapland longspur					Lapland longspur
Snow bunting					Snow bunting
Black-headed grosbeak					Black-headed grosbeak
Lazuli bunting					Lazuli bunting
Bobolink					Bobolink
Red-winged blackbird	31	25			Red-winged blackbird
Western meadowlark	4	3			Western meadowlark
Yellow-headed blackbird	9	14			Yellow-headed blackbird
Brewer's blackbird					Brewer's blackbird
Brown-headed cowbird	3	3			Brown-headed cowbird
Bullock's oriole					Bullock's oriole
House finch					House finch
Pine siskin					Pine siskin
American goldfinch					American goldfinch
Dark-eyed junco					Dark-eyed junco

Comment 934

Response Section in Chapter 32 ➥

Comment #: 934

Date: 9/6/2013

Source: Email

Name: Jason Gipson

Location:

Comments:

<See attachment on next page, titled USACE_Letter_9-6-13.pdf>

Comment 934 (continued)

Response Section in Chapter 32 ➥

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO ATTENTION OF

September 6, 2013

Regulatory Division (SPK-2007-01985-UO)

Mr. James Christian, Division Administrator
U.S. Department of Transportation
Federal Highway Administration, Utah Division
2520 West 4700 South, Suite 9A
Salt Lake City, Utah 84118

Mr. Carlos Braceras, Executive Director
Utah Department of Transportation
4501 South 2700 West
Salt Lake City, Utah 84114-1250

Dear Mr. Christian and Mr. Braceras:

As a cooperating agency we appreciate the joint-lead agencies, the Utah Department of Transportation (UDOT) and the Federal Highway Administration (FHWA), affording us the opportunity to provide comments regarding the Draft Environmental Impact Statement (DEIS) for the West Davis Corridor Project (WDC).

We also appreciate the level of participation and discussion that you have provided us throughout the EIS process for this project. Additionally, since this project will likely require a Department of the Army permit for impacts to waters under Section 404 of the Clean Water Act, we look forward to continuing to work with you to ensure that the EIS for the West Davis Corridor will be sufficient for us to incorporate into our permit decision under the 404(b)(1) Guidelines (§40 CFR 230; hereafter Guidelines) and our regulations. We note that since we have not yet received a 404 permit application, we are making these comments outside of our normal process.

General Comments

The Great Salt Lake (GSL) ecosystem, including its adjacent wetlands, provides high quality stopover and breeding habitat for migratory waterbirds. As described in the DEIS, the GSL is a designated Hemispheric Site of Importance by the Western Hemispheric Shorebird Reserve Network with an estimated 5 million birds comprising 257 species utilizing the GSL environment. The complex system of wetlands and uplands surrounding the Lake provide habitat for many other wildlife species as well, as described in the DEIS. The jurisdictional waters adjacent to the Lake, as well as the

Comment 934 (continued)

Response Section in Chapter 32 ➥

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waters within the Lake's surrounding watershed, are an integral part of this ecosystem. We agree with the DEIS which states that wetlands and streams within the impact analysis area have been extensively altered during the past century to the degree that very few undisturbed habitats remain. We believe this underscores the importance in the lead-agencies' commitment to avoidance and minimization of further impacts to the portions of the GSL Ecosystem that remain rather than using these facts to justify focusing on avoiding impacts to the built environment. Impacts to these waters, including direct, indirect, and cumulative, for the WDC Project, or any other proposed project, should be evaluated in light of the overall importance of the GSL ecosystem. Therefore, once a permit application is received, our evaluation of the WDC Project under the Guidelines will reflect the severity of the potential for significant adverse impacts on this important aquatic ecosystem.

32.14.3E

Further, our regulations under §33 CFR 320 require that impacts to waters be avoided and minimized to the extent practicable. This includes direct as well as indirect and cumulative impacts. We believe that there are additional modifications to the described alternatives that would further avoid and minimize impacts to the aquatic ecosystem. More specific descriptions of the areas where we believe additional avoidance and minimization may be warranted are included in our specific comments under the build alternatives.

32.14.3F

Recently, a group of local organizations publicized a conceptual alternative to the WDC Project, called the "Shared Solution." We encourage the joint-lead agencies to evaluate this alternative to determine if it meets the purpose and need of the project as well as the detailed screening criteria. If the Shared Solution meets these criteria, it should be included in the analysis as another build alternative.

32.2.1G

Specific Comments

Chapter 14.2 Regulatory Setting

Executive Order (EO) 11990 on the Protection of Wetlands should be added to the regulatory requirements under Ecosystem Resources. Wherever there is a practicable alternative, EO 11990 requires all Federal Agencies to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct and indirect support of new construction in wetlands. Further, it requires Federal agencies to implement all practicable measures to minimize harm to wetlands when there are no practicable alternatives to avoid wetland impacts.

32.14.3G

Chapter 14.3 Affected Environment

We are very supportive of the joint-lead agencies' decision to identify and map potentially jurisdictional waters using the *1987 Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation*

Comment 934 (continued)

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32.14.3H *Manual: Arid West Region*. Although the effort required to delineate wetlands within the 8,265-acre wetlands impact analysis area involved a substantial commitment of resources, we believe that the accuracy and the level of detail gained provides a solid basis for calculating acreages of impacts between alternative alignments.

32.14.3H The Methodology for Determining Wetland Quality subheading in Section 14.3.1.3 describes the checklist method used to generate an overall quality rating for each wetland. This facilitated methodology was used to save time and resources while evaluating the potential alternatives impacts at the planning level. This section does not mention whether or not the joint-lead agencies would complete a more thorough functional assessment using the more extensively tested and accepted UDOT Wetland Functional Assessment Method for all alternatives carried forward for detailed analysis at a later date. We note that Technical Memorandum 8 states that this full UDOT method would be used to assess wetlands for the Preferred Alternative; however, it is our opinion that all alignments should be assessed at the same level and with the same methods. We believe that the project alignment alternatives are sufficiently identified such that the investment in the time and resources necessary for this assessment is warranted. The joint-lead agencies should now complete the more thorough functional assessment for each build alternative in order to produce a consistent level of information in which to compare the alternatives' functional impacts to waters.

32.14.3I Section 14.3.2.2 the DEIS states that springs would be identified later as part of the Section 404 permitting process. The location of springs should have been mapped during the 2012 delineation of the wetland impact analysis area. This information would assist in the avoidance and minimization of impacts to wetland hydrology and to these irreplaceable aquatic resources. Since springs are often a hydrology source for wetlands downstream, the impact to a spring or other groundwater discharge point may also indirectly impact wetlands a significant distance away from the spring. This seems to contradict statements in Section 14.3.1.3. Please clarify.

32.14.3J Section 14.3.2.3 describes the conservation areas within and adjacent to the project area. The Guidelines identify any water within a sanctuary or refuge, designated under State and Federal laws or local ordinances, that is managed principally for the preservation and use of fish and wildlife resources as a special aquatic site (§40 CFR 230.40). When evaluating potential impacts from a proposed project, any waters, including streams and ponds within areas that meet this definition, should be quantified as a special aquatic site in the affected environment and environmental consequences sections of the DEIS since this designation is important to the 404(b)(1) analysis.

32.14.3K Section 14.3.4 includes a statement that the Corps has identified the ordinary high water mark of the GSL as 4,217 feet above mean sea level (MSL). This is incorrect; the Utah Regulatory Office has a policy of using 4,205 feet MSL as the ordinary high water mark of the GSL. The 4,217 feet MSL water elevation is the 100-year floodplain along the east shore of the Lake.

Comment 934 (continued)

Response Section in Chapter 32 ➥

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Section 14.4.3.3 discusses the impacts on wildlife from noise impacts. This section of the DEIS relies heavily on the Legacy Avian Noise Research Program Final Report (Legacy Report) which studies the effects of highway noise on bird species at several sites. We are aware that several of the wildlife resource agencies have serious concerns regarding the validity of the Legacy Report as well as the manner it is used in the DEIS to draw conclusions regarding the WDC Project. Likewise, we have the same concerns with use of information from this unpublished, non-peer reviewed report to refute information published in scientific journals and/or other peer-reviewed scientific studies. As you know, we have been involved with the wildlife working group to assist in quantifying indirect impacts from the project. We encourage you to give the proper deference to the wildlife agencies and to continue to work with them to find an accepted science-based model for describing the effects of noise on wildlife. 32.14.2H

Build Alternatives

After reviewing the information provided in the DEIS, we are supportive of the Bluff Road alignment of the B Alternatives since this alignment would locate the WDC further from the wetlands adjacent to the GSL. Although the B Alternatives have higher direct and indirect (within 300 feet) wetland impacts than the A Alternatives, we believe that this would be environmentally preferable to impacting wetlands adjacent the GSL because of their substantially higher wildlife functions and services. We recognize that the wetlands along Bluff Road provide beneficial water quality functions and services; however, they do not provide the same quality of wildlife habitat as the wetlands south of Gentile Street that would be affected by the A Alternative alignments. Additionally, we recognize that the B Alternatives would have substantially less impact on the Great Salt Lake Shorelands Preserve, as the DEIS describes in Table 14-12. Further, we believe that the A Alternatives would promote future development along the alignment that would not otherwise occur. This aspect of indirect and cumulative impact caused by growth inducement from the A Alignments should be thoroughly addressed in the DEIS. 32.14.3L

In the southern portion of the WDC Project, the DEIS identifies two alignments, one that follows Glovers Lane in Farmington (Alternatives A1, A2, B1, and B2) and another near Shepard Lane along the Farmington-Kaysville border (Alternatives A3, A4, B3, and B4). Although the direct impact acreages appear to be similar, within a difference of 0.5-acre, we believe that the wetlands along Glovers Lane have substantially higher functions for water quality and wildlife than the wetlands along Shepard Lane. Also, some of the wetlands along the Glovers Lane alternative are part of Farmington Bay Wildlife Management Area and are near several conservation easements that provide enhanced protection and functions to wetlands. Further, the wetlands within the Glovers Lane alternative are contiguous and adjacent to the GSL, whereas the wetlands within the Shepard Lane alternative are closer to, and in some cases surrounded by, existing development. Additionally, according to the DEIS, the Glovers Lane alternatives would have higher indirect impacts to wetlands within 300 feet of the right-of-way. However, we note that the DEIS does not break down the indirect wetland 32.14.3L

Comment 934 (continued)

Response Section in Chapter 32 ➥

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impacts per segment. We recommend that this should be corrected to allow for more detailed comparisons. In recent meetings, UDOT indicated wetland impacts can be further minimized along the Glovers Lane alternatives by modifying the proposed alignment. We look forward to seeing additional minimization revisions to the alignment and believe this information should be made available for public and agency comment as soon as practicable.

North of Shepard Lane, all 8 build alternatives follow a "shared" alignment along West Kaysville until it crosses Gentile Street. Throughout this alignment, the WDC would have direct and indirect impacts to wetlands adjacent to the GSL. Although we agree that some of these impacts are unavoidable, we believe that there are areas where the WDC alignment could be modified to further distance it from the GSL. Specifically we are referring to the area between 1140 West and 3200 West in Layton. We recognize that the area east of the proposed alignment in this section is considered prime and unique and state-protected farmland that would be lost as a result of moving the alignment eastward. However, community master plans designate this area for future commercial development and the Layton Parkway is planned to bisect these lands. The parkway impacts to these farmlands may result in the reconfiguring of some parcels such that farming would no longer be viable. If this is the case, the impacts to these farmlands may not be as severe as predicted in the DEIS since these farmlands are planned to be lost to future development and transportation projects. It appears that there are potential alternatives in this area which would allow the WDC to be shifted eastward into these farmlands with resulting minimized impacts to wetlands, especially indirect impacts. We encourage the joint-lead agencies to explore all possible options in this area that would result in fewer impacts to jurisdictional waters.

32.14.3M

There are two potential alignments in the northern section of the B Alternatives, one east of 4500 West (Alternatives B1 and B3) and one west of 4500 West (Alternatives B2 and B4). The eastern alignment would result in more direct wetland impacts (approximately 4.5 acres) and substantially more indirect wetland impacts within 300 feet of the right-of-way. Although we highly encourage the joint-lead agencies to locate the alignment away from wetlands adjacent to the GSL, we believe that the western alignment may have less overall impacts to jurisdictional waters under these two options. Also, we believe that the western alignment would have a diminished impact on the GSL and adjacent wetlands since it would not impact any conservation areas, would be outside the floodplain, and would be generally more than 3,000 feet from the GSL.

32.14.3L

Another of our concerns in the northern segment pertains to the A Alignments along 5100 West in Hooper (Alternatives A2 and A4) that would terminate the roadway close to aquatic resources along the Weber River. This would likely promote development in this area that would constitute a cumulative impact to waters. Additionally, it is highly probable that the terminus would serve as a connection point for future expansion of the WDC highway. Due to its proximity to the Weber River, future expansion of the WDC from this terminus would have more wetland impacts than an alternative to the east.

32.14.3N

Comment 934 (continued)

Response Section in Chapter 32 ➥

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The current termini of the A Alignments would predetermine the locations of a future northern expansion of this corridor and limit the potential for avoidance and minimization of aquatic resource impacts. Choosing the east or west B Alternative alignments in the northern segment would allow more flexibility in avoiding and minimizing impacts to waters with future expansion of this corridor to the north.

Locally Preferred Alternative

Section 2.4 of the DEIS identifies Alternative B1 as UDOT's "Locally Preferred Alternative" for the WDC Project. We note that Alternative B1 has the most acres of direct and indirect impacts to jurisdictional waters of all the B Alternatives. The Guidelines restrict the issuance of a permit for a discharge if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. Based on the rationale provided in Section 2.4, we believe that other alternatives presented in the DEIS could be permitted that would have less impact to the aquatic ecosystem. Most importantly, there are alternatives presented that would have less impact, both direct and indirect, on waters adjacent to the GSL. Based on available information, we believe the Locally Preferred Alternative does not represent the least environmentally damaging practicable alternative.

32.14.3E

Again, we appreciate this opportunity to comment on the DEIS. We look forward to continuing our active participation on the WDC Project.

Please refer to identification number SPK-2007-01985-UO in any correspondence concerning this project. If you have any questions, please contact John Urbanic at the Utah Regulatory Office, 533 West 2600 South, Suite 150, Bountiful, Utah 84010,

Sincerely,

Jason Gipson
Chief, Nevada-Utah Regulatory Branch
Sacramento District

cc:

Mr. Vince Izzo, HDR, Inc., 1715 South Reserve, Suite C, Missoula, Montana 59801
Ms. Betsy Herrmann, U.S. Fish and Wildlife Service, Utah Field Office, 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119
Ms. Karen Hamilton, U.S. Environmental Protection Agency, Region 8-Wetlands, 1595 Wynkoop Street, Denver, Colorado 80202-1129

Comment 935

Response Section in Chapter 32 ➥

Comment #: 935

Date: 9/6/2013

Source: Email

Name: Warren Hatch

Location: Farmington

Comments:

<See email attachment on next page, titled 00935_Warren_Hatch_9-6-13>

Please see the attached letter outlining my many objections to UDOT's preferred alternative for the West Davis Corridor.

Comment 935 (continued)

Response Section in Chapter 32 ➥

Warren and Jeanette Hatch

[redacted]

September 6, 2013

UDOT
Governor Gary Herbert
Utah State Tax Commission, Royce VanTassell
Federal Highway Commission, James Christian
Utah Transportation Commissioner, Dannie McConkie
Davis County Transportation Commissioners
Wasatch Regional Council

All:

We appreciate this opportunity to voice our opinion regarding UDOT's preferred alternative for the West Davis Corridor freeway.

32.2.13C In short, we strongly oppose UDOT's position, particularly as it relates to the Glover Lane alternative.

32.31R We agree with the positions expressed in great detail by Robert F. Steward, Regional Environmental Officer, United States Department of the Interior, in his August 14, 2013 letter to James Christian, Division Administrator, FHWA Utah Division, and by Dave Millheim, Farmington City Manager, in the city's September 6, 2013 letter to Paul Ziman, FHWA Utah Division.

Among our many shared concerns:

- 32.14.3E The Glover Lane alternative is not the least environmentally damaging practicable alternative.
- 32.14.2H UDOT hasn't fully considered both direct and indirect environmental impacts to the shores of the Great Salt Lake (and its occupants).
- 32.3F UDOT has undervalued the significance of conservation easements in and around Farmington.
- 32.14.2H UDOT and FHWA must recognize the irreplaceable resource of the Great Salt Lake ecosystem and select the least damaging alternative.
- 32.14.2H All build alternatives would cause significant, permanent impacts to the wetland and wildlife resources associated with the Great Salt Lake ecosystem.
- 32.2.1G UDOT should fully vet the "Shared Solution."
- 32.14.2H Of the build alternatives, Alternative B would have the least overall impact to wildlife and wildlife habitat, because the impacted wetlands are more fragmented, surrounded by more development, and of lesser wildlife value than those of Alternative A.
- 32.14.2H The wildlife buffer zone analysis should be extended from 1,300 feet to 4,000 feet (a distance supported by current road ecology science) to more clearly highlight the difference between the alternatives.
- 32.14.2H The Glover(s) Lane alignment would cause greater impacts than the Shepherd Lane alignment due to the high value shore land habitats of Farmington Bay west of Glover(s) Lane, especially if the buffer zone is extended to 4,000 feet.

wlh wdc comments.docx 1 9/6/2013

Comment 935 (continued)

Response Section in Chapter 32 ➥

32.14.2H
32.14.2H
32.14.2H
32.14.3E
32.14.2I
32.14.2H
32.27B
32.14.2H
32.31Q
32.3E
32.1.2A
32.1.2F
32.1.2F
32.3F
32.31Q
32.1.1C

- The shore land habitats north of the Farmington Bay Waterfowl Management Area and west of and immediately adjacent to the Glover(s) Lane alignment are primarily high value and would incur substantial impacts from a new road corridor.
- Because the shore lands of the Great Salt Lake are a unique and irreplaceable resource, the alignment furthest from the Great Salt Lake shoreline should be selected.
- The Glover(s) Lane option would result in the construction of a 4-lane freeway adjacent to the lake shore which would permanently and irreparably degrade the wildlife values of the shore land habitats.
- Alternative B1 isn't the Least Environmentally Damaging Alternative under Section 404 of the Clean Water Act.
- The Draft Environmental Impact Statement doesn't provide any commitment to mitigate the impacts on the unique resource of the Great Salt Lake shoreline habitat.
- Construction of a new 4-lane freeway adjacent to the Great Salt Lake shore lands would have significant, irreparable impacts to the wildlife populations that rely on those habitats, would substantially degrade the value of that habitat, and would permanently alter the composition of the wildlife community in the area.
- UDOT's determination that the Glover(s) Lane option would have *de minimis* impact on the Great Salt Lake Shorelands Preserve (with no adverse impacts to its features, attributes, or activities) is dubious, at best.
- The size and traffic volume of the proposed West Davis Corridor Glover(s) Lane option far exceeds that of the existing Glover(s) Lane and would introduce a suite of impacts very different from that of the current road and transmission line, including: noise, light, visual disturbance, habitat degradation from pollution, invasive plant species, decrease water quality, on-road mortality, and barriers to movement.
- The Draft Environmental Impact Statement doesn't provide the public with sufficient relevant information to allow meaningful feedback and discussion regarding whether such a road is needed, whether the trade-offs required are worth it, and whether less damaging or more feasible and prudent alternatives have been fairly analyzed.
- The Glover(s) Lane alignment frustrates Farmington City's intention to remain a rural community with planned areas of functioning commercial development, will injure the quality of life of its residents, will injure the quality of the environment, will create economic losses and create other environmental injuries.
- It currently isn't clear whether this Project is needed at all for the Region in 2040 and it clearly isn't needed by that time (if ever) in Farmington City.
- The assumptions regarding future North/South travel demand are doubtful, especially in view of the noted preferences of the younger workers in the Region to find local employment and to not become commuters.
- If a Need can be demonstrated for the West Davis Corridor, Centerville, Farmington, and Kaysville should be excluded from the Study Area, as so little Need appears to exist there.
- Farmington City's Conservation Easements (trails and their destinations) haven't been given appropriate consideration.
- The problems with this Draft Environmental Impact Statement are significant and far reaching enough that a new or revised one must be taken before a final EIS may be prepared.
- Further effort must be invested in the Alternatives Analysis to include the roads located in the entire corrected Study Area and allowing for a full review of an alternative or alternatives that don't require the West Davis Corridor.

wlh wdc comments.docx 2 9/6/2013

Comment 935 (continued)

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32.2.1M
32.2.1Q
32.3E
32.1.2F
32.10H
32.3F
32.7F
32.7F
32.7F
32.10H
32.24A
32.1.2F
32.2.13C
32.3E
32.2.13C
32.2.13C
32.3E
32.1.2F

- If it is concluded that a portion of the currently contemplated West Davis Corridor is required based on a revised effort on the Need for the Project, then interchanges located north of Farmington City must be studied.
- Due to the bottleneck created by the Great Salt Lake and the Wasatch Mountains in the Farmington/Kaysville area, construction of additional freeways in this area should be avoided.
- Insufficient effort was made to understand local Farmington needs. The Glover(s) Lane alignment isn't compatible with the Farmington City General Plan, nor it's Master Transportation Plan, and it doesn't improve mobility (or safety) in this area, nor does it enhance peak-period mobility over the no action alternative.
- The Glover(s) Lane option doesn't fully support a continuous future Great Salt Lake Shoreline Trail (shown in the Farmington City Trails Master Plan), and detrimentally impacts the trails that access Farmington City's Conservation Easements along the shore of the Great Salt Lake and will destroy the Conservation Easements, the Purposes for which they were entered and the numerous conservation values they are designed to protect.
- UDOT's preferred alignment curtails the regional movement of automobile traffic from the West Davis Corridor to one of the largest regional transportation hubs on the entire UDOT system (the existing Park Lane/I-15/US 89/Legacy Highway interchange).
- UDOT's preferred alignment has no east to west connectivity for the Farmington Front Runner commuter rail service.
- UDOT's preferred alignment provides no access to a major (500 acre) Regional employment and shopping center (Farmington Station).
- UDOT's preferred alignment limits bicycle and pedestrian trail opportunities under Farmington City's Master Plan, detrimentally impacts current and future trails, and destroys the destinations for a number of trails.
- UDOT omitted from the cost of its preferred alternative a multi-million dollar interchange planned for I-15 at Shepard Lane, while including it in the costs of other alternatives, skewing the costs in favor of the preferred alternative.
- There is no traffic advantage within the Farmington City area to any of the build alternatives in comparison to the No-Action Alternative.
- The Glover(s) Lane option, while encircling west Farmington with freeways, provides no local connections to Farmington. UDOT must be assuming the primary function of the West Davis Corridor (with the Glovers Lane option) is to move vehicles past Farmington.
- The bridge structures in the Glover(s) option are clearly longer than those in the Shepard option, increasing maintenance and motorist exposure to icy/snowy conditions.
- The Glover(s) lane option clearly results in a greater loss of developable land and impacts Farmington City's only light manufacturing area.
- UDOT's discussion of impacts appears designed to result in the forgone conclusion that Alternative B1 would be the preferred alignment.
- UDOT's preferred alternative basically leaves the west side of Farmington City as an isolated area with no access benefits provided. It has a large footprint and will create significant noise in a formerly quiescent area.
- UDOT's preferred alternative runs counter to Farmington City's land use plans (clustering housing near transit opportunities) that impacted CNN/Money Magazine's recognition of Farmington City as the 14th most livable city in the United States.
- Davis and Weber counties have experienced a significant increase in employment opportunities, resulting in less need for commuter-based additional freeways. UDOT should ensure that roads aren't built based on an old paradigm.

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Comment 935 (continued)

Response Section in Chapter 32 ➥

32.11.1A
32.12A
32.13A
32.27A
32.27B

- Impacts on air quality, noise, and water quality haven't been sufficiently examined.
- The Draft Environmental Impact Statement fails to treat Farmington City's Conservation Easements as Section 4(f) properties, while Farmington City is legally obligated to protect all of the conservation values and purposes articulated in those easements.
- The Draft Environmental Impact Statement also fails to treat The Nature Conservancy Conservation Easements as Section 4(f) properties.

We appreciate this opportunity to express our concerns and hope this process will result in a better solution for Davis and Weber County traffic needs.

Sincerely,

Warren L. Hatch

wlh wdc comments.docx 4 9/6/2013

Comment 936

Response Section in Chapter 32 ➥

Comment #: 936
Date: 9/6/2013
Source: Email
Name: William (Bill) McGuire
Location: Kaysville
Comments:

32.2.13B

I understand that today is the final day to make comments on the West Davis Corridor. I strongly support the decision of UDOT to use the Glover Lane option and would also strongly oppose the selection of the Shepard Lane option. There are several reasons for this decision.

First, UDOT has stated that in 22 out of 25 criteria selected, Glovers was equal to (7) or better than (15) the Shepard option. Just by those criteria the correct decision was made.

32.2.6A

Second, going with the Shepard option would create significant traffic congestion. We would be joining all of the various highways (I-15, Legacy and the West Davis) in a single area of highway for approximately one mile. There is no real reason to create the congestion and the possibility of accidents that would occur when we have a ready alternative. The Glovers option would allow seamless transition between the highways and greatly decrease the possibility of congestion.

Third, the Glovers route provides a completely separate north/south highway allowing traffic to still flow if something happens on one of the routes. We have experienced shut downs on several occasions on I-15 which resulted in the impact of side streets. A separate north/south route would lessen the impact of those situations.

Fourth, there is a real impact on the people of those in the Shepard route if it was chosen. Ten homes would be taken, and those remaining would have significant financial impact decreasing their property values. No homes would be taken on the Glovers route. In times like we have suffered through the last couple of years, taking financial means away from families is an important consideration in this decision. Where government impacts the family in such a significant financial way, it should be careful in making a decision in that manner.

Finally, beyond the financial impact, there is a health factor that should be considered. There are 214 homes within 300 feet of the Shepard route. This would impact those residents in many ways including noise and other pollution factors. This compares with only 37 on the Glovers route.

32.2.1G

While I understand that there is concern that Glovers impacts the bird population and other factors, the above concerns overwhelm those issues. I would request that you support the selection of the Glovers Lane. In the absence of that I would suggest that what has been called the Shared Solution be considered.

Thank you for your consideration of this opinion and input.

Bill McGuire

Comment 937

Response Section in Chapter 32 ➥

Comment #: 937

Date: 9/6/2013

Source: Email

Name: Lisa and Brigham Halverson

Location: Kaysville

Comments:

32.2.13B

Today is the last day to make public comment regarding UDOT's preferred Route. I wanted to let my voice be heard one last time before the comment periods are over. I am strongly opposed to the Shepard Option of the West Davis Corridor. UDOT has said there are 25 criteria in choosing the route. The Glovers route was equal to (on 7 of the 25) or better than (on 15 of the 25) Shepard as the preferred route. 88%! http://www.udot.utah.gov/westdavis/files/document/GetInvolved_Presentations_SWG16May2013.pdf - slides 19-21). This means that there is no question which is the better route. I firmly believe that UDOT has made the right choice to choose the Glovers route as there preferred route!
Here are a few other concerns I have:

32.2.6A

1. There is no doubt there is much greater homeowner impact on Shepard than on Glovers. There would be significant community impacts (10 homes taken on Shepard to 0 on Glovers, 214 homes within 300 feet on Shepard to only 37 on Glovers). I think Senator Bishop and Mayor Hiatt made a good point in this statement:
My view: West Davis Corridor: Protecting our neighbors while paving the way to the future

By Rob Bishop and Steve Hiatt

Published: Tuesday, Sept. 25 2012 12:00 a.m. MDT

Summary
How a government deals with private property is a window to the soul of that government. A century ago, Sir Henry Maine wrote that "nobody is at liberty to attack … property and to say at the same time he values civilization. The history of the two cannot be disentangled." The desire and use of property raises mankind from political slavery. Community growth can be a challenge to that personal property right only if it is allowed to be.

Growth is good but must be managed in a manner consistent with our community values — including property rights. For starters, strategic investment in our infrastructure is needed. Roads and highways are engines for economic growth and job creation. The West Davis Corridor is an infrastructure investment for the community, but the proposed corridor route must be consistent with our community values.

32.2.13A
32.2.13B

One of the Utah Department of Transportation's proposed routes would require state government takeover of more than 10 homes, several businesses and would negatively impact roughly 300 other homes. Another route being considered would not impact families and businesses as dramatically but instead would intersect a few more acres of wetlands which might trigger federal intervention under the Clean Water Act.

The act suggests that a "practicable alternative" for wetland mitigation be pursued. This vague requirement, which was born from the poorly written and ambiguous Clean Water Act, is often interpreted to mean "avoid at all cost" even if it demands deviation from proper urban planning and development practices. In the instance of the West Davis Corridor, it could mean uprooting families from their homes.

We refuse to accept the notion that it's OK to sacrifice the rights of families living in their homes just so a road disrupts fewer wetlands. It is our firm belief that the West Davis Corridor can be built in harmony with both urban and ecological needs. We are not proposing that all wetlands be disregarded, but the highest priority should be placed on keeping Utah families in their homes while also meeting Utah's growing transportations needs.

Destroying homes and livelihoods and displacing our fellow Utahns could only be justified as a last resort when no other options exist. Fortunately, this isn't one of those cases. We should accept a route that harms the fewest

Comment 937 (continued)

Response Section in Chapter 32 ➥

families rather than a route that harms the fewest wetland areas.

32.2.13A
32.2.13B

The West Davis Corridor proposals are being considered by UDOT. Each proposal aims to meet with I-15 in a slightly different way, but it seems to us that the selection priority should be based on which proposal affects or destroys the fewest homes. It's important to take a step back and evaluate that as the prime goal. We share the view that the interests of our friends, neighbors and fellow members of the community are our No. 1 priority, and we should be working together to ensure personal property and safety are protected.

John Adams said the biblical injunction against stealing applies to government as well as individuals. So should it here.

Rob Bishop is the U.S. representative for Utah's 1st Congressional District. Steve Hiatt is the mayor of Kaysville.

32.1.2D
32.2.6A

2. I am also concerned about traffic problems. I believe there is a need for a true alternate route in Davis County. If the Glovers Route is chosen this is obtained. If Shepards is chosen Legacy and I-15 would be right next to each other which could cause problems. there have been accidents on I-15 shutting it down (remember when it was closed for 10 hours due to the shooting, and numerous other times) This could cause major problems. Also everyday traffic is usually backed up on 1-15 under the Shepards overpass. With legacy coming on and off right here I can only see more delays in this area with lane changes and confused drivers.

32.2.6A

3. Moving the Tracks. This will be a costly and long process.

32.2.6A
32.1.2B

4. The space allotted for the Shepard option in small and does not allow for future growth as well as the Glovers option does.
I know there are many wildlife activist and environmental groups opposed the the Glovers option or really any of the options. They are saying there is not need for a road. I feel there is a need for the road. when I look at the impact to wetlands I see it as almost even with either route, and don't feel that there will be a greater impact to the wetlands with the choice of either option. Both options take wetlands. I have read how the bird population has even improved since Legacy Highway was put in. I feel this might be the same with the West Davis Corridor.

32.14.2E

There are so many more reasons I am opposed to the shepards route.
I am opposed to the Shepard Route, and think UDOT has made the right decision to make the Glovers Route the preferred route.

32.2.13B

Thanks for taking the time to read my comment,
Lisa Halverson

Comment 938

Response Section in Chapter 32 ➥

Comment #: 938

Date: 9/6/2013

Source: Email

Name: Cynthia & William Hatting

Location:

Comments:

TO: UTA West Davis@utah.gov

From: Bill and Cynthia Hatting
Syracuse, Utah

REGARDING
West Davis Expansion:

Extending the Legacy Freeway is a mistake that will carry forward a hundred or more years of adverse affects.

32.2.3A Please refer to the economic and ecological impacts on Atlanta, Georgia; Orlando, Florida; Dallas, Texas; Miami, Florida; Los Angles, California and many other cites who expanded freeways across their lands wreaking disaster to ecology.

Their vast freeway expansions paved over prime waterways and swamp lands, decreasing populations of water based wild life, aquatic water life and other habitats.

Result:
During normal rain fall seasons flooding occurs; excessive flooding consumes many areas and when more powerful storms move over or through these cities. There is wide spread and catastrophic flooding.

An increase in mosquitoes and vermin infestations that were normally controlled by wildlife whose diet kept the vermin in proportion. Instead of wildlife, poison is used to control the population which leads to more pollution.

New freeways created new swamps in obscure areas and standing water accumulated and malignant. These ponds are poisonous to animals while providing a breeding ground for insects and vermin.

Aquifers that allowed water to percolate and refresh the ecosystems were paved over and destroyed. Man made replacements are too few and do not provide sufficient refreshment of water-land absorption. This produces
32.31D massive flooding and additional flood and water control problems for everyone.

Result:
Areas that didn't flood, become flooded; ponds form and hold caustic water; absence of fowl and wildlife allowr disproportionate levels of insect populations to increase.

Specific to California:
Los Angles: Vast freeway systems destroyed inland estuaries, killed fragile ocean ecology, eliminated most useful species of birds, giving way to proliferation of scavenging sea gulls and pigeons.

San Francisco, California;
A vast expansion of freeways throughout the bay area, into Marin, County, by the addition of new bridges and freeways eroded hundreds of miles of inland estuaries and killed 40% of ocean wildlife and polluted inlets, bays and wildlife refuges.

Comment 938 (continued)

Response Section in Chapter 32 ➥

Environmental impact statements did not consider the 100 year impact damage a freeway would cause.

The cities listed above are connected by several major issues.

32.31D • Petroleum residue (oil lasts forever) from vehicles that accumulates during the dry season runs off in rain
32.13B storms, taking streams of caustic, carcinogenic chemicals into ground water, estuaries, rivers and streams.

32.13B • Freeway "deserts," created by poisonous water, chemical spills, are created. Vegetation cannot survive caustic runoff, and sparse scrub plants barely survive above water flow. The current Legacy Highway is showing signs of decomposing soil and dying plants.

32.13B • Remediation cost to shore up, alter and divert freeway runoff exposes huge financial impacts and long term 100 year liability on taxpayers to sustain remediation processes.

32.1.2A • Increasing freeway webs will not alleviate transit conflicts or improve traffic problems. More freeways add more cars and more pollution.

32.12A • Noise pollution within a ten mile radius of a standard freeway during a work day is 200%, dropping to 70% in the off hours. People who live within this radius cannot get relief from noise.

32.8A • Historically, homes located within five miles of a freeway, have lost 60% or more of it's resale value, often forcing owners to abandon their property in order to escape the effects of freeway traffic problems; noise and pollution. If they can't sell why stay?

32.31D • Land buried under a freeway cannot be reclaimed for hundreds of years. Chemical decomposition of road-by products destroys soil based ecosystems, pollutes water sources, and kills wildlife. A freeway is a health hazard and should not be a primary process.

LESSONS LEARNED:
• To remediate pollution is a 100 year tax liability. It cannot be absorbed by any other means.

• Expanding a freeway will not solve traffic problems or add value to a community. A freeway attracts more
32.1.2A traffic, which requires more freeways thus attracting more traffic.

32.31D • Long term affects, 100 years or more, will destroy ecosystems, soil, fowl migration patterns, land water
32.31D systems and pollute wells.

• Air, noise and water pollution increases more than 100%.

32.31D • Georgia, Texas, California to name a few, have spent billions of dollars on remediation programs after their freeway expansions. The San Francisco estuary is highly protected, but it took 30 years and billions of dollars to mitigate and recover. It will never return to it's "before" state and costs continued to escalate; tax payers continue to pay for the freeway in terms of health, and taxes.

32.31D • Building a public transportation (light rail et al) after freeways are built cost 50% to 100% or more to plan and construct. Additional costs include tearing up a freeway to add a light rail or rail service.

32.31D • Maintenance and freeway repairs escalate 25% a year or more, depending on kind of maintenance required. Asphalt will last approximately 5 years, before a complete new top is laid. This creates more pollution and more caustic destruction.

SUMMARY:

32.2.3A
32.2.1A UTA does not need to extend any freeway unless a more effective public transportation infrastructure is
32.2.1J established at least 24 months before any dirt is moved.

Comment 938 (continued)

Response Section in Chapter 32 ➥

Prime farmland and estuaries will die and not recover. You cannot get the land into a natural state for at least a century.

32.13A There will be an increase in flooding due to loss of percolating aquifers.

32.15A Subsoil as it dries increases the risk of sink-holes and freeways are not exempt from sinking.

The Davis Legacy Freeway is a horrible decision and it will destroy much more than policy makers can expect. An environmental impact statement omits a 100 year impact or skews data to look less damaging than reality provides.

32.8A Housing prices are destined to collapse and this is not something Utah needs to experience at this time.

32.2.1A Alternative transportation methods will prove more effective and have more positive long term solutions.

The Davis expansion is an expensive liability tax payers will be saddled with into future generations.

32.31D Policy makers must evaluate "Lessons Learned" from other states ecological damage and include their review in a new EPIS citing why this freeway is different from others.

CONCLUSION:

32.1.2A Building a freeway is an easy way to create a new traffic flow, however it is not a solution. A freeway is a

32.2.3A method void of a solution.

32.2.1A UTA needs to operate a reliable public transportation system. This will serve Utah better over the long term instead of building a freeway. This is a short sighted and temporary solution and will not accommodate future planning. Freeway leads to another and another, adding costs of maintenance and additional expansions.

32.2.3A DO NOT BUILD THIS EXTENSION. IT IS NOT A VIABLE SOLUTION.

Utah needs a better solution than this.

32.2.1A UTA with all it's money and brain power can certainly do a better job with public transportation. This freeway is short sighted.

32.2.3A NO DAVIS EXPANSION. It's not worth the long term costs.

Comment 939

Response Section in Chapter 32 ➥

Comment #: 939

Date: 9/6/2013

Source: Email

Name: Alison Wood

Location: Kaysville

Comments:

32.2.1A The solution to the traffic problems and future traffic problems in Davis County, Utah is improving the

32.2.1J FrontRunner (Commuter Rail System). I have lived here during here during the EIS Study for Front Runner. Steve Meyers, the project manager, for the FrontRunner project said at least 10 or more times to me personally, "I have the obligation of building the least expensive commuter rail system I can. It is the responsible thing to do for the tax payer." And that is exactly what was done. Front Runner was built so cheaply, that it makes no impact on I-15.

It is more expensive to ride Frontrunner than drive a car.

It takes more time to ride the Frontrunner than drive in a car.

32.31D It is more hassle to ride Frontrunner than driving a car.

It is more dangerous to ride Frontrunner than riding a car (getting to and from the stations)

There are no East/West rail lines in Davis County (This is the main purpose of building the West Davis Corridor, and this has not even been addressed by the commuter rail, which has to be done before and EIS on West Davis Corridor can be approved.)

Station Park in Farmington, Utah, Davis County has the major Front Runner hub station for Davis and Weber counties--and there is no safe way to walk or bike ride into the station. One can ride the bike trail and see the station, but there are no sidewalks, one unsafe crosswalks (added way after the fact),no bike trails, etc. to allow anyone to actually get to the station. There is absolutely no way to into the station from the west or north, and

32.31D there is one cross walk on the South that is UNSAFE (is located just after a curve and is not at an intersection). No sidewalks, bike trails, etc. were ever planned. Additionally, as far as I can see no sidewalks or bike routes were ever fully planned out on any rails lines that UTA has ever built in the state. No one can go without a car or second car because commuter rail takes away that need for them.

Why were parking lots even built if sidewalks and bike routes weren't funded first?
Also, no sound walls were put up in Davis County along the rail lines. Instead of a sound wall in West Bountifu,l the train slows down so it is quieter and can stop for pedestrians. This increases the ride time. In some places the Frontrunner actually shares track lines with Union Pacific and has wait for UP lines to go by. Also, I have

32.31D never been able to understand why the trains slow way down in the industrial part of of North Salt Lake. There are three or more times the train has to slow down or stop along the ride from Farmington to Salt Lake that has nothing to do with lettting passengers get on or off, or allow for other Frontrunner trains to go by.

So, one has to buy and maintain and insure a car, park it, pay to ride, and then take longer during the ride time to actually go into Salt Lake and then get dumped off not exactly where you want to go. How many people would do that? My neighbor across the street gets a free pass from his employer each month for Frontrunner.

32.31D He would like to ride his bike each day to rail station. He will not take it. He says his life is worth more than a trip on commuter rail.

The I-80/I-15 interchange (spaghetti bowl) and road widenings around them destroyed the City of South Salt Lake (I lived there for four and a half years). It is a town without adequate residents and heart. It is just a way

Comment 939 (continued)

Response Section in Chapter 32 ➥

32.2.6A
32.2.3A
32.2.1A
32.2.1J

to go from the airport to Park City. The Shepard Lane interchange will do the same to Kaysville and Farmington. It will just be a way to get from Weber to Salt Lake counties. Let's stop spending money on this EIS process for the West Davis Corridor and start spending the money on making Frontrunner viable. Everyone will be happy with this solution.

Improving FrontRunner has none of the disadvantages of the building the West Davis Corridor (cheaper, no homes torn down, no destroying animal habitat, little pollution, no huge interchanges, doesn't disrupt local traffic, runs along I-15 so it doesn't further divide the community, etc.) Finally, increasing the traffic on the rail lines more negatively impacts my property than the West Davis Corridor with any option including the Shepard Lane option--and I still think it is the best option.

Thank You,

Alison Wood

Comment 940

Response Section in Chapter 32 ➥

Comment #: 940

Date: 9/6/2013

Source: Email

Name: M. Darin & Gaylynn Hammond

Location: Kaysville

Comments:

To Whom It May Concern:

32.2.13B

I want to again voice my support for UDOT's selection of the Glover option for the West Davis Corridor. Although I made comments at the public hearing, my time was limited and I was not allowed to share all of my ideas. Please do whatever you can to keep the West Davis Corridor from going on the Shepard option.

32.2.6A

The environmental impact statement properly analyzes the situation and comes to the best reasoned conclusion. The traffic flows of the Glovers option are better than the traffic flows of the Shepard option. If you are going to build the West Davis Corridor, then you truly need an alternate route. The Shepard option does not allow for that and only increased congestion by piling numerous lanes of traffic into one area.

32.2.6A

The impact to the human community is much greater if the Shepard option were selected. In other words ten homes being taken on the Shepard option is much worse than 0 homes on the Glover option. The proximity to homes is very different under the two routes. Many more homes will be affected by pollution, noise and proximity if the Shepard option is selected.

32.2.13B

When you look at the two options side by side, it is clear that the best transportation and least overall impacts is the Glovers option. Please do not alter your conclusions as stated in the Draft EIS.

Thank you,

Darin Hammond

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