Brief Summary and Statement of Need:
This project funds the work necessary to issue Certificates of Approval for construction related to dams. Certain dams for mines, hydroelectric generators, water supply, and other purposes are subject to review and approval under AS 46.17 and in accordance with the mission of Department of Natural Resources to protect life and property. Application fees are used to fund these technical reviews as necessary.

Operating & Maintenance Costs:

<table>
<thead>
<tr>
<th>Amount</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Development:</td>
<td>0</td>
</tr>
<tr>
<td>Ongoing Operating:</td>
<td>0</td>
</tr>
<tr>
<td>One-Time Startup:</td>
<td>0</td>
</tr>
<tr>
<td>Totals:</td>
<td>0</td>
</tr>
</tbody>
</table>

Prior Funding History / Additional Information:
Sec1 Ch17 SLA2012 P124 L29 SB160 $506,000

Project Description/Justification:
The Division of Mining, Land and Water (DMLW) manages fees required with applications for Certificates of Approval for construction of new dams, and repair, modification, removal or abandonment of existing dams, as statutory designated program receipts (SDPR). The fees are calculated according to 11 AAC 05.010(a)(8)(J) and 11 AAC 93.171 or 11 AAC 93.172, based on certain costs related to construction, and paid by the applicant. The Dam Safety and Construction Unit (Dam Safety) within DMLW reviews the applications and issues Certificates of Approval under 11 AAC 93.173, after the application is complete and determined to provide for the protection of life and property.

Current applications include modifications of tailings dams at the Red Dog, Fort Knox and Kensington Mines, and work on several small water dams at other locations. Current applications also include proposed construction of new dams at the Fort Knox Mine, the proposed Donlin Mine and a hydroelectric dam near Angoon. In the near future, applications are expected for a major modification of two tailings dams at the Red Dog Mine, the closure of the Fort Knox tailings dam, and the removal of the defunct Lower Eklutna Dam. Other existing mining prospects such as Pebble
or Livengood will use state regulated dams if the projects advance toward development. Recent advocacy for renewable energy is expected to result in more small hydroelectric projects that may also use state regulated dams. When deficiencies in existing dams are identified through periodic safety inspections, risk mitigation projects may also result in new applications.

The revenue from application fees are utilized by Dam Safety to provide regulatory oversight of the design and construction related to the specific project, which can span a period of several months up to six years depending on a number of factors. In order to conduct timely and competent reviews of technically complex application submittals for large projects, Dam Safety utilizes qualified expert consultants retained under professional services contracts with the department (the statutory provision for this approach limits staff requirements and supports private sector services). Technical reviews conducted by Dam Safety may cover design scope proposals, geotechnical investigation reports, hydrology and seismology studies, detailed design reports, construction specifications, drawings, quality control/quality assurance plans and other construction documents, independent design and technical evaluations, field inspections, record of construction documents, operations and maintenance manuals, emergency action plans and other post-construction documents, risk assessments, and independent expert review panels. Such work is necessary for the department to issue the Certificates of Approval to Construct, Repair, Modify, or Remove a Dam, and in most cases, a new Certificate of Approval to Operate a Dam after construction is complete.

This project will be used to fund personal services, travel and contractual support for dam construction projects. Failure to review applications in a timely manner could lead to delays in issuing requisite certificates that could result in violations of regulations by the applicant, shut down of the mine or other project, costly construction delays, or unnecessary risk to life and property. Failure to conduct a thorough technical review could contribute or lead to failure of critical systems that could endanger life or property downstream of the dams. A catastrophic failure of a dam could lead to loss of life or significant property damage. Major economic impacts can occur for dam owners including mining operations and the mining industry at large, as well as major negative impacts to the State of Alaska and regulatory programs.

Recently, Certificates of Approval to Modify a Dam were issued for expansions of two tailings dams at the Red Dog Mine, and one tailings dam at the Fort Knox Mine. A Certificate of Approval to Modify a Dam was issued for new construction at an existing water dam at the Pogo Mine. A Certificate of Approval to Modify a Dam was issued for expansion of a heap leach pad at the Fort Knox Mine. Applications are currently under review for the expansion of an existing tailings dam at the Kensington Mine, a new dam at a new heap leach pad at the Fort Knox Mine, and seven new dams proposed for the Donlin Mine project.

**Budget Detail:**

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 – Personal Services</td>
<td>$160,000</td>
</tr>
<tr>
<td>2000 – Travel</td>
<td>$15,000</td>
</tr>
<tr>
<td>3000 – Services</td>
<td>$220,000</td>
</tr>
<tr>
<td>4000 – Commodities</td>
<td>$5,000</td>
</tr>
<tr>
<td>5000 – Capital Outlay</td>
<td>$0.0</td>
</tr>
<tr>
<td>7000 – Grants</td>
<td>$0.0</td>
</tr>
<tr>
<td><strong>Total Project</strong></td>
<td><strong>$400,000</strong></td>
</tr>
</tbody>
</table>
Industry Projects Application Review

FY2018 Request: $400,000
Reference No: 54913

PCNs
10-1679 – Technical Engineer II/ Architect II
10-1885 – Engineering Assistant II