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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

### Division of Water Rights

MICHAEL R. STYLER      KENT L. JONES  
Executive Director      State Engineer/Division Director

July 9, 2009

VAN BURGESS  
NORTH UTAH COUNTY WATER CONSERVANCY DIST  
645 ALPINE HIGHWAY  
ALPINE UT 84003

### DIVISION OF WATER RIGHTS - DAM SAFETY SECTION

### DAM INSPECTION REPORT – 2009

|                  |                              |                        |              |
|------------------|------------------------------|------------------------|--------------|
| Dam Name/Number: | <b>Tibble Fork – UT00299</b> |                        |              |
| Date:            | 7/1/2009                     | Hazard:                | High         |
| Storage Level:   | ~ 6380 ft                    | Dam Type:              | Earthfill    |
| Spillway Flow:   | 165 cfs                      | Purpose of Inspection: | Annual       |
| Outlet Flow:     | 0 cfs                        | Weather:               | Cloudy; 55°F |

#### Representatives at the Inspection:

| <i>Name</i>                                | <i>Representing</i>                     |
|--|---|
| Everett W. Taylor                          | UT Division of Water Rights, Dam Safety |
| Bronson Smart, Jason Robison, Marcos Perez | NRCS                                    |
| Van Burgess, John Jacobs, Karl Clark       | NUCWCD                                  |
| Don Wadley, Dave Thurgood, Frank Mills     | NUCWCD                                  |
| Sid Smart, Ron Stewart                     | NUCWCD                                  |
|  |   |

#### Necessary Maintenance and Repair:

1. Remove woody vegetation (willows, trees, & sagebrush) from the upstream and downstream slopes.
1. Exterminate burrowing rodents.
2. Submit video recording of drain line inspection.
3. Operate the control gate annually through its full range.
4. Repair concrete spalling on right spillway wingwall.

#### Emergency Action Plan Review:

1. The contact lists, flowcharts, and tables need to be updated.

|                    |   |
|--------------------|---|
| <b>Embankment:</b> |   |
| Crest:             | The pavement is in fair condition. Cracks have been sealed. Some potholes are developing. |
| US Slope:          | Willows near the spillway and the tree on the left side need to be removed.               |
| DS Slope:          | Exterminate burrowing rodents. Remove woody vegetation near the left groin.               |

|                              |   |
|------------------------------|---|
| <b>Abutments/Foundation:</b> |   |
| L Abutment:                  | In good condition.  |
| R Abutment:                  | In good condition.  |
| US Toe:                      | Submerged – Not inspected.  |
| DS Toe:                      | In good condition. There is seepage about 200 feet down from the toe of the dam. This may be from a clogged drainpipe in the area. The owner is planning on videoing the drain outfalls in the near future to determine if this is the cause. The seepage is clear. |

|                         |                            |
|-------------------------|----------------------------|
| <b>Reservoir Basin:</b> |                            |
| Shore Stability:        | Good.                      |
| Reservoir Bottom:       | Submerged – Not inspected. |

|                         |   |
|-------------------------|---|
| <b>Spillway:</b>        |   |
| Freeboard:              | The principal spillway is spilling approximately 3'. There is 11 ½ feet of freeboard between the principal spillway crest and dam crest.  |
| Intake:                 | Good.   |
| Concrete Structures:    | The concrete of the spillway is in good condition overall. There is some spalling on the right spillway wing wall that should be repaired. Cracks have been sealed. This maintenance should continue as new cracks develop. |
| Outfall/Stilling Basin: | Good – Clear of debris. Concrete floor of the spillway was not inspected because of the large flow.   |

|                         |  |
|-------------------------|--|
| <b>Outlet:</b>          |  |
| Conduit:                | Not inspected.   |
| Intake:                 | Submerged – Not inspected.   |
| Channel/Stilling Basin: | Good.  |
| Controls/Venting:       | Controls function but were not operated as part of this inspection. The control gate should be operated through its full range once per year as a minimum. |

|                         |  |
|-------------------------|--|
| <b>Instrumentation:</b> |  |
| Monuments:              | None observed.   |
| Staff Gage:             | Reservoir level is measured from the spillway.   |
| Piezometers:            | Piezometers are in good condition. Cross cutting the tops will allow the caps to be removed easily. Piezometers should be labeled. |
| Drains:                 | The 10" drain was inspected and is flowing. Measurements are submitted.  |

PHOTOS:



Photo 1: Tree on upstream slope should be removed



Photo 2: Remove willows from the upstream slope



Photo 3: Spillway Flow



Photo 4: Pot Hole Developing on the Crest



Photo 5: Seepage Approximately 200 ft Downstream of the Dam.



Photo 6: Seepage Looking Downstream.

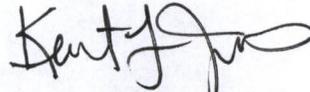


Photo 7: Rodent Holes on Downstream Face

Page 7  
UT00299

Your cooperation is appreciated. If you have any questions, please feel free to contact Everett Taylor at (801) 538-7372.

Sincerely,

A handwritten signature in black ink, appearing to read "Kent L. Jones". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Kent L. Jones, P.E.  
State Engineer

KLJ/jm

pc: Teresa Wilhelmsen - Water Rights Regional Engineer  
Bill Self Forest Service Regional Office  
Uinta-Wasatch-Cache National Forest  
Bronson Smart, P.E. State Conservation Engineer NRCS  
Superintendent Timpanogos Cave National Monument  
Marsha Demillion Uinta-Wasatch-Cache National Forest  
Craig Walker Division of Wildlife Resources  
John Jacobs North Utah County Conservancy District  
Craig Searle Utah County Engineers Office