

**Palmer Correctional Center Underground Fuel Line  
Replacement and Water System Repair**

**FY2001 Request: \$575,000**  
**Reference No: 30791**

**AP/AL:** Appropriation

**Project Type:** Health and Safety

**Category:** Public Protection

**Location:** Palmer (Palmer)

**Contact:** Dwayne Peeples

**House District:** Palmer (HD 27)

**Contact Phone:** (907)465-3315

**Estimated Project Dates:** 07/01/2000 - 06/30/2002

**Brief Summary and Statement of Need:**

This project funds the Palmer Correctional Center's underground fuel line replacement; water system repair, and activation of water well #3.

<b>Funding:</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>	<b>FY2006</b>	<b>Total</b>
Gen Fund	\$575,000						\$575,000
<b>Total:</b>	<b>\$575,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$575,000</b>

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Additional Information / Prior Funding History:**

**Project Description/Justification:**

This project funds the first phase of the following Palmer Correctional Center (PCC) utility system repairs:

Phase I: Medium Complex Underground Fuel Line Replacement and Water System Repair

Phase II: Well #3 Activation

Phase I:

Underground Fuel Line: \$200.0

Palmer Correctional Center facilities are heated by oil-fired hot water heaters, boilers, and forced air furnaces. This includes the Medium Complex, which contains a number of cottages, chapel, special handling unit, and gym/classroom building. The gym / classroom area are supplied directly from the fuel oil day tank located within the same building. The cottages, chapel, and special handling unit are supplied separately with a direct-buried, bare copper fuel line. This direct-buried line is a pressurized, continuously circulating system, which does not meet EPA criteria. Leaks that develop can not be detected and can cause large quantities of fuel to be discharged into the ground. Two significant fuel leaks have occurred from this line. The most recent leak was discovered in June, 1998, after a 9,670 gallon deviation in fuel consumption was identified.

- Based upon the review of the options, the most cost effective means is to replace, on a permanent basis the fuel ling with a new double-wall piping system. This system would include sumps at all tees, and a leak detection system to avoid further problems occurring unnoticed. The project will include full design and construction and installation of a double-wall piping system.

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The cost estimate for this project is based upon conservative engineer assessments conducted last year. There is no other viable alternative than to replace the line. Failure to correct the deficiency will result in future fuel spills that result in contamination and clean up requirements. Due to the location of the line, an additional spill may result to abandoning the water wells. This contamination would result in additional expenditures in drilling new wells.

Water System Repair: \$175.0

- The current PCC water system operates with two wells: Well #1 with a 15 hp pump, and Well #2 with a 25-hp pump. These are the maximum size pumps that can fit into the respective well casings. Well #2 is the primary water source, with Well #1 supporting. Well #1 can not support the total demand because it is too small. A larger pump can not be placed into Well #1 because the casing is too small. The water distribution line is configured such that major repair to Well #2 requires shutting off water flow to all housing units. The distribution system has a number of problems, including three failed expansion tanks, improper well pump controller, leaking flush valves, high-flow fixtures and lacking sand traps. These problems result in high water consumption and shorten the life span of the well pumps.

- This phase of the project will repair the three defective expansion tanks, replace the current Well #2 pump controller with a variable frequency drive controller, replace leaking flush valves, replace the high-flow plumbing fixtures with units which require less water flow and install protective sand traps on the system.

Phase II: \$200.0

Phase II will activate Well #3 into the domestic water system. This well was originally constructed to serve as irrigation well. The well is not connected to the domestic water system. It has been used several times as an emergency water source; however, this is limited to summer months as the temporary above-ground line would freeze during winter months.

This project will install a buried water distribution line (approximately 1,000 LF) connected to Well #3 and will modify the existing distribution line to enable operating each well independently, thereby not curtailing water flow to the compound.

The estimates for the water system repair and upgrade are based upon engineering assessments conducted in the last year, and DOC staff estimates based upon discussion with engineers and previous experience with repair expenditures. Failure to resolve the water problems at PCC will result in continued supply issues and any future system failures will lead significant health and safety compliance issues regarding the population capacity of the facility.