MEMO

To: Idaho Water Resource Board
From: Brian Patton
Subject: Pristine Springs Update
Date: September 6, 2013

Construction continues on the pipeline replacement. Attached are construction photos from August 3rd and September 5th. The work is on track for November completion.

Blue Lakes Pipeline – August 3, 2013

Blue Lakes Pipeline – September 5, 2013

MWH.

BUILDING A BETTER WORLD

MEMORANDUM

TO:	DISTRIBUTION	DATE:	September 12, 2013
FROM:	Ed Cryer	CC:	
SUBJECT:	Progress Report Blue Lakes Pipeline Replacement	REF:	10502444.010101

In order to provide the Owners of the Blue Lakes Pipeline Project (Project) a summary of the design/construction progress to date, the following discussion was developed.

PROGRESS

As of September 10th the project is well underway and the following work elements are in progress.

1. **Intake Structure** – As has been discussed, due to the physical conflicts with the preceding three Alpheus Creek intakes (one in service and two abandoned), it was necessary to relocate the originally designed location of the new intake. Due to the type (very rough) of the previous work on the site, the result was a very unstable work area. We closed the excavation at the original site and moved to a new location between the original proposed location and the very first hatchery intake (some remnants of that remained). We are still on the Owners' property as surveyed. The new location is stable, very little infiltration leakage has occurred (minor pumping) and the work has progressed. The concrete intake structure construction is divided in a number of separate placement phases (3 slabs and 4 sets of wall section). The first slab is in-place and the second is being formed and placed this week. The transition sections (steep section) will be formed for multiple pours over the next couple of weeks. The pipe transition wall with the pipe connection wall thimble fitting will then be cast-in-place to allow completion of the pipe work.
2. **Outlet Structure** – The concrete placement work on this structure is complete. The next activity, once the pipeline is complete, will be the necessary transition work on the active structure to saw cut the necessary openings for the water flow transfer to the new intake section. Stop logs, handrails and other accoutrements are being sourced.
3. **Pipe** – The pipe material is all on site and pipe installation has been initiated starting at the discharge structure. A number of conflict problems with existing yard piping have occurred over the last two weeks that have slowed up the progress and will be discussed in next section.
4. **Flow Meter** – As you know, we need to install a new flow meter. The new intake will not accommodate a weir-type flow measuring device currently in use. As presented earlier, we will install a magnetic-type flow meter in the pipe near the hatchery building. The meter selection was approved by IDWR and the meter has been ordered from GE. The meter will be installed in a smooth section of HDPE pipe (on-site) and it will be housed in an accessible concrete subsurface structure. The meter readout will be adjacent to the

structure above ground. This will provide an accurate measurement of flow and be much easier to access and read. If, in the future, someone (IDWR, City of Twin Falls) wants to modify the system to connect it to a telephone or radio transmitter for reporting to an off-site location, that can be accommodated. We have not proposed installing an off-site connection at this time since flows are generally constant over extended (weeks) periods.

ISSUES

1. **Intake Structure** – Other than the initial problem in having to relocate the structure, we are moving ahead and no significant issues are currently anticipated.
2. **Outlet Structure** – No problems currently anticipated.
3. **Pipeline** – Over the past two week, four unmarked and non-locatable underground conflicts were discovered. On September 5, a three-phase power line (unknown) was cut and had to be relocated and repaired. This line must service the lower building (assumed) but was installed by the previous owners so it was not found and marked by the contract utility locator firm that surveyed the site prior to construction. The day before, a hatchery process water drain line was discovered that had to be relocated under the new pipeline. Earlier this week a sanitary waste line (sewer) was located and had to be moved to allow installation of the new pipeline. At the same time another electrical line was located parallel to the pipe, that we do not know where it goes or if it is an active (live) service. This line was marked by the locator but it is not shown on any utility information.

While all these interferences are relatively minor, they have delayed the progress of the pipe installation, cut into the contractor's contingency funds and generally been a frustration. There are no real "as-built" drawings for the site. However, since the lines are in use and part of the hatchery leased to SeaPac, they had to be repaired and relocated as required. The locator firm will only look for known utilities. The hatchery staff has not been of much help identifying possible conflicts. We will locate the lines and make sure they are on the "as-built" we will repair. The 3-phase higher voltage line will be surface marked for safety.

Other than these conflicts, the pipeline work should proceed without major problems. We are hopeful that once the working installation space is a little farther from the hatchery that further conflicts will not be an issue.

Flow Meter

The only aspect of concern for the flow meter is cost. The IDWR allows relatively few options for meters and what was selected was the best. he meter unit itself is not that expensive but, with the required subsurface structure and installation, it will cut into the contractor's upper limit contingency and we should expect a change order for this element.

SCHEDULE

Aside from a week or so delay with the intake and a week delay with the pipeline conflicts, the work is progressing and we would anticipate a late October early November completion.

Blue Lakes Pipeline Rehabilitation Progress

Coffer Dam at Inlet

Outlet Structure Construction Adjacent to Existing Outlet

Inlet Structure Low Element Construction

Inlet Structure Construction

Discharge Structure Concrete Complete

Discharge Structure and Pipeline

Pipeline Construction

Sewer Line and Buried Power Line Conflict

Power Line in Conduit Conflict