Evaluation Criteria	Alternative 2 – Construct a New Mechanical WWTP	Rating	Alternative 3 – Upgrade the Existing Lagoon System	Rating
Financial	<ul> <li>Capital cost opinion for a new mechanical WWTP at Lagoon site is anticipated to be \$31.0 M (-30%/+50%) Note these figures were developed in 2022 at time of PIC# 1</li> <li>Higher operation and maintenance (O&amp;M) cost due to increased operational effort, equipment maintenance, and monitoring/control requirements</li> </ul>		<ul> <li>Capital cost opinion for upgrade of existing Lagoon facility is anticipated to be \$15.4M (-30%/+50%) Note these figures were developed in 2022 at time of PIC# 1 are updated as part of Phase 3 of Class EA process</li> <li>Lower operation and maintenance cost compared for the new WWTF compared to a mechanical WWTF (Alternative 2) due to lower operational effort, less equipment to operate and maintain, and fewer processes to monitor and operate</li> </ul>	
Technical	<ul> <li>Capable of meeting the projected wastewater servicing needs by proving the required level of treatment and meeting the effluent quality requirements</li> <li>Can be designed with required redundancy and modularity for additional capacity in future</li> <li>Relatively low compatibility with the existing lagoon system and allows only a moderately efficient use of the existing lagoon system</li> <li>Higher operational complexity needing higher O&amp;M and control effort than a lagoon system.</li> </ul>		<ul> <li>Capable of meeting the projected wastewater servicing needs by proving the required level of treatment and meeting the effluent quality requirements</li> <li>Can be designed with required redundancy and modularity for additional capacity in future</li> <li>High compatibility with the existing lagoon system facilitating an efficient use of the existing lagoon system for future wastewater treatment</li> <li>Low operational complexity with significantly lower O&amp;M and control effort compared to a mechanical plant.</li> </ul>	
Environmental	<ul> <li>This alternative has a relatively higher carbon footprint for both construction and operation</li> <li>The proposed solution would be resilient to climate change with the use of existing lagoon cells as equalization and/or sludge storage ponds.</li> <li>This alternative is likely to have a moderate impact on wildlife and vegetation due to higher amount of excavation and construction compared to a lagoon upgrade</li> </ul>		<ul> <li>This alternative has a low carbon footprint for construction as well as operation</li> <li>The proposed solution would be resilient to climate change with the retention of existing lagoon cells as a key treatment process facilitating attenuation of peak wet weather flows</li> <li>This alternative is likely to have a low impact on wildlife and vegetation due to lower amount of excavation and construction activity compared to a mechanical plant</li> </ul>	
Social, Cultural and Archeological	<ul> <li>Alternative can support existing developed areas and future growth</li> <li>Moderate visual, noise, and potential archaeological impacts due to high degree of construction</li> <li>Longer construction duration compared to Alternative 3</li> </ul>		<ul> <li>Alternative can accommodate future growth and support existing developed areas</li> <li>Low visual, noise, and archaeological impacts due to low degree of construction</li> <li>Shorter construction duration compared to Alternative 2</li> </ul>	
Overall Conclusion				

## ALTERNATIVE 2 – CONSTRUCT A NEW MECHANICAL WWTP







## ALTERNATIVE 3 – UPGRADE OF THE EXISTING LAGOON SYSTEM





