CITY OF ELLENSBURG, WASHINGTON

Minutes of Council Meeting, Special Session
Date of Meeting September 9, 2002
Time of Meeting 6:30 p.m.
Place of Meeting Council Chambers, 102 North Pearl Street

Councilmembers Present: Barry, Collins, Lillquist, Perrie, Savidge, Sowards and Mayor Bassett

Others present were City Manager Barkley; Public Works Director Akers; Assistant Public Works Director Bollinger; Deputy Clerk Keno; and Chris Pitre of Golder Associates.

The purpose of the special meeting is to review the draft Strategic Water Plan prepared by Golder Associates and to discuss the plan’s recommendations.

STRATEGIC WATER PLAN

Chris Pitre, Golder & Associates, presented an overview of the Strategic Water Plan prepared for the City of Ellensburg.

The City’s existing water supply system has an installed instantaneous capacity of approximately 6,000 gallons per minute (gpm) with all wells operational. Actual capacity may be temporarily less than this as a result of interference between wells, seasonal variation in groundwater levels, or individual wells may be out of operation for maintenance or other reasons. Current peaking demand is approximately 6,000 gpm for short periods of time (e.g., days). The City also has two above ground storage reservoirs with a total capacity of five million gallons. During short periods when peaking demand is larger than operational production capacity, demand is met by drawing down storage reservoirs.

There is currently very little redundancy in the City’s water supply. Should any of the existing wells go out of commission for an extended period of time, water use restrictions will likely be required during peak summer demand periods. The minimum recommended system redundancy is equivalent to the largest single source. The City’s single largest source is the City Wells with an installed capacity of 3,000 gpm.

The City has groundwater rights for an instantaneous rate of approximately 10,000 gpm. The City’s installed capacity is less than this for several reasons, including the fact that the wells have diminished in production capacity from when they were first installed. Additional capacity is needed to maintain system reliability and redundancy. There is permitted capacity in water rights to install this additional capacity.

The City has groundwater rights for an annual volume of 10,071 acre-feet per year (AF/yr). Approximately 50% of this annual quantity is used to meet current demand. The annual quantity of all
rights cannot currently be exercised without additional infrastructure (e.g., new wells). The City also
has surface water rights for an annual quantity of approximately 11,000 AF/yr in addition to
groundwater rights. These surface water rights are associated with a contract with the Bureau of
Reclamation through the Kittitas Reclamation District, the Naneum water right claim, and share
holdings in the Ellensburg Water Company.

The consultant presented two short term options for expanding the current installed capacity of the
City’s water supply system that would not require processing of water right changes. These options
are: 1) optimization of existing wells; and 2) installation of additional points of diversion for the Mount
Stuart Well.

**Well Optimization:**

The City’s well yields have dropped significantly over the years which is typically attributable to a
function of well and pump efficiencies, and/or dropping aquifer water levels. These factors can be
addressed through well redevelopment or modification of pump specifications. Candidates for
redevelopment (and associated potential increase in well yield) include the Whitney (400 gpm) and
Mount Stuart (800 gpm) Wells.

Pump specifications for the Mount Stuart, Kiwanis and Memorial Wells should be reviewed to ensure
that pump curves and performance are consistent with current conditions. Results of the review may
identify the need for pump rehabilitation or new pumps.

**Mount Stuart Well:**

The Mount Stuart Well is permitted for an instantaneous quantity of 1,700 gpm. The well had a
capacity of approximately 1,600 when installed in 1977, but currently produces approximately 750
gpm. Some of the lost capacity may be restored by well development. Full capacity can also be
restored by installation of a second well as an additional point of withdrawal under this water right. If a
second well is installed within the same ¼ -¼ section as the original well, water right permitting
requirements consist of simple notice to Ecology, and no application is required.

If a new well is installed under the Mount Stuart water right, the original well can continue to be
maintained and used as long as operation of the two wells do not exceed the total instantaneous
quantity of the water right at any moment, and the annual quantities of the two wells combined do not
exceed that of the original right. The Mount Stuart Well is located in the southwest corner of the
permitted area of the well. By locating a new well under this water right in the northeast corner of this
area, operational interference between the two wells will be minimized. The Mount Stuart Elementary
School is a recommended site for a new well.

Mid- and Long-Term Options to increase the City’s water system capacity include: 1) City Wells; and
2) Well Development in Northeast Ellensburg.
City Wells:

The City Wells are currently being evaluated as potentially being under the influence of surface water. If this is determined to be the case, treatment in compliance with federal surface water treatment rules may be required if operation of the wells is to be continued as currently configured. This may cost approximately $8 million dollars if treatment capacity equivalent to the full instantaneous capacity of the water right is installed.

Instead of developing surface water treatment plant facilities, the City Wells water right may be transferred to deeper, protected portions of the aquifer system. The consultant suggests the City Wells water right be transferred to approximately four or five wells, including the Kiwanis and Whitney Wells and approximately two or three new wells along the alignment of the transmission main extending from the current location of the City Wells to the City of Ellensburg. These wells may be permitted as points of withdrawal under the City Wells water right. The cost of well installation may be approximately $750,000 per well, for a total cost of $3 million dollars for four new wells, including a new northeast well.

Application for a change in the point of withdrawal must be submitted by the City and approved by Ecology. It is assumed that these change applications would be processed through the Kittitas County Water Conservancy Board. Change applications may take six months to a year to be processed. Installation of new wells may be accomplished over several years.

Well Development in Northeast Ellensburg:

Development of a new groundwater source in the northeast corner of the City of Ellensburg water service area will improve operational balance, including improved consistency in fire flow and system pressure, decreased need for additional storage capacity, and improved flushing of the distribution system. The exact well location has not been determined.

Permitting of this well may be accomplished through the transfer of a portion of surface water rights (e.g., the Naneum surface water right) to groundwater, or by making the well a supplemental source to existing surface water rights such as of the Airport or City Wells water rights. The cost of this new well is included in the estimate of $3 million dollars for four wells listed above.

Well siting studies are recommended before proceeding with installation of new wells, including evaluation of potential aquifer productivity and wellhead protection concerns. The exact location and number of wells have not been determined and property acquisition may be necessary.

The consultant explained the Aquifer Storage and Recovery (ASR) program. The natural environment of the Kittitas Valley is well suited for such a program. The City also has several pre-requisite components of an ASR program, including surface water rights to provide water for recharge (e.g., the Naneum water right claim). Although development of an ASR program is not recommended at this time, future conditions may warrant doing so. Primary requirements are water supply and rights and
good aquifer storage. Secondary requirements are a transmission system, recharge wells and a surface water treatment plant. Ellensburg has the primary requirements.

In summary, the steps to proceeding with the Plan with Council approval include:

• Informal discussions with the Department of Ecology (DOE).

Prioritize activities
Well siting studies
Optimization of Kiwanis and Whitney Wells
Notify DOE and drill second Mt. Stuart Well
Change applications to Kittitas County Water Conservancy Board
Allow staff and the consultant to go to Department of Ecology for informal discussions based Lillquist on the principals in this document.

Staff will request prioritization of activities from Council once the informal discussions with the DOE are completed. Outside assistance will be needed for the well-siting studies.

In answer to Council inquiry, informal discussions with the DOE will take approximately one to two months. Staff advised some monies are left over in the Water Construction Fund that could potentially be used for a replacement well or additional Mount Stuart Well. A water utility rate increase will be needed to fund a significant portion of the Strategic Plan’s recommendations.

Vote on motion. Affirmed

**ADJOURN** Adjourn at 8:50 p.m. Perrie

Affirmed

Mayor

ATTEST:

City Clerk