Chapter 2 - Proposed Action and Alternatives

2.1 Introduction

The Proposed Action is authorization to increase Steinaker Reservoir's normal water surface elevation from 5,517.8 feet to 5,520.5 feet. This would be an increase of 2.7 feet and would allow the reservoir to be filled to the current spillway crest elevation. This EA will be used to analyze the potential effects to the human environment and will serve to guide Reclamation's decision, along with other pertinent information, whether to implement the Proposed Action.

If authorized to proceed, UWCD would be allowed to fill the reservoir to the proposed normal water surface elevation for a period of time not to exceed 60 days each water year (during the summer irrigation season). This 60-day limitation is imposed by Reclamation's Risk Analysis (U.S. Department of the Interior, 2005).

In conjunction with this authorization, UWCD (and Reclamation) would work with Steinaker State Park management to modify or relocate certain recreational facilities. The Proposed Action Alternative is analyzed in this EA, along with a No Action Alternative to facilitate comparison of potential effects between the two.

2.2 No Action Alternative

Under the No Action Alternative, Reclamation would not authorize UWCD to fill the reservoir to the proposed new normal water surface elevation, and State Park facilities and infrastructure would not need to be relocated and/or reconstructed. The No Action Alternative does not require any changes to project features.

2.3 Proposed Action Alternative

The Proposed Action Alternative is to increase Steinaker Reservoir's normal water surface elevation from 5,517.8 feet to 5,520.5 feet for a period of time not to exceed 60 days per water year. This would be an increase of 2.7 feet and would allow the reservoir to be filled to the current spillway crest elevation. The reservoir would be allowed to fill to this new, higher normal water surface elevation during the spring runoff season, for the 60 day period stated above. Total area of new inundation would be approximately 30 acres. Most of this area is vegetated by sagebrush.

If Reclamation decides to implement the Proposed Action and authorizes UWCD to operate the reservoir at the higher normal water surface elevation, portions of Steinaker State Park facilities and infrastructure would need to be relocated and/or reconstructed. The following actions would be undertaken by UWCD in conjunction with the Proposed Action (see Map 2 and 3 for locations of the following facilities and infrastructure):

1. Soils within the area are mostly sand and could be highly susceptible to erosion from wave action on the new higher shoreline. Erosion can affect both water quality and recreation. This erosion could affect approximately 30 acres. Most of this affected area is located adjacent to the West Campground and Boat Dock. If deemed necessary by Reclamation and/or the State Park, erosion would be repaired as necessary, including where recreational facilities or water quality are affected.

2. The current location of the Lower Pavilion Area would be partially inundated by the higher water level in the reservoir. The structure should be able to withstand the increased lake level; however, some erosion may occur to the sand material around the post bases. The supports are anchored by concrete at each post location and there is no slab under the pavilion. This pavilion may need to be disassembled and moved to higher ground. This can be accomplished by disassembling the cover and placing new footings at a location. This new location would be within 200 feet of the structures current location and be higher on the bank.

3. The proposed maximum water level would rise onto the asphalt roadway above the concrete section of the West Shore Boat Ramp. The granular base and subgrade materials under the roadway could be saturated with possible detrimental effects to the roadway. This ramp would need to be extended at the current location to withstand the proposed maximum water elevation. The concrete boat ramp would need to be extended approximately 35 feet and widened to match the lower concrete section width. Riprap would need to be extended along the new concrete section. The parking area associated with the boat dock would be reconstructed at its present location. The restroom leach field adjacent to the boat ramp was monitored during tests of the proposed maximum water elevation during the spring seasons of 2005 and 2006. These tests showed that the proposed elevation increase would not impact the leach field. All leach fields in the state park will maintain a 100-foot horizontal set back and a 2-foot vertical limit from any high water level. The boat dock dead-man anchor would not need to be relocated.

4. The light pole and power feed adjacent to the West Shore Boat Ramp would need to be relocated approximately 75 feet to the west and higher on the bank, or it must be disconnected or otherwise protected to prevent a possible electrical safety hazard for the public.

5. The West Campground pads for picnic tables and fire pits would be only slightly above the proposed elevated waterline. This could cause a safety hazard due to the existence of water, several feet in depth, within several feet of the pad sites. These pad sites would need to be protected from wave action by gently sloping the gradient to the water and placing riprap over this slope. Access to the shore would be provided by the construction of gravel walkways.

6. Within the North Group Use Area, a water supply line would be submerged by the raised water level. This supply line would to be moved to higher ground (Map 4). Water supply line valve risers must be raised above the anticipated lake level, with freeboard for wave action. There is a concrete pipe outlet that drains the parking lot that would be partially submerged during high water. It would need to be checked after high water periods to make sure debris has not accumulated. The higher water level will be close to the roadway surface for the access road of the group area. This roadway would need to be monitored to determine potential roadway damage. If damage does occur the road would be raised and/or protected. The bottom of the vault toilet is located above the anticipated raised water surface; however, the toilet would be within the established 50-foot horizontal setback from the reservoir's shore. Administrative controls such as pumping the sewage from the toilet early and often or construction of a containment berm around the toilet would be accomplished to mitigate potential problems.

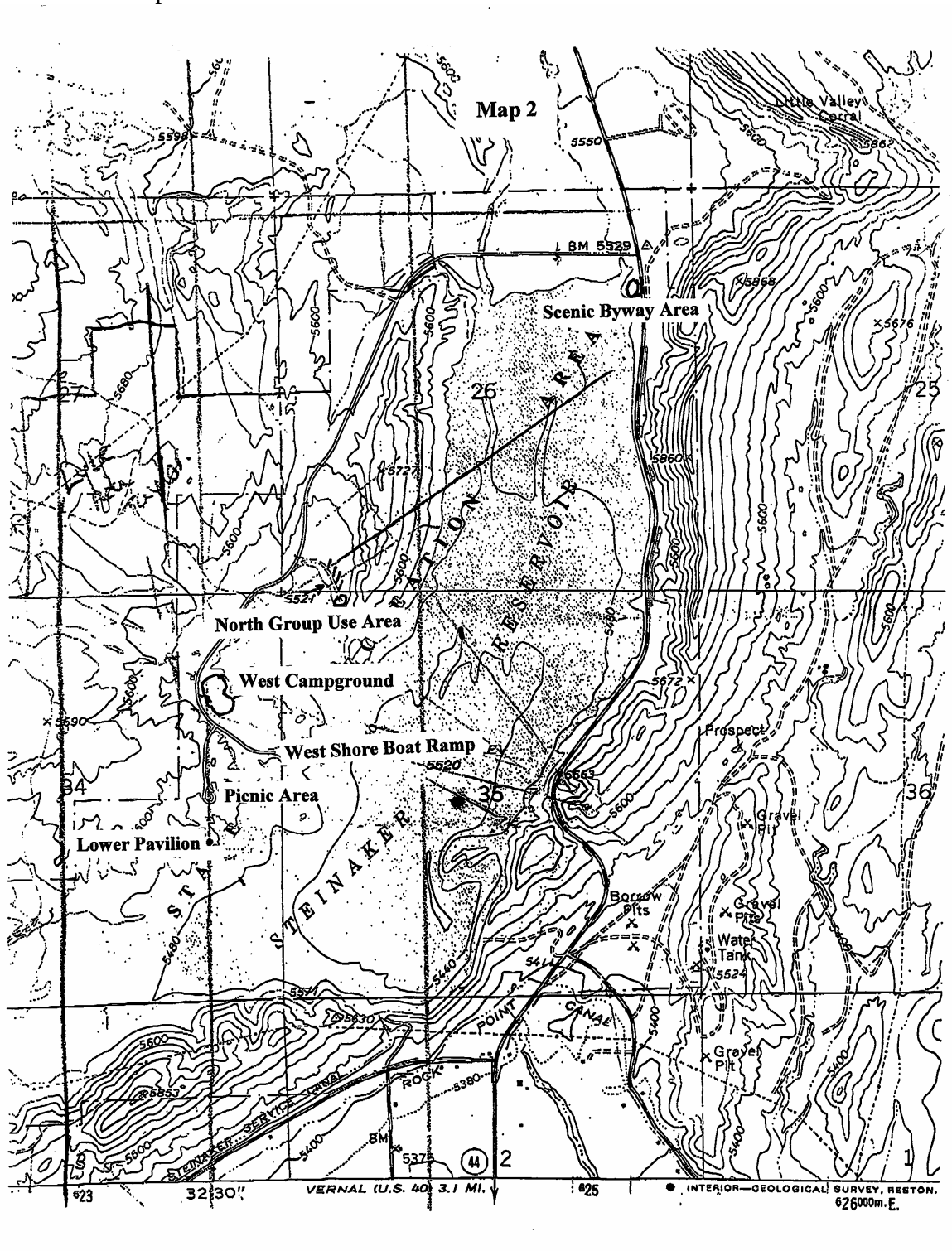
7. Within the Scenic Byway Area, some displays and kiosks would be affected by the raised water level. The interpretive trail (approximately ½ mile in length) would be submerged along the entire length, along with two foot bridges. These facilities would be raised by the construction of an elevated boardwalk or by a berm. The raised water level will be next to the roadway into the area and sections of the parking area would be under water. One vault toilet in the area would be above the raised water surface and outside the 50-foot setback area. Another toilet was removed because it would be within the established 50-foot horizontal setback from the shoreline.

8. Fire rings that are below the proposed new high water level must be moved to keep camp site open. Barriers (wheel stops or jersey barriers) have been installed in parking areas where it was deemed necessary to prevent vehicles from rolling into the reservoir.

9. DURING INUNDATION**:** All roadways and parking areas next to the water surface must be monitored to assess any potential road damage. The Lower Pavilion area must be monitored to determine if damage is occurring to the structure and if measures can be taken to reinforce the

post foundation. Wave erosion must be monitored along the entire elevated waterline of the reservoir. Wave heights in strong winds can be 1 to 2 feet and would travel into 2 to 3 camp sites. Camp sites may need to be closed during periods of high wind. The North Group Area would need to be monitored during high winds, due to the potential for water to overtop the roadway. All restroom leach fields and vault type toilets would need to be monitored and pumped as necessary to prevent contamination at the higher reservoir level.

Map 2. Steinaker Reservoir State Park Recreational Facilities



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Map 3. Steinaker Reservoir State Park Work Locations