Summary Report

Encampment Sierra Madre Well Level II Study

Wyoming Water Development Commission Project #05SC0292436

May 2007

PMPC
Saratoga, Wyoming

in association with
HINCKLEY Consulting
Laramie, Wyoming
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INTRODUCTION
This Summary Report pulls together the project history and political developments leading to the Town of Encampment requesting the termination of the 2004 Encampment Sierra Madre Well Level II Study prior to its completion. Progress and work products for tasks undertaken in the course of the study are summarized; deliverables are included in the Project Notebook for future use in the event a variation of this study is undertaken in the future.

PURPOSE OF STUDY
The Town of Encampment (Town) diverts surface water from the North Fork of the Grand Encampment River, treats a portion for potable use and supplies a separate untreated municipal irrigation system. Recent low water levels in the river due to drought conditions have been a cause of concern for the Town. The Sierra Madre Water and Sewer Joint Powers Board (JPB) supplies water to the Town of Riverside and surrounding area from a two well system. The JPB has concerns with their water distribution system's lack of redundancy, namely only one supply pipeline crossing the Encampment River.

The Town and the JPB co-sponsored the Level II Study principally to investigate the possibility of supplying the Town with groundwater from the JPB wells. The study was to include a negotiated use agreement between the co-sponsors, drilling a Level II test well and evaluation of the feasibility and costs for expanding the Town's raw water irrigation system into un-serviced portions of the Town and JPB service areas.

PROJECT OVERVIEW
The study began in July 2004 with a Project Scoping Meeting and essentially concluded in October 2006 with an Encampment/WWDC meeting. Many meetings and workshops were held during the study. The participants started out with cautious optimism that a mutually beneficial development of community water supplies could be achieved and progressed to a cooperative identification of issues of concern and directions for resolution. Then factions of the Town opposing combining with the JPB system, primarily basing their opinions on the possible (imminent to some) loss of the Town's water rights, were successful in influencing the Town Council to request ending the study.

This study, like most municipal water-related engineering projects, was conceived by those having to deal with the day-to-day problems of running an EPA-compliant system, with little attention from the public being served. Public perception, beyond apathy, was based on a vague (incorrect) perception of system adequacy, resistance to regulation, independence, and suspicion of change. Early meetings were advertised but were poorly attended. Those opposed to the project gradually raised public awareness; perhaps
through misunderstanding, sometimes through mistrust of information provided in the study, and perhaps through intentional distortion of information to further their beliefs; ultimately leading to termination of the study.

The Towns of Encampment and Riverside share a common border but have vacillated between cooperation and individual independence and unwillingness to cooperate politically. Economic pressure has caused them to reluctantly participate in common law enforcement and fire protection efforts. While the two entities jointly requested the WWDC-funded project discussed here, one or the other has opposed combining their municipal water systems on other occasions:

• 1992 - Encampment declined joining the JPB when it was formed to provide water to Riverside and adjacent areas.
• 1997 - JPB didn’t want Encampment to connect to their system as a mutual backup water supply.
• 2006 - Encampment discontinued efforts to obtain water from the JPB prior to completion of Level II study.

While development of a combined water system for the two populations has long appeared to be an obviously good idea to outsiders, the necessary local conjunction of economics, engineering, regulation, and personalities has yet to occur.

STUDY CHRONOLOGY

Many meetings, workshops and individual discussions occurred during the study. Following are notable project events, with comments, that are intended to document the sponsor influenced course of the study. A more detailed Job Diary is included in the Project Notebook.

July 29, 2004
- Project Scoping meeting at Encampment Town Hall

December 16, 2004
- Project status, population and consumption figures were presented to Encampment and JPB in separate special meetings.

February 8, 2005
- Interim Report presentation at an Encampment - JPB joint meeting
  - Approximately 30 total attendees
  - Presented Interim Report and answered questions from the audience and sponsors
  - Sponsors agreed to pursue having two separate water systems with Encampment being an outside user (consecutive system) to the JPB system
  - Both sponsors will meet with their respective attorneys and meet again March.
  - Meeting was cordial and productive.
• WWDC directed PMPC to work with the sponsors in preparing the use agreement drafts.
• PMPC will prepare an outline and costs of necessary capital improvements and benefits/costs for each sponsor with Encampment as an outside user to the JPB system.

April 20, 2005
• Meeting with Bill Craig, Encampment Public Works Director, at Encampment WTP
  • Plant can’t meet 0.3 NTU MCL
  • Plant can meet 0.5 NTU March through August and 0.4 NTU from September through February.
  • Bill has broken equipment that he is holding off repairing until he knows if the plant or wells will be used
  • WTP is in violation of the IESWTR and anticipates receiving a NOV for turbidity violations
• Called Mindy Mohr, EPA, to see if Encampment can get an extension until the Level II is complete & the Town can decide what their water supply will be. Ms. Mohr said Encampment hasn’t demonstrated a good faith effort to her satisfaction. They have received numerous NOVs for various non-compliance issues; TOC removal measurements, 15 minute filter readings, chemical monitoring reporting.

April 22, 2005 (meeting proposed at February 8, 2005)
• Encampment Council workshop – purpose was to have their attorney review water rights issues with the council before meeting with JPB. Meeting turned into answering questions from citizens who had not attended previous meetings. Meeting did not accomplish the meetings objectives.
• Encampment Council/JPB workshop – intention was to continue discussions on operating plan and use agreement. Council workshop carried over into this second meeting, JPB left before meeting started and entire meeting was spent answering questions from Encampment residents.

May 13, 2005
• Encampment Council Meeting
  • Questions & comments from audience, many of the same people from the last meeting asking the same questions and not liking or believing the answers provided.
  • Councilwoman Claypool stated that she feels answers are being withheld from people newly interested in the project. She was provided a copy of the 2002 TST MF report for her to review with a Mr. Tillman, a family acquaintance. Told her I would be glad to talk with Mr. Tillman about the project.
• Preserving water rights was again discussed in detail. Town Attorney stated that obtaining drinking water from the JPB will not jeopardize their existing water rights.
• Reviewed handout of schematic costs for construction, operation and maintenance of surface and groundwater supply systems. Comparison showed a $21,000 potential annual savings with the groundwater system and emphasized that any payment to the JPB for water was not included in the estimates and would reduce the price differential. Both estimates anticipated receiving 50% grant funds. $21,000 equates to about $5.80 per month for the approximately 300 active Encampment water accounts.
• Council was told the $21,000 differential was economic justification for the Council to resume discussions of the operational agreement and use plans with the JPB. There is too much “he said” “they said” type gossip going around and it was time for the two boards to set across the table and ask each other the hard questions and get the true answers.
• Councilwoman Claypool expressed her discomfort with PMPC’s $900,000 WTP upgrade estimate in light of Mr. Tillman’s $327,000 verbal material quote. Told her PMPC is in the process of updating the 2002 WTP upgrade estimate but we didn’t expect cost estimate changes that would make upgrading the WTP more economical. Cost update will proceed concurrently with Encampment – JPB meetings.
• Council decided to reinitiate negotiations with the JPB with possible meeting dates of May 18 and June 2 depending on JPB availability.
• Council is concerned what will happen if they can’t reach an agreement with the JPB.
• WWDC Commissioner Steward reassured the Council that the WWDC is there to help Encampment and if acceptable solutions cannot be negotiated it may be possible to amend the current study to address those developments. A short term study amendment may be to hire a facilitator to work with both boards if the negotiations become stalled.
• EPA NOVs were discussed and a draft letter to EPA requesting a compliance deferral will be prepared by PMPC for the Mayor’s review and signature.
• Council was cautioned to anticipate at least 4 use agreement negotiating meetings and not expect everything to come together in one or two meetings.

May 16, 2005
• Telcon - Chris Abernathy
  • WWDC is not very receptive to contract amendment at this time
  • Sponsors need to work out their problems amongst themselves without WWDC telling them what to do.
May 18, 2005
• Operating Plan – Use Agreement Workshop at Encampment Library
• Meeting started out in an adversarial mood and worked into a semi-cooperative mood.
• Encampment is worried about loss of control and wants to be a member of the JPB. JPB is reluctant to admitting Encampment into the JPB.
• Making Encampment a JPB member will require approval of both Riverside Council and the Water District’s Board.
• Next meeting scheduled for 7 pm, June 24 @ Encampment town Hall.

June 7, 2005
• Encampment Council meeting w/ Chris Abernathy & Commissioner Steward
  • Mayor McKinney wanted Council to vote on whether or not to proceed with negotiations with the JPB. Councilwoman Claypool felt this was decided at the end of the May 18 meeting. Council unanimously voted to continue discussions with the JPB.
  • Jim Pedersen presented his draft community development plan – document will support combining water systems and extending the gravity irrigation system
  • Abernathy told Council that a detailed evaluation of the Encampment WTP is outside the current Level II scope but PMPC is updating the 2002 TST cost estimate.

June 24, 2005
Encampment/JPB joint meeting at Encampment Opera House. Mayor McKinney allowed audience comments at the beginning of the meeting then went into a workshop format with the Council & JPB.
• Discussion portion – About 30 in the audience.
  • Ron Platt – SEO is monitoring a well in the area and the water level is dropping.
  • Ken Dalke – his well was making sand and he had to cut it back to stop pumping sand and this was caused by the JPB wells.
  • This was the first time I had heard Ron & Ken’s concerns. Told the Sponsors that PMPC will look into the matter and report back to them.
• Workshop portion
  • Sinclair/Rawlins Agreement is the preferred Use Agreement format.
  • Councilwoman Claypool had comments marked on the Green River agreement and gave a copy to PMPC to put into the Sinclair agreement.
  • Workshop portion was generally cooperative and somewhat productive.

July 6, 2005
• SEO is not monitoring any well levels in Encampment area.
• USGS is monitoring one well (Helmer South/Split Rock #2) that is showing a rise in groundwater levels.
July 13, 2005
• JPB regular meeting.
  • Discussed handout on USGS Helmer South Well data and Dalke well location with USGS well data shows a water level increase since the JPB wells were drilled, leveling off for the few years prior to the last available data in 2001.
  • Effects of JPB wells on Dalke well are minimal if any at all; and don’t see how anything done by the JPB or proposed in the Level II would cause the Dalke well to pump sand.
• Encampment/JPB joint meeting at Encampment Opera House
  • Large crowd.
  • Mayor McKinney called meeting to order, explained that no comments would be taken from the audience.
  • Councilwoman Claypool told the Mayor that a petition with 65 signatures had been presented to the council; the large audience was there to discuss the petition and she wanted to discuss the following petition.

  Petition to the Mayor and Town Council, Encampment Wyoming
  Concerning entering into agreement(s) with Sierra Madre Joint Powers Board

We, the undersigned citizens of Encampment, Riverside, or Carbon County, Wyoming, believe that the Encampment Mayor/Town Council and the Sierra Madre Joint Powers Board are moving water users in these municipalities and parts of Carbon County into agreement(s) on water use that are – as proposed – NOT IN THE BEST INTERESTS of concerned users.

We demand that other alternative sources of water and water use be examined BEFORE any more negotiations on contracts between the Town of Encampment and the Sierra Madre Joint Powers Board to drill a well, user hook-up, transmission lines, power lines, formation of Joint Powers Boards, advisory committees, or other binding agreement(s) occur(s).

• The JPB appeared to be disappointed and appeared to be in support of proceeding with the negotiations.
• The Mayor excused the JPB and started discussion of the petition.
• Council will put the petition question to a vote by the Encampment residents.
• Councilwoman Claypool dominated much of the discussion presenting her views and findings on the following topics.
  • Petition – she said more signatures were out there and many people were afraid to sign out of fear of retaliation by their employer (Town) or others.
  • Water Rights – she visited the SEO, obtained necessary paperwork, and will personally prepare a petition to the Board of Control to get a permit changed to the Town of Encampment. This will make it so there is only 6 cfs in the North
Fork senior to Encampment. She did not mention petitioning for a change of use.

- Helmer South Well – she determined the USGS, not the SEO, are monitoring this well.
- WWDC funding – Councilwoman Claypool chastised McCarthy for not telling her WWDC funds water treatment rehabilitation projects. She feels WWDC will fund Encampment WTP rehabilitation.
- Councilwoman Claypool wants a separate evaluation of the Encampment WTP. She doesn’t believe the costs prepared by PMPC and wants to have PMPC and another engineering firm prepare independent evaluations of the WTP with cost estimates. She told the audience she didn’t know us (PMPC and Commissioner Steward) well enough to trust what we are telling the Council and doesn’t want to spend a lot of money without additional information. Encampment is willing to pay for both a PMPC study and another study by a Denver firm.
- McCarthy, PMPC, told Council he will discuss ‘conflict of interest’ issues with Chris Abernathy, WWDC, and get info back to Mayor Mc Kinney.
- Councilwoman Claypool’s acquaintance suggested contacting Black & Veatch, Burns & MacDonald and Carollo to see if they are interested.
- PMPC explained to the audience how the Level II got to where it is now. All decisions made to date are based on engineering/scientific and economic studies and analysis.
- A former Mayor wondered how we got from the Encampment Level II 1,600 gpm direct filtration alternative to the much more expensive 250 gpm microfiltration option? Response – changes in technology and EPA regulations.
- Another past town official stated that the existing WTP was outdated before it was completed.

July 15, 2005
- Call from Encampment – Town wants to have a well-advertised public meeting on August 23 (rescheduled to September 15 and ultimately cancelled).
- Written questions are to be submitted one week before the meeting to allow preparation of responses.

July 19, 2005
Meeting with WWDC in Cheyenne
- Discussed the current Encampment project status.
  - WWDC wants to develop the resource and promote regionalization.
  - WWDC has funded parts of both water systems and would like to eliminate their competing for the same funds.
• Authorized PMPC wrap up paperwork for Phase I Tasks 1-7 and prepare a PowerPoint-based presentation for the August 23 meeting.
• End PowerPoint presentation with – WWDC will resume this Level II Study when the two entities have adopted a USE AGREEMENT and PERSONALLY REQUEST RESUMPTION OF THE LEVEL II STUDY.

July 20, 2005
Called Encampment - WWDC will pay for an additional detailed presentation but will not pay for a more in-depth study of the WTP.

September 8, 2005
• Encampment Council meeting
  • Large turnout – 100+ people in Opera Hall
  • Discussed the EPA Compliance Schedule with the council.
    • Many questions from the audience
    • Councilman Dickinson asked why I prepared the draft compliance schedule – told him I offered to prepare a draft for the Town Attorney because he had not worked with the EPA before.
    • Some discussion of pilot plant study – Council members Claypool & Dickinson questioned the need for a pilot plant study because the EPA Administrative Order didn’t specifically mention or require one. Council decided to not pursue lining up a pilot plant for the 2006 runoff season.
    • Councilman Dickinson volunteered to write the EPA compliance statement.
  • Former Mayor Terry Priquet, apparently as spokesman for the large crowd, asked the council to decide if they wanted to improve the water plant or go with a well supply. Council member Dickinson or Claypool made the motion to go with the water plant. Motion passed and McCarthy was told this meant the Council wanted the Level II study stopped and wasn’t interested in a well supply and the September 15 presentation was cancelled. This action drew a large applause from the audience.
  • Discussed cartridge filters as a short term means of bring plant turbidity into EPA compliance.
    • Council volunteered Susan Munson to prepare a SLIB MRG grant application with help from PMPC.
    • Discussed disinfection byproduct profiling and potential compliance problems with only cartridge filters.
    • Dickinson, with information from Greg Salisbury, feels the only improvements needed at the WTP is installation of cartridge filters and for $40,000 the Town can satisfy the long term EPA requirements.
  • Discussed the gentleman’s water use agreement with Jim & Janet Herring.
  • Reviewed overlapping water right status and what I thought the questions the BOC would ask.
• Told Council the 3 cfs granted to the Town by Wolford was for a right of way and not for a water right. Councilwoman Claypool had a letter from Alan Cunningham expressing a different opinion (sent this letter to Frank Carr and this didn’t change Frank’s opinion).
• Claypool will prepare a petition to the Board of Control petitioning that the 3 cfs be adjudicated to the Town and 0.84 cfs now being used by Bill Ervine be returned to the Town.
• Council doesn’t want to meet with any of the other interested parties at this time.

September 16, 2005
• Call from Susan Munson
  • Can WWDC modify the Level II scope to look at wells as a backup supply.
  • Apparently some of the council changed their minds and want to get something out of the Level II.
  • Told Susan this is a question for Chris Abernathy

October 4, 2005
• Workshop with Encampment Town Council – Chris Abernathy, WWDC, and PMPC
• Council stated the purpose of the meeting is to discuss options available to the Town with regard to the current Level II Study since the Town has decided to repair the WTP as their primary potable water supply and wants to consider wells as a backup source.
• After much discussion and clarification Mr. Abernathy stated that the Council can request a Level II scope change and it must be approved by the WWDC. A written request explaining the changes should be sent to Mr. Abernathy, he will then prepare a draft scope and Town representative(s) should present it to the WWDC at a regular meeting. Potential Scope Change items are:
  • Look at well(s) as a backup potable supply.
  • Prepare a detailed design and cost approximation for connecting the water systems.
  • Conduct a more detailed evaluation of the WTP in light of changing EPA regulations and MF technological advancements.
• Much speculation about what the JPB will require to have their system used as Encampment’s backup supply. All agreed that the first task should be a joint meeting with the Encampment Council and the JPB. (Discussion topics will be very similar to those proposed at previous Use Agreement meetings.)
• Defining Use Agreement topics and making some progress on the agreement is essential before Encampment can formulate a plan of action including submitting a Scope Change Request to WWDC.
• Ball is in Encampment’s court – they need to decide how they want to proceed and then take appropriate action, presumably starting discussions with the JPB will be the first step.

October 18, 2005 – Telcon with Susan Munson & relayed information to Chris
• 10/13/05 Encampment council meeting.
  • Voted to continue with Level II and request a scope change to include updating the 1997 and 2002 WTP estimates and determining costs for the connection to the JPB system.
  • Council is still discussing the material to go in the WWDC request letter.
  • Meeting with the JPB is being arranged.
  • No word from EPA on Compliance Schedule.

February 9, 2006 – Telcon w/ Abernathy
• If Encampment wants to request WWDC to modify the existing study it needs to be by resolution and received by Feb 17 for the March meeting and the drop dead date is by April 20 for the May 12 meeting.

April 13, 2006
Encampment voted to discontinue the Level II Study. Letter of Council action received by WWDC on April 20, 2006.

ENCAMPMENT - RIVERSIDE AREA WATER SUPPLY STUDIES
Following is a listing of recently completed water supply studies in the Encampment-Riverside area. In 1980, Riverside was served by individual wells and Encampment was served by surface water diversion and treatment

1982 - 1984 WWDC-funded study by HNTB for Encampment:
  - Insufficient surface water to meet future needs due to low-flows in river and downstream senior rights.
  - Treatment capacity inadequate for present or future needs.
  - Recommended groundwater development to replace surface source.
  - Groundwater exploration on north side of town found low production.
  - Recommended groundwater development as supplement.

1982 WWDC-funded study by Simons & Li for Riverside
  - Recommended conversion from individual wells to a municipal groundwater system.
  - Identified a favorable groundwater-development site in town and completed 17 gpm production well. This site was investigated further with the drilling
of Riverside Well No. 5 during the subsequent 1989-1992 study, with unfavorable results.

1989-1992 WWDC-funded study by PMPC (w/JMM) for Riverside:
- Inadequate water from individual wells; contamination issues
- Rejected surface water system due to water rights and low-flow concerns
- Exploratory drilling in and east of Town identified current wellfield.
- Well No. 4 and 6 successfully completed.
- Two aquifers: shallow and deep
- Shallow-aquifer predictions based on peak use of 180 gpm (i.e. Riverside + Encampment demand)
- 6 ft. of drawdown impact projected at 1/4 mile
- 3 ft. of drawdown impact projected at 1 mile
- No test impact (7 days) from deep well (No. 6) on shallow wells at 300 ft. distance.

1993 JPB Groundwater System Completed

1997 WWDC-funded study by PMPC (w/ Weston) for Encampment
- Insufficient surface water to meet future needs due to low-flows in river and downstream senior rights.
- Treatment capacity inadequate for present or future needs.
- Recommended groundwater development to augment surface source.
- Use of JPB wellfield: “Hydrologic impacts ... to other users by the joint use of local groundwater resources by Encampment and JPB will be minimal.”
- Investigated aquifer storage and recovery (ASR) project.
- Delineated watershed contamination issues

1997 Encampment raw water system enlargement, WWDC level III project.

1998 Encampment water meter installation – SLIB funding

2002 JPB-funded study by Wester-Wetstein
- Written to address streamflow interference concerns; conclusions:
  - No impact from Well No. 6
  - Possible long-term impact from Well No. 4

2002 Encampment - TST schematic cost approximation for water plant upgrade with micro-filtration

2002 Encampment raw water transmission line, WWDC Level III, $800,000 project cost.
2003  Encampment-funded study by Hinckley
  - Evaluated ground water potential of the area north of Encampment/Riverside
  - Identified potentially favorable area for further exploration
  - Concluded other areas unlikely to be superior to a JPB tie-in

2004  WWDC-funded study by PMPC (w/ Hinckley) for Encampment and JPB
  - Focus on JPB wellfield
  - No historical long-term drawdown in area
  - Adequate productivity to meet project combined demand
  - Minimal interference potential
  - Study was terminated prior to completion at Encampment’s request

WORK SUMMARY
Work was progressing on several Phase I tasks of the Level II Study when the project was terminated. Following is a summary of the work accomplished.

Task 1. Scoping Meeting, Project Meetings
A scoping meeting was held on July 29, 2004 in the Encampment Town Hall to familiarize the sponsors and the public with the scope of the project, and to obtain input from affected parties. Project sponsors were informed of the project’s status at their regular meetings and additional meetings were held as needed during the project. Meetings are listed in the Project Chronology (above) and Job Diary (in Project Notebook). Scoping meeting, Encampment Council meeting and JPB meeting minutes are included in the Project Notebook.

Task 2. Projection of Long Term Needs
Water Demands  Encampment and JPB water use records were examined to identify consumption amounts and usage trends. Projected long-term needs are based on population projections and projected water use tempered with the short term usage information of Encampment’s recently installed water meters and the expected decrease in potable water use for irrigation if the Town’s untreated water irrigation system is expanded.

Population  DA&I population projections show a slight population decrease for both Encampment and Sierra Madre. The community is actively pursuing economic development to maintain the current population and achieve a modest population increase. A 1% population growth rate is used for developing the projected water needs through 2030.
Task 3. Evaluation of Sierra Madre JPB’s Well Production Records

The results of our evaluation of the Sierra Madre wellfield were presented in the Technical Memorandum dated January 10, 2005, which was provided as part of the February 2005 Interim Report on the project. The main conclusions of that report and a compilation of recommendations for future wellfield operations are summarized here.

1. The installed pumping capacity and aquifer productivity of the existing JPB wellfield is sufficient for average and peak-day demands far in excess of those generated by the current service area. (At some point in the future, it may be desirable to re-develop Well No. 4 to restore the original productivity.)

2. The quality of groundwater pumped from the wellfield is well within applicable EPA drinking water standards for community water supplies.

3. There is no evidence of a long-term decline in aquifer water levels in and around the wellfield.

4. Record-keeping for the wellfield would provide a better history with which to assess changes over time by:
   A. Measuring static (non-pumping) water levels at least monthly, in a systematic manner with respect to pumping periods, e.g. after at least 30 minutes of recovery from pumping, including notation of pumping status with water-level records (i.e. recovered or pumping water level).
   B. Making at least twice-a-year measurements of pumping water levels, e.g. after a set 30 minutes of continuous pumping, and including notation of discharge rate.
   C. Calibration of airlines to sounder-measured water levels and maintenance of airline fittings to ensure accurate readings.
   D. Recording of all “raw” data used to calculate water levels, i.e. the actual airline pressure readings, along with the calculated values.

Task 4. Evaluate Encampment’s Surface Water Facilities

The WTP evaluation performed in the 1997 Encampment Level II Study and the 2002 TST schematic cost approximation for a WTP upgrade with membrane filtration were reviewed and cost approximations updated. Annual operation and maintenance costs were developed and a life cycle cost determined for comparison with the JPB groundwater supply alternative.

Task 5. Interim Report

The Interim Report and supporting Technical Memorandum were presented to the Sponsors and WWDC at a special joint sponsors meeting on February 8, 2005. A revised Technical Memorandum (with 4/27/2007 revisions) is included in the Project Notebook.
Task 6. System Development and Operating Plan
A system development and operating plan was being developed in concert with the use agreement anticipating that a well supply would be developed for Encampment. Workshop discussion topics included system and well field operation, allocation of administration responsibilities, operating costs, new infrastructure ownership and water rates/fees.

Several Phase II tasks were conceptually addressed in this task because the Sponsors wanted some idea of how the completed system might look and operate. Completion of these tasks was scheduled to occur in Phase II after successful completion of the test well.

Raw Water Expansion - If a successful well were completed and groundwater was determined to be a viable potable water supply for both co-sponsors, Encampment would like to utilize their surface water right (6 cfs) to expand their raw water irrigation service for residents not currently being served, as well as to expand this system into the JPB service area.

Expansion of a raw water irrigation system into Riverside was opposed by the Mayor of Riverside during a joint Use Agreement workshop. Work on this task was suspended until later in the study.

Distribution System Connection – This was another Phase II task that was conceptually discussed during the Operating Plan/Use Agreement workshops. It involved pumping from the JPB system into the Town system and allowing backflow through a pressure reducing valve into the JPB system.

Economic Analysis And Project Financing This is a Phase II task that was conceptually discussed during the Operating Plan/Use Agreement workshops. Conceptual costs were prepared and life-cycle costs developed and discussed. Potential funding sources and their individual programs were also presented for each sponsor. Encampment’s system is older and will need improvements in the near future; the JPB system is relatively new and has cash reserves.

Task 7. Use Agreement
As discussed in Task 6, special meetings and workshops were held to pursue a joint use agreement. An agreement outline was prepared using a recent Town of Sinclair/City of Rawlins Agreement as a model. Agreement items discussed included Encampment becoming a member of the JPB, user rates and fees, connections between the two water systems and other capital improvements. Distrust of information provided in preparing the study along with previously mentioned water rights concerns prevented any real progress in developing a Use Agreement.
The Use Agreement and Operating Plan must be accepted and agreed upon by the Encampment Town Council and the Sierra Madre Water and Sewer Joint Powers Board and be approved by the WWDC prior to the commencement of Level II, Phase II work.

CONCLUSIONS AND RECOMMENDATIONS

- The Town of Encampment and the JPB may want to pursue future projects through the WWDC programs. There is an open path to WWDC funding but there needs to be an agreement in place between both systems as a minimum good faith effort to avoid WWDC funding a potential regional project only to find out there isn’t regional support.
- Encampment – Formalize the "gentleman’s agreement" with the Herrings to provide water from the North Fork to the Town during low flow periods.
- Encampment – Continue expanding the separate raw water irrigation system.
- JPB – Implement well monitoring and record keeping procedures presented in Task 3.
- JPB – Develop a wellhead protection plan
- JPB – Contact adjacent well owners about properly abandoned wells.
- Both – Install a permanent connection between the Town and JPB distribution systems for emergency use and to provide system redundancy.