

Apr 21 2005 9:57AM HP LASERJET 3200

P. 1

*"The Jewel of Utah's Dixie"*

Mayor  
Dennis Drake

City Manager  
Matthew J. Brower

City Council  
Bruce Anderson  
Herb Basso  
Clark Gubler  
Mary Jo Hafen  
Rick Rosenberg

Michelle Herrell  
State of Utah  
Department of Natural Resources  
Division of Wildlife Resources  
1594 W. North Temple, Suite 2110  
Salt Lake City, UT 84114-6301

Dear Michelle,

I am Mayor Dennis Drake from Santa Clara City. I serve as chairman of the HCAC committee representing the Washington County Mayor's Association.

I believe the City of Ivins, acting in good faith, purchased a seven acre site within the HCP to establish an approved use within the habitat; a flood retention basin.

As you are well aware, the flooding issues in Washington County can be severe and life threatening and the drainage coming out of the area described can run a considerable amount of water.

The basin, at the preferred location, seems to be the most effective way of controlling the flooding in that area. It also seems to affect the least amount of tortoise habitat. A flood affects considerably more than the seven acres contained in the retention basin and with the 24 hour draining period, the loss within the retention basin, seems to me, to be minimal.

Whereas, the loss over considerably more acreage within the habitat, could affect more than just the one tortoise within the basin's footprint. Thus, thereby, justifies, in my mind, the need to allow this approved use at the preferred site.

In the establishment of the HCP, permitted uses were designated and flood control was one of those permitted uses. I believe Ivins City has gone to great lengths to determine the best site. The alternatives do not control the problem.

I feel that Ivins should be permitted to construct their retention basin.

2721 Santa Clara Drive, Santa Clara, Utah 84765  
Phone (435) 673-6712 Fax (435) 628-7338



## State of Utah

### Department of Natural Resources

MICHAEL R. STYLER  
*Executive Director*

### Division of Parks & Recreation

MARY L. TULLIUS  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

June 9, 2005

Michelle Herrell  
Department of Natural Resources  
Division of Wildlife Resources  
1594 W. North Temple, Suite 2110  
Salt Lake City, UT 84114-6301

Dear Michelle,

These comments are submitted on behalf of Snow Canyon State Park regarding the proposed Tuacahn Detention Dam Project in Ivins, Utah. Please consider this letter the official comments of Snow Canyon State Park.

Snow Canyon State Park is one of 41 parks operated by the Utah Department of Natural Resources, Division of Parks and Recreation. Encompassing nearly 7,100 acres, it is the third largest unit in the state park system. Classified as a "scenic park," where the land itself is the major interest due to unique geologic features and scenic values, Snow Canyon provides recreation opportunities such as camping, hiking, biking, technical climbing, horseback riding, and wildlife viewing and photography. Scenic park status provides protection of the land and resources as well as aesthetic benefits to the public.

Approximately 85% of Snow Canyon State Park is located in the 62,000-acre Red Cliffs Desert Reserve (RCDR). Established in 1996 under the Washington County Habitat Conservation Plan, the RCDR is designed to preserve and protect the Federally listed Mojave desert tortoise (*Gopherus agassizi*) and other locally sensitive species and their habitat. Snow Canyon State Park is a unique entity within the RCDR, faced with the challenges of maintaining scenic values and established recreation opportunities for over 300,000 visitors per year, developing appropriate infrastructure, and protecting the desert tortoise and its habitat. Based on these diverse challenges the management team of Snow Canyon State Park opposes the preferred detention dam location (approximately 300 feet of Tuacahn Drive and 1000 feet south of Tuacahn Center for the Arts) for the following reasons:

- 1) The scenic value of Snow Canyon State Park is its lifeblood. In a scenic park the aesthetic nature of infrastructure both in and surrounding the park is critical in maintaining the integrity and character of the site. The preferred detention dam location sits in the middle of two recreation trails in the park: The Toe Trail is a 2.5 mile trail open to hiking, biking and horseback riding

year-round; the Padre Canyon Toe Trail is a hiking only trail that is open to the public from November 1 to March 15 annually (the seasonal closure is designed to reduce impacts to the surrounding high density tortoise populations and quality tortoise habitat). The preferred detention location and size of the dam would have a direct impact on both the scenic integrity and recreation experiences of our visitors. Park aesthetics would not be impacted if the detention dam was constructed at the alternative location (above Tuacahn amphitheatre) and impacts to recreation experiences would be minimal.

- 2) Based on several factors we are very concerned because of the potential for introduction and spread of non-native plant species both at the preferred detention dam site and on adjoining park property:
  - a) Preliminary plans for the preferred detention dam location indicate two potential access points across property owned by Snow Canyon State Park: Access via the wash or via a right-of-way from Tuacahn Drive which would be constructed specifically for this project. Either access point would create significant new ground disturbance on state park property. These disturbances have the potential to create an environment ripe for weed invasions since weeds prefer highly disturbed areas such as waterways, flooded areas, trailheads, and roads (Sheley and Petroff, 1999). Non-native plant species are increasingly becoming a threat on public lands because of their ability to displace native plants and wildlife, alter natural fire regimes, and decrease recreation opportunities. Both the Snow Canyon State Park Weed Management Plan (2004) and Snow Canyon State Park Tortoise Management Plan (Comella et al. 2004) recognize the threat of non-native plants and place a high priority on avoiding or minimizing new habitat disturbance in order to protect desert tortoises and their habitat and visitor experiences in the park.
  - b) Preliminary maps of the seven-acre preferred detention dam site show that, in the event of a 100-year flood, water would pool outside of the property owned by Ivins City and onto Snow Canyon State Park property. While the dam is designed to drain within a 24-hour period, pooling of water would cause soils to become unnaturally saturated, creating pathways for weed invasions. Would mitigation be required for habitat impacts to Snow Canyon State Park and RCDR property?
  - c) On private property located above the preferred detention dam site (the site of Tuacahn amphitheatre) animal waste is dumped directly into the wash. Under any significant flow this waste will be washed downstream into the detention basin following a storm event. As the detention basin drains the potential exists for this pooled waste to be left behind creating ripe conditions for weed invasions.

EPMS

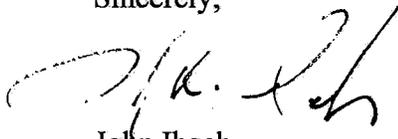
- d) Depending on the source of construction material and fill needed to create the dam, the potential exists to introduce weeds into the detention dam site and onto adjoining park property.

Both the preferred and alternative locations have the potential to create pathways for weed invasions. However, in our opinion the alternative location is preferable because it would allow animal waste to flush through the wash in a more natural flow (and off of park property) as water is released from the basin. This would minimize the spread of animal waste onto park property and potentially reduce weed invasions.

Regardless of the final location of the detention dam a thorough evaluation of impacts to Snow Canyon State Park needs to be conducted including loss of scenic value, reduced visitor experiences, and disturbance of native habitat and desert tortoise populations. Prior to the start of this project we hope that there will be detailed planning in regards to ongoing weed control and management, minimization of landscape disturbances, and minimization of both short and long-term impacts to native habitat and desert tortoise populations.

Thank you for your consideration of our views and the opportunity to comment on this project.

Sincerely,



John Ibach  
Park Manager

cc: Bruce Hamilton, Deputy Director

Comella, K.M., J.R. Ibach, R.A. Fridell, and A.M. McLuckie. 2004. Desert tortoise management plan: Snow Canyon State Park, Washington County, Utah. Utah Division of Wildlife Resources. Pub. No. 04-10. 28pp.

Sheley, R.L. and J.K. Petroff, eds. Biology and management of noxious rangeland weeds. Oregon State Univ. Press. Corvallis, OR. 438pp.

Snow Canyon State Park Weed Management Plan. 2004. Utah Division of Parks and Recreation. Ver. 1. 4pp.



JON M. HUNTSMAN, JR.  
Governor  
GARY R. HERBERT  
Lieutenant Governor

**State of Utah**  
**DEPARTMENT OF NATURAL RESOURCES**  
**Division of Water Rights**

MICHAEL R. STYLER      JERRY D. OLDS  
*Executive Director*      *State Engineer/Division Director*

APR 19 2005

April 13, 2005

Sent to  
Barbara  
4/27

Michelle Herrell  
Utah DNR - Division of Wildlife Resources  
1594 West North Temple, Suite 2110  
Salt Lake City, UT 84114-6301

RE: Proposed Ivins/Tuacahn Detention Dam

Michelle:

We have been involved with the planning process of the above referenced detention structure and because of its proximity to subdivisions and other development, we would consider this dam as a high hazard structure with the potential to cause loss of life if it fails. If the project is placed high in the drainage above the Tuacahn Amphitheater it can provide protection for that property while leaving the lower end of the drainage exposed to flood flows from the unprotected end of the drainage. Placing the dam lower on the stream and closer to the existing subdivision provides protection from a larger drainage of floods but will require a more extensive dam and dike system and not provide protection to Tuacahn.

In light of these tradeoffs we believe that with sound engineering, a good dam can be built in either place. Design documents along with a geotechnical and hydrological investigation will be necessary as well as a full set of plans and specifications. Spillway requirements may be significant and may need to accommodate the 6-hour Probable Maximum Flood as the Inflow Design Flood, depending on the level of risk presented. Additionally, a Stream Alteration Application will have to be filed with this office for the changes in the natural channel.

We appreciate the opportunity to comment on this project. If you have any questions or comments, please do not hesitate to call Matt Lindon or myself at 801-538-7372.

Sincerely,

For David K. Marble, P.E.  
Assistant State Engineer

DKM/jm

cc: Kerry Carpenter - Regional Engineer



# REDCLIFFS

A WASHINGTON COUNTY INITIATIVE

JUN 16 2005

June 13, 2005

Michelle Herrell  
Division of Wildlife Resources  
P.O. Box 146301  
Salt Lake City, UT 84114-6301

Dear Ms. Herrell:

Please accept the enclosed comments from the Washington County Habitat Conservation Plan (HCP) Technical Committee on Ivins City's proposed detention dam and basin located near the Tuacahn High School and Center for the Performing Arts (as presented by Ivins City's Engineer, Alpha Engineering).

The Technical Committee is comprised of biologists and representatives from entities that cooperate in the management of the Red Cliffs Desert Reserve. The 62,000 acre reserve was established in 1996 to protect the Mojave desert tortoise and its habitat in Washington County. Establishing and managing the reserve is the primary mitigation for the development of over 350,000 acres of private land across the county and the take of 1,169 tortoises. The proposed dam and detention basin are located within the boundaries of the reserve in occupied tortoise habitat.

If you have any questions on the committee's analysis or comments, please contact me at 435-634-5759.

Sincerely,

Lori Rose  
HCP Biologist



Washington County Habitat Conservation Plan Technical Committee  
Ivins Detention Basin Scoping Comments  
June 13, 2005

The Washington County Habitat Conservation Plan (HCP) Technical Committee is composed of biologists and representatives from the entities which cooperatively manage the Red Cliffs Desert Reserve. The purpose of the technical committee is to be available to the HCP Administrator and the Habitat Conservation Advisory Committee (HCAC) as-needed to provide biological information on endangered, threatened, and candidate species. In response to assignments, the TC considers biological impacts and makes recommendations to inform the process and to help minimize impacts to the wildlife and habitat protected by the reserve.

This is a summary of the Technical Committee's response to the following assignment:  
*The USFWS, Division of Federal Assistance and the Utah Division of Wildlife Resources have issued a letter requesting comments on City of Ivins' proposal to construct a 500 x 17 foot detention dam and seven-acre basin within the Red Cliffs Desert Reserve on property owned by the City. The HCAC motion granting conceptual approval to the project on February 22, 2005 stated several conditions including "that the TC and other officials with jurisdiction through state and federal laws be involved in the final design of the project." This assignment is being given to ensure that the TC has the opportunity to communicate biological input for consideration in the EA.*

*Please provide a brief summary of the biological impacts to the Reserve and tortoises. Comments on minimizing the impacts of the proposed detention dam and basin site are welcome.*

#### Summary

The Technical Committee met twice to evaluate impacts of the proposal and to discuss minimization measures and potential design alternatives for consideration during the NEPA process. The first session was culminated by a field trip to ground check biological information and to consider impacts on site.

#### The TC developed the following alternative that meets minimization measures while providing Ivins with resources to achieve minimization of habitat and species impacts—

Proposed detention dam located at Ivins preferred site with the following system design details to minimize impacts at this location (also see analysis details on pages 2-3):

- Culverts at Center Street and Tuacahn Drive are upgraded to maximum size possible, within existing constraints, to handle flood waters within the wash channel.
- To minimize the needed capacity of the reservoir and to maintain more natural flood flows through and below the dam, the detention dam outlet is maximized, compatible with increased downstream culvert capacity (and allowing for additional watershed contributions from side drainages below detention basin), so that detention area and duration is minimized, and natural low-water flows are not impeded.
- All materials to construct the dam are brought in from off-site; vegetation and basin upstream from detention dam remain in natural condition.
- The dam and spillway are designed to facilitate and encourage tortoise movement both across the top of the dike and up and down the spillway (an escape route).
- Consult with experienced geomorphologists on design details to ensure the wash function and riparian habitat are maintained below and above the detention site.
- Access to the site for construction and maintenance is through the wash from the north.
- State Parks acquires city property using Section 6 funds; Ivins donates the small portion of the property impacted by the dam structure. Parks issues right-of-way to Ivins for long-term maintenance of structure.

**Specific Analysis of Impacts and recommended minimization measures:**

Impacts	Minimization Measures
<p><b><u>Habitat Loss</u></b>                      -High Density tortoise population                      -local population already constrained by fencing and topography; approximately 120 acres of tortoise habitat between ridge and Tuacahn Road                      -Further reduces resources—up to 6% of area impacted if 7-acre basin is excavated</p>	<p>-Confine impacts/excavation to wash area and dam site ✓                      -Maintain Natural habitat within detention basin ✓                      -Increase outflow to as many cfs as possible to reduce detention and avoid pooling onto adjacent park property ✓</p>
<p><b><u>Fragmentation</u></b>                      -Narrows corridor for north-south tortoise movement to either side of detention dam                      -excavated basin impacts tortoise movement east to west and potentially entraps animals in a flood</p>	<p>-Design dam and any necessary armoring so slopes are reseedable and climbable (rocky and vegetated) ✓                      -Construct spillway at a climbable slope; 30% or less ✓                      -Design top of dike to facilitate and encourage tortoise movement across the top ✓</p>
<p><b><u>Take of Animals</u></b>                      -At Construction                      -During Floods                      -During Maintenance</p>	<p>-follow UDP minimization measures ✓                      -Confine impacts/excavation/maintenance to wash area and dam site ✓                      -Maintain Natural habitat within detention basin ✓</p>
<p><b><u>Impacts to riparian function of wash downstream</u></b>                      -impeding low flows reduces water necessary to maintain riparian vegetation downstream</p>	<p>-Design outflow to allow natural flows at low levels without pooling ✓                      -Minimize excavation behind outflow pipe so pooling does not occur; wash flows through pipe at natural level ✓</p>
<p><b><u>Invasive Weeds</u></b>                      -Disturbed areas are vulnerable to growth of invasive weeds                      -Construction vehicles can introduce weed seeds                      -Imported soils may contain weed seeds</p>	<p>-Restoration plan with measures to prevent importation and spread of weed seeds ✓                      -aggressive weed removal for multiple years ✓                      -select soil source/soil horizon of imported fill material to minimize weed seeds. Do not use top soil for imported fill. ✓</p>

<p><b><u>Other Sensitive Species</u></b>          -Gila monsters also located in this area</p>	<p>-follow UDP minimization measures          -Confine impacts/excavation to wash area and dam site          -Maintain natural habitat within detention basin</p>
<p><b><u>Access Road Location</u></b>          -Additional habitat and visual impacts would be caused by road access outside of the wash</p>	<p>-Access through wash from north for construction and maintenance</p>
<p><b><u>Use of Material from Site</u></b>          -adds to take of habitat</p>	<p>-All materials to construct the dam are brought in from off-site; vegetation and basin upstream from detention dam remain in natural condition</p>

*option*

**Technical Committee Members Participating:**

- Rene Chi, Wildlife Biologist, USFWS
- Ann McLuckie, Wildlife Biologist, UDWR
- John Ibach, Manager, Snow Canyon State Park
- Bob Douglas, Biologist, BLM
- Sandy Ferrell, Local Biologist
- Lori Rose, Washington County HCP Biologist