

1 Q. **Tab 27; Volume II: Implement Terminal Station Flood Mitigation – Springdale**
2 Hydro states on page 2 that “the installation will be designed to prevent flooding of
3 the terminal station during a 1 in 100 year rainfall event.”

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5 Pages 4 and 5 outline the alternatives and a brief discussion of them concluding
6 that “the earth retention berm is the least cost option and is therefore the
7 recommended alternative.”

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9 Was a cumulative net present value analysis completed? If so, please provide the
10 analysis. If not, please provide the rationale for not doing such an analysis.

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13 A. A cumulative net present value analysis was not completed for the evaluation of the
14 three flood mitigation alternatives.

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Alternative 1, which consists of the replacement of the roadway culverts, was
deemed to be an ineffective measure for preventing a repeat occurrence of the
flooding. Consequently, no further assessment of this alternative was warranted.

20 Alternatives 2 and 3, which consist of the diversion of flood waters away from the
21 terminal station and the installation of retention berms, were determined to be
22 technically viable options for flood mitigation and an economic comparison of these
23 alternatives was required.

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25 A cumulative net present value analysis compares the asset lifecycle costs and
26 applicable revenue generated over the asset’s life. Costs typically include capital
27 expenditures, annual operating and maintenance costs, and asset replacement

1 costs. As indicated on page 5 of the report, both of these options carry similar
2 operating and maintenance costs. They also have a similar anticipated service life,
3 thus sharing the same projected timeline for replacement. Each alternative will be
4 fully depreciated at the end of their service life, with no remaining book value to
5 consider.

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7 The respective direct capital expenditures provide the only variable for comparison
8 purposes. Consequently, a cumulative net present value analysis was not
9 completed, but rather, the options were compared on the basis of the direct capital
10 cost. Alternative 3 carries the least direct capital cost and is, therefore, the
11 recommended alternative.