

## **APPENDIX D – PROPOSED SNOWMAKING POND DESCRIPTION AND SPECIFICATIONS**

The design of the proposed snowmaking pond is identical in the Proposed Action and Alternative 3.

The proposed pond is to be a geosynthetic lined pond with an earthen embankment. The conceptual design assumes a 20-foot wide embankment crest and a 10-foot wide access road around the perimeter of the pond for maintenance access. The crest elevation would be 9,495 feet amsl. The pond floor would be at 9,480 feet amsl. Pond side slopes should be no steeper than 2:1 (horizontal to vertical) and no flatter than 3:1. The downstream face of the embankment would be 3:1.

The embankment height from crest to toe would be constructed to 17 feet. Maximum possible storage (to the embankment crest) is 7.5 acre-feet (for 2:1 side slopes) to 6.1 acre-feet (for 3:1 side slopes). This makes the structure a non-jurisdictional dam in the State of Nevada (less than 20-foot crest to toe embankment height and less than 20 acre-feet of storage). Although the structure would not have to be permitted as a jurisdictional dam, the State of Nevada would still have a notification requirement.

The recommended liner would be a 60-millimeter High Density Polyethylene (HDPE). However, since the pond is storing clear water with no undesirable constituents, there are no environmental (i.e., public health) consequences to potential leakage. Therefore, a composite liner system (HDPE overlying a compacted clay bedding layer) would not be required nor would a double lined system with leak detection be required. Local sand can be used as bedding for the HDPE liner. Any bedrock, boulders, or cobbles exposed during the pond excavation should be removed and/or covered with not less than six inches of sand with not more than 30 percent by weight gravel sizes and a maximum particle size not greater than three-quarter inch. It is not necessary to protect HDPE from ultraviolet light, although covering the plastic may further extend its useful life.