

MINUTES OF THE CITY COUNCIL OF LAUREL

April 1, 2008

A regular meeting of the City Council of the City of Laurel, Montana, was held in the Council Chambers and called to order by Mayor Ken Olson at 6:30 p.m. on April 1, 2008.

COUNCIL MEMBERS PRESENT: Emelie Eaton Doug Poehls
 Kate Hart Mark Mace
 Gay Easton Chuck Dickerson
 Alex Wilkins Norm Stamper

COUNCIL MEMBERS ABSENT: None

OTHER STAFF PRESENT: Mary Embleton Bill Sheridan
 Sam Painter Jan Faught

Mayor Olson led the Pledge of Allegiance to the American flag.

Mayor Olson asked the council to observe a moment of silence.

MINUTES:

Motion by Council Member Eaton to approve the minutes of the regular meeting of March 18, 2008, as presented, seconded by Council Member Mace. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

CORRESPONDENCE:

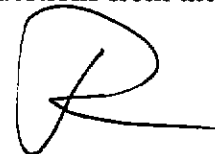
Montana Department of Commerce: Letter of March 14, 2008 regarding Treasure State Endowment Program.

PUBLIC HEARING:

- **Public hearing for TSEP Water Grant application**

Mayor Olson asked Public Works Director Bill Sheridan to introduce the item for the council. Bill stated that the city is considering improvements to the water system and the water treatment plant. He then introduced Pat Murtagh of Great West Engineering, who is preparing the application for the Treasure State Endowment Program (TSEP) grant to help fund the proposed improvements.

Pat asked that all present, including the council members, sign the attendance sheet to be used for the grant application. Pat also distributed hand-outs, which are attached to these minutes. Pat explained the city is planning to apply for a \$625,000 TSEP grant, which is the maximum allowed according to the city's current water rates. If the city's rates were higher, then the maximum could go up to \$750,000 in TSEP grants. The city will also apply for a \$100,000 DNRC grant, just under \$2,000,000 in loans, and will contribute \$500,000 from reserves. The price tag for these improvements would mean the city would have to approve a \$4.66/user/month water rate increase. This increase would not go into effect until the funding is awarded in 2009. This would be the first rate increase in 4 years, which computes to roughly 1½ % per year, which is very good. The scope of the project would be to bring the water treatment plant up to a capacity to meet a peak-day demand, replace cast iron pipe, surge control at the plant, protect the upper zone pressure with a permanent generator at the booster station, replace 52-year-old pumps at the plant, and provide for hazard safety by improving conditions in the chlorination system. Pat compared his recommendations to the original plan's recommendations. He also explained some of the issues to be corrected with his proposal. He then reviewed another comparison sheet which compares the rate increase he is proposing (\$4.66) versus the rate increase from the original study (\$.57). Granting agencies want to see efforts by cities to raise the rates in order to maintain and improve the utility system. More explanation of the hand-outs followed. Pat then asked for questions from the council.



Council member Dickerson asked when the \$4.66/user/month proposed rate increase becomes a realistic figure to the voters. He doesn't want to have to go back to the voters and ask for more, due to increased costs and change orders. Pat stated that he is confident of the figures. He has calculated a 20% contingency factor, which is higher than normal, and a 2010 inflationary factor. Council member Dickerson then asked for a timeframe for this project. Pat outlined the application deadline is May of 2008, and then they would begin the design phase of the project, even before the grant was awarded, which would be in the spring of 2009. He would like to see construction in late 2009 and early 2010.

Council member Mace asked if the city would have been eligible for a higher grant award (\$750,000) if the city would have done more frequent rate increases. The last rate increase was in 2005. Pat replied that each city has a "target rate" which is figured by the Department of Commerce based on median household income. Laurel users should be paying about 2.34% of their median household income for water and sewer, which is about \$63.00 for water. This puts Laurel at 125% of the target rate, which makes us eligible for the \$625,000 grant level. If the city was at 1½ times the target rate, then it would be eligible for the full \$750,000 grant.

Council member Poehls asked when the city would know if the city is awarded the grant. Pat stated that the ranking of the applications is completed by the end of September, 2008. Then the legislature meets in January, 2009. Pending the outcome of the session, the grant awards are usually announced the following April, with the funds being available by July 1, 2009.

Mayor Olson stated that there is a resolution to apply for the TSEP grant and other funding on tonight's agenda. This includes a commitment for the rate increase. He stressed that it is important for the council to recognize this issue.

Director of Public Works Bill Sheridan stated that Pat is an excellent engineer, and has impressed him by recognizing the immediate needs of the system, such as the pumps. Pat also commented that none of these improvements are for new development. The improvements are necessary for the existing system and its users.

Mayor Olson then read the rules governing the public hearing, and opened the public hearing.

He then asked three times for any proponents, supporting the item. There were none.

He then asked three times for any opponents, not supporting the item. There were none.

Mayor Olson closed the public hearing.

CONSENT ITEMS:

- **Claims for the month of March 2008 in the amount of 134,016.00.**
A complete listing of the claims and their amounts is on file in the Clerk-Treasurer's Office.
- **Approval of Payroll Register for PPE 03/23/2008 totaling \$136,263.96.**
- **Receiving the Committee Reports into the Record.**
 - Budget/Finance Committee minutes of March 18, 2008 were presented.
 - Emergency Services Committee minutes of March 24, 2008 were presented.
 - Council Workshop minutes of March 25, 2008 were presented.
 - Laurel Airport Authority minutes of February 26, 2008 were presented.

The mayor asked if there was any separation of consent items. There was none.

Motion by Council Member Mace to approve the consent items as presented, seconded by Council Member Dickerson. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

CEREMONIAL CALENDAR: Recognition of Assistant Ambulance Director, Jay Martin

Mayor Olson stated that he has known and interacted with Jay Martin for quite some time. He has been privileged to see his professionalism in varying displays at work and in the community. He asked for Jay Martin and Ambulance Director Jan Faught to come forward. Jan presented Jay with a plaque containing a photo of Jay in action, during a very serious car accident, involving a foreign exchange student. Mayor Olson stated that volunteerism is a big part of serving the needs of a small community. He appreciates Jay's efforts in this regard, and described various instances. Mayor Olson emphasized that volunteerism is the core of what American is all about. He continued by outlining Jay's dates of service: December 5, 1994 – started as a reserve ambulance attendant; May 1, 1995 – became an ambulance attendant; April of 1999 – appointed as Assistant Ambulance Director; March 11, 2008 – resigned, for a total of 13 years, 3 months of volunteer service. He responded to a total of 872 calls. His first call was a seizure, and was memorable. Mayor Olson then presented Jay Martin a certificate of recognition, and thanked him for his dedicated service.

REPORTS OF BOARDS AND COMMISSIONS:

- **Yellowstone County Public Works Department: TSEP Grant for repair of the Davis Creek Bridge**

Mayor Olson introduced Rebekah Wales of the Big Sky Economic Development Authority. Rebekah told the council that one of the duties of the BSEDA is to assist Yellowstone County with grant applications and programs. The Treasure State Endowment Program grants are awarded every two years. This year, Yellowstone County focused their application efforts on the replacement of two bridges in the county. Both are below the 50% sufficiency rating. One of the bridges is over the Billings Bench Water Association canal near Shepherd, and the other one is on the Davis Creek Road, approximately 4 miles south of Laurel. The purpose for this presentation is to inform the public and perform outreach for the grant application. She also asked everyone in attendance to fill out the sign-in sheets. One of the rating criteria of the TSEP application is the level of public involvement and outreach. The bridge is planned for replacement, and Rebekah then introduced Bill Oakey, the engineer for the project. He explained the sufficiency rating process: anything below a 50% rating needs to be replaced, and the Davis Creek Bridge is rated at 47.5%. The state inspects all bridges over 20 feet in length, every 2 years. He explained that because of the underpass south of town, which is 14'1" high, a lot of heavy/tall truck traffic gets re-routed by the state around this underpass by turning off the highway, on to Byam Road, and over the Davis Creek Bridge to the Spring Creek Road, and on to Billings. However, the bridge is rated for only 13 tons. There is no expense to the City of Laurel. It will be funded by the Yellowstone County Road and Bridge fund. The county has already replaced the bridge on Valley Drive. This proposed bridge replacement will become a giant concrete culvert. Mayor Olson thanked them for their presentation.

AUDIENCE PARTICIPATION (THREE-MINUTE LIMIT): None.

SCHEDULED MATTERS:

- **Confirmation of Appointments.**

Assistant Director of the City of Laurel Volunteer Ambulance Service:

Mayor Olson appointed John Kuper as the Assistant Director of the City of Laurel Volunteer Ambulance Service.

Motion by Council Member Poehls to approve the Mayor's appointment of John Kuper as the Assistant Director of the City of Laurel Volunteer Ambulance Service, seconded by Council Member Dickerson. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0. Ambulance Director Jan Faught introduced John Kuper, along with his wife and daughter, to the council. Mayor Olson thanked him for agreeing to serve as the Assistant Director.

Mayor Olson announced that Resolution No. R08-27 (item d.) will be pulled from the agenda.

- **Resolution No. R08-25: A resolution of the City Council authorizing the submission of a TSEP, DNRC Grant and DWSRF Loan Application and to commit matching funds on behalf of the City of Laurel for improvements to the city's water treatment facility.**

Motion by Council Member Hart to approve Resolution No. R08-25, seconded by Council Member Eaton. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

- **Resolution No. R08-26: A resolution approving the attached Amendment No. 1 to Task Order No. 1 for the on-call engineering services provided by Great West Engineering to the City of Laurel.**

Motion by Council Member Dickerson to approve Resolution No. R08-26, seconded by Council Member Stamper. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

- **Resolution No. R08-28: A resolution authorizing the Mayor to sign an agreement with the Montana Department of Transportation to provide for street cleaning on the primary road system in the City of Laurel.**

Motion by Council Member Stamper to approve Resolution No. R08-28, seconded by Council Member Hart. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

- **Resolution No. R08-29: Resolution approving the revised Laurel Volunteer Ambulance By-laws.**

Motion by Council Member Wilkins to approve Resolution No. R08-29, seconded by Council Member Poehls. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

- **Resolution No. R08-30: A resolution to modify the previously approved compensation levels for the Volunteer Ambulance Service.**

Motion by Council Member Eaton to approve Resolution No. R08-30, seconded by Council Member Hart. There was no public comment. Under council discussion, Council Member Eaton stated that this resolution clearly shows that the volunteers don't do this for the pay. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

- **Resolution No. R08-31: Resolution of the City Council to create a seasonal position called the Aquatics Manager and to adopt a job description for such position.**

Motion by Council Member Mace to approve Resolution No. R08-31, seconded by Council Member Poehls. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.

ITEMS REMOVED FROM THE CONSENT AGENDA: None.

COMMUNITY ANNOUNCEMENTS (ONE-MINUTE LIMIT): None.

COUNCIL DISCUSSION:

- Review of Monthly Reports: Police, Fire, Ambulance, and Code Enforcement: None.

Council member Dickerson requested that the following issues be placed on the next workshop agenda: status report on the right hand turn lane and no 25 mph speed limit signs on S. 1st Ave., and the condition of the street under the underpass.

UNSCHEDULED MATTERS: Council member Dickerson reminded the council that the next Centennial Celebration Committee meeting is this Thursday at 7 p.m. Council member Mace stated that the events for the Centennial Celebration will mean extra work for city employees, which means extra budgetary concerns. Mayor Olson added that the council may want to declare their support for the centennial activities and events.

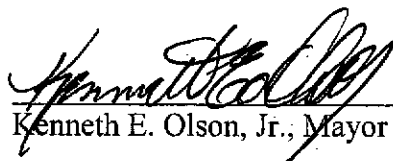
ADJOURNMENT:

Motion by Council Member Poehls to adjourn the council meeting, seconded by Council Member Hart. There was no public comment or council discussion. A vote was taken on the motion. All eight council members present voted aye. Motion carried 8-0.


There being no further business to come before the council at this time, the meeting was adjourned at 7:28 p.m.


Mary K. Embleton, Clerk-Treasurer

Approved by the Mayor and passed by the City Council of the City of Laurel, Montana, this 15th day of April, 2008.


Kenneth E. Olson, Jr., Mayor

Attest:


Mary K. Embleton, Clerk-Treasurer

**HEARING OF APRIL 1, 2008
FOR APPLICATIONS TO:**

- THE TREASURE STATE ENDOWMENT PROGRAM (TSEP) FOR \$625,000
- THE DNRC RENEWABLE RESOURCES GRANT AND LOAN PROGRAM (DNCR)
FOR \$100,000
- DRINKING WATER SRF PROGRAM FOR A LOAN OF UP TO \$1,942 MILLION
 - RESERVE CONTRIBUTION OF \$500,000

COST PER USER:

\$4.66/Month for an average home.

PURPOSE OF PROJECT:

- Bring the Water Plant up to needed firm capacity to meet peak day demands
- Improve treatment by providing chemical mixing
- Protect deteriorating City piping by including surge controls at the high service pumps, and providing approximately \$1/2 million in pipeline replacements
- Protect community in the higher pressure zone from back-flow and contamination by providing a permanent generator at the booster station (no storage exists)
- Replace 52-yr-old high service pumps
- Provide hazard safety by improving conditions at the chlorination system

SCOPE:

ALL IMPROVEMENTS IN THE FIRST PHASE OF THE FACILITY PLAN, INCLUDING:

Reconstructing the Filters

Pipeline replacements

Surge Control (but suggest using VFDs in lieu of control valves)

SOME SECOND PHASE IMPROVEMENTS, INCLUDING:

Low-lift Pump to Clearwell

Generator at the Booster Station (but make it automatic switchover and permanent)

ADDITIONAL HIGH PRIORITY ITEMS INCLUDED:

Replace 52-yr-old pumps at plant

Provide additional VFDs

Provide a Flash Mixer

Clear debris in the line from the sedimentation basins to the filters

Improvements to the chlorination system.

PERCENTAGE OF TOTAL COST FOR EACH ITEM OF CONSTRUCTION

ALL IMPROVEMENTS IN THE FIRST PHASE OF THE FACILITY PLAN, INCLUDING:

Reconstructing the Filters	34.6%
Pipeline replacements	17.8%
Surge Control (but suggest using VFDs in lieu of control valves)	4.7%

SOME SECOND PHASE IMPROVEMENTS, INCLUDING:

Low-lift Pump to Clearwell	9.2%
Piping for Low-lift Pump	2.2%
Generator at the Booster Station (but make it automatic switchover and permanent)	3.4%

ADDITIONAL HIGH PRIORITY ITEMS INCLUDED:

Replace 52-yr-old pumps at plant	15.2%
Provide additional VFDs	8.4%
Provide a Flash Mixer	2.5%
Clear debris in the line from the sedimentation basins to the filters	0.8%
Improvements to the chlorination system.	1.2%

UPDATE INCLUDES ADDITIONAL VFDs, EARLY MIXING, PERMANENT GENERATOR AT BOOSTER STATION

Modified Phase 1 Water System Improvements			
With \$500k Cash Contribution from the City			
No.	Units	Cost/Unit	Total
2 ea		\$190,000	\$380,000
1 ea		\$150,000	\$150,000
1 ea		\$190,000	\$190,000
1 ea		\$40,000	\$40,000
2 ea		\$150,000	\$300,000
2 ea		\$150,000	\$300,000
3 ea		\$50,000	\$150,000
1 ea		\$35,000	\$35,000
1 ea		\$45,000	\$45,000
1 LS		\$22,000	\$22,000
Direct Construction Cost			\$1,397,000
Multiplier to Project to 2010 (1.28)			\$1,788,160
Direct Construction Cost 2010			\$1,788,160
Contingencies (20%)			\$357,632
Construction Cost with Contingencies Projected to 2010			\$2,145,792
Design and Construction Admin.			\$423,822
Grant Administration			\$43,029
Total Construction Cost			\$2,188,821
Other Project Costs:			
Leak Detection			
PER Amendment			
Grant Writing			
Hydraulic Model			
Total Project Cost			\$3,016,523
Financing			
Grant-TSEP			\$25,000
Grant-DNRC			\$100,000
Cash from City Water Revenue Fund			\$500,000
Loan			\$1,780,523
Loan Reserves at 7.5%			\$139,288
Bond Counsel at 1%			\$17,916
Loan Total			\$1,937,727
Payment with multiplier			\$193,802
Additional Collections Required			\$174,752.53
EDUs			\$126
Payment per EDU/month			\$4.96
Note that a significant portion of the above stays with the City. This budget allows City to build a reserve at \$34,851 per year plus \$134,289 is included in a restrictive reserve			

Modified Phase 2 Water System Improvements			
With \$500k Cash Contribution from the City			
No.	Units	Cost/Unit	Total
1 ea		\$421,000	\$421,000
One Year of pipeline replacement			
Phase 2, less generator, cont. & emp. (File and Std Basins, Mixing structure)			\$4,211,889
Total			\$4,632,889
Direct Construction Cost			\$4,370,889
Multiplier to Project to 2010 (1.28)			\$5,594,796
Direct Construction Cost 2010			\$5,594,796
Contingencies (20%)			\$1,119,155
Construction Cost with Contingencies Projected to 2010			\$6,713,951
Design and Construction Admin.			\$1,125,472
Grant Administration			\$115,652
Total Construction Cost			\$7,854,775
Financing			
Grant-TSEP			\$25,000
Grant-DNRC			\$100,000
Cash from City Water Revenue Fund			\$500,000
Loan			\$6,229,775
Loan Reserves at 7.5%			\$466,709
Bond Counsel at 1%			\$66,228
Loan Total			\$6,762,712
Payment with multiplier			\$617,089
Additional Collections Required			\$546,374.15
EDUs			\$126
Payment per EDU/month			\$17.23
Note that a significant portion of the above stays with the City. This budget allows City to build a reserve at \$123,276 per year plus \$466,709 is included in a restrictive reserve			

Does include:
 All PER phases 1 and 2
 3 years of Pipe Replacement
 Two new HS pumps with VFDs
 Chlorination system improvements
 Low Lift pump P#1 instead of Ph. 3
 Two additional VFDs at HS Pumps
 Early mixer
 Permanent Generator at BS
 Earlier rate increase helps grant
 Earlier improvements allow plant
 to have peak day firm cap in 2010

For Comparative Purpose:
 Total Increase
 \$21.89
 Could be lessened possibly with developer fees, Congressional funding, infrastructure reserves, etc.

Phase 1 from Original PER Water System Improvements, Initiated to 2010			
With \$500k Cash Contribution from the City			
No.	Units	Cost/Unit	Total
1 ea		\$190,000	\$190,000
1 ea		\$820,000	\$820,000
One Year of pipeline replacement			
Rehab Existing Dual-Media Filters			\$160,000
High Service Pump Control Valves (instead of VFDs)			\$81,111
Direct Construction Cost			\$1,271,111
Multiplier to Project to 2010 (1.10)			\$1,398,222
Direct Construction Cost 2010			\$1,398,222
Contingencies (20%)			\$279,644
Construction Cost with Contingencies Projected to 2010			\$1,677,866
Design and Construction Admin.			\$184,804
Grant Administration			\$20,465
Total Construction Cost with Contingencies to 2010			\$1,883,135
Other Project Costs:			
Leak Detection			
PER Amendment			
Grant Writing			
Hydraulic Model			
Total Project Cost			\$2,145,792
Financing			
Grant-TSEP			\$25,000
Grant-DNRC			\$100,000
Cash from City Water Revenue Fund			\$500,000
Loan			\$1,500,792
Loan Reserves at 7.5%			\$112,433
Bond Counsel at 1%			\$21,867
Loan Total			\$1,635,092
Payment with multiplier			\$153,258
Additional Collections Required			\$131,345.17
EDUs			\$126
Payment per EDU/month			\$9.57
Note that a significant portion of the above stays with the City. This budget allows City to build a reserve at \$4,289 per year plus \$16,403 is included in a restrictive reserve			

Phase 2 from Original PER Water System Improvements + Low Lift Pump, 2 HS Pumps, C12 Sys.			
With \$500k Cash Contribution from the City			
No.	Units	Cost/Unit	Total
2 ea		\$469,000	\$938,000
Two Years worth of pipeline replacement			
Phase 2 (generator at Cherry Hills, Phase and Std Basins, Mixing structure) less cont'd			\$4,238,889
Total			\$5,176,889
Direct Construction Cost			\$4,677,889
Multiplier to Project to 2010 (1.28)			\$5,987,817
Direct Construction Cost 2010			\$5,987,817
Contingencies (20%)			\$1,202,812
Construction Cost with Contingencies Projected to 2010			\$7,190,629
Design and Construction Admin.			\$1,324,089
Grant Administration			\$138,795
Total Project Cost			\$8,653,513
Financing			
Grant-TSEP			\$25,000
Grant-DNRC			\$100,000
Cash from City Water Revenue Fund			\$500,000
Loan			\$6,028,513
Loan Reserves at 7.5%			\$454,315
Bond Counsel at 1%			\$70,575
Loan Total			\$6,549,403
Payment with multiplier			\$609,123
Additional Collections Required			\$568,404.14
EDUs			\$126
Payment per EDU/month			\$26.98
Note that a significant portion of the above stays with the City. This budget allows City to build a reserve at \$157,261 per year plus \$609,123 is included in a restrictive reserve			

Does include:
 All PER phases 1 and 2
 3 years of Pipe Replacement
 Two new HS pumps with VFDs
 Chlorination system improvements
 Low Lift pump P#2 instead of Ph. 3
 Early mixer
 Permanent Generator at BS
 Peak Day firm Capacity in 2012

For Comparative Purpose:
 Total Increase
 \$24.53
 Could be lessened possibly with developer fees, Congressional funding, infrastructure reserves, etc.

SUMMARY OF PER UPDATE

Project demands are presented through 2029 instead of 2022 (grant agencies require a 20-year planning period)

Demands for future residences does not include Cenex demands (180 gpcd vs 373 gpcd)

Storage to be calculated based on state criteria and worst-case fire flow

Change the following from priority #2 to #1

- Emergency Generator at the Booster Station (but make it permanent and automatic)
- Mixer (mount at location provided)

Change the following from priority #3 to #1

- Low-lift pump

The following were added to priority #1

- Troubleshooting the pipe and valves between the sedimentation basins and filters
- New VFDs in lieu of control valves at the high service pumps 3, 4, and 5
- New "shared" VFD for 3,500 gpm high service pumps
- Replace the 1956 (oldest) high service pumps with new 2,000 gpm pumps
- Improvements for Chlorine handling

Reasoning for the changes are:

- The permanent generator is recommended since the first minute after a power loss is critical to avoid back-siphoning and infiltration of contamination
- The Mixer is considered necessary for adequate mixing and potentially using both a polymer and a flocculant, which could become necessary if arsenic levels rise. This is relatively inexpensive.
- The low-lift pump must be installed as soon as possible as the existing two pumps run 24/7 during the summer, but are beginning to decrease in yield. This is a bottleneck that should be resolved soon. This is the operator's highest priority.
- The reconstructed filters will be a great improvement, but their full capacity cannot be realized until the bottleneck in the pipe leading to the filters is corrected. A plan to remove some of the valves and inspect all of the pipe is relatively low-cost.
- The new VFDs is a little costly but provides the best protection for the surge-plagued mains.
- Since VFDs are being installed, this would be an opportune time to also replace the 52-yr old high service pumps.
- The chlorine handling system is not as safe as it should be (see photos)

Costs are inflated to 2010 (PER had Phase 1 as constructed in 2008)

The next priority, to be addressed in the subsequent funding cycle would be replacement of and expansion of the sedimentation basins and installation of flocculation equipment and additional mixers and filters, and possibly adding a new raw pump. Priority 2 is now inflated to 2012.

The final, third phase would include creating a third pressure zone to the airport, and adding storage to the existing second zone and the new third zone. New major pipelines as described in the PER and additional pipelines would be required for this expansion. The new sludge pond would be considered as a third-priority improvement, as recommended in the PER.

The existing intake system has pipe installed for sending water from a boiler to the intake screens that are prone to jamming from slush. Unfortunately the boiler was removed from the intake project due to under-funding of the improvements. As part of the third phase, the City should consider constructing a small building to house a large boiler for keeping slush from clogging the intake.

It is also recommended that the City continue dedicating approximately \$229,000/yr for continued replacement of leaking pipe, or 4-inch mains that are to serve for fire protection.

OTHER FINDINGS

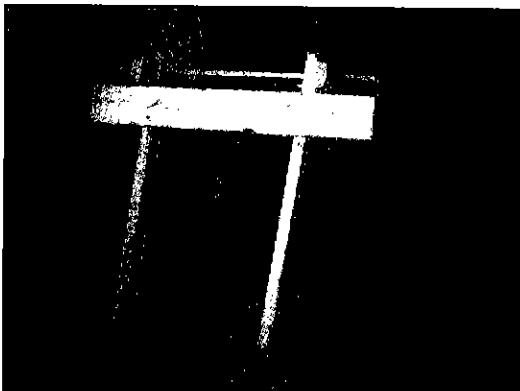
No new storage is recommended until it can be added in the higher pressure zone. Special control valves would be placed to allow water to flow from the higher pressure zone tank to the lower zone without loss of pressure to the higher zone. In this manner, the storage is usable for both zones.

The PER will include evaluations of tank materials, types and locations.

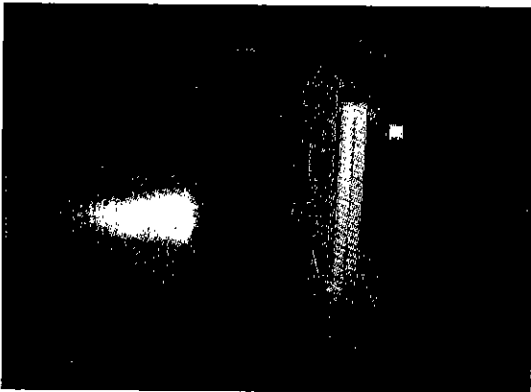
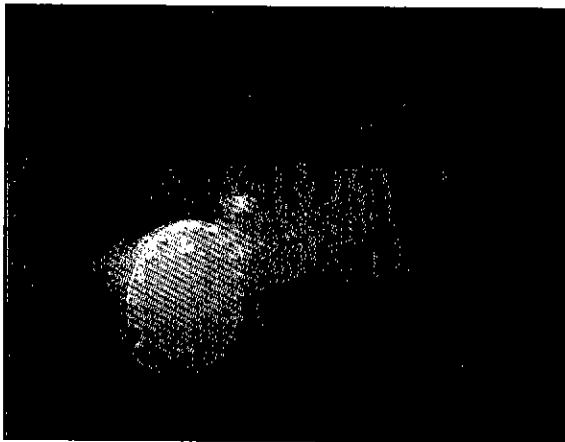
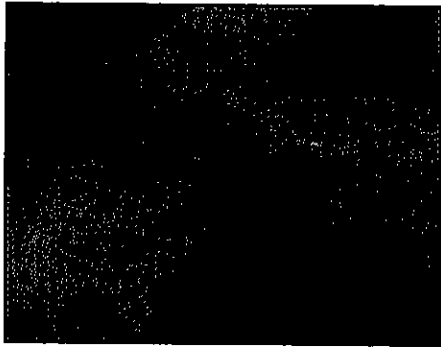
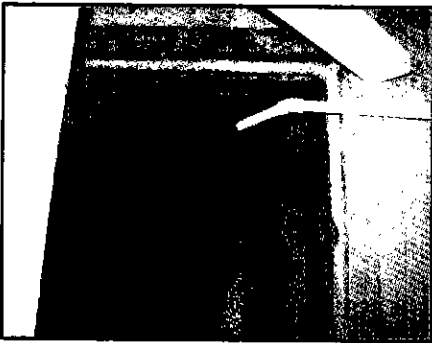
The PER states that the Town would essentially be without water if it was to provide 8,000 gpm to the Cenex refinery. This could not be confirmed and it would appear that if the tank was 3/4^{ths} full when the fire started, the Town should be able to provide this quantity of water and still have 1 million gallons of storage remaining. This is conservatively assessed, assuming that the high service pumps are only pumping at the rate needed for peak day demand use and not providing added fire flow. In actuality the pumps would be providing about half the flow for the fire while the tank in the system provided water for the other half of the fire flow and demands of the City.

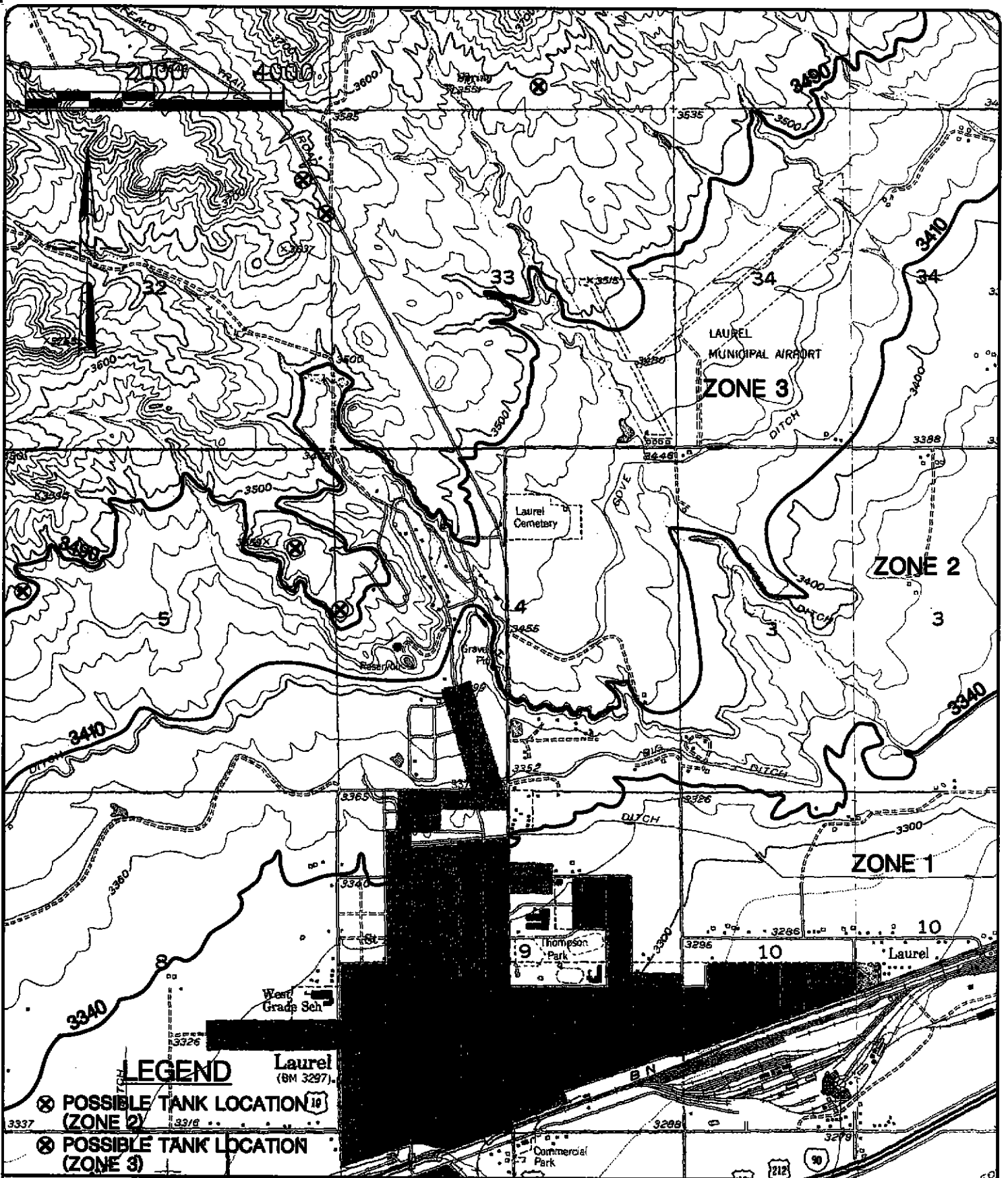
Great West believes that the City and Cenex should discuss the potential to send treated wastewater to the refinery in lieu of raw water. The water would have a much more consistent quality, and not have the sediment associated with the raw water. The cost to run a major pipeline such as this to Cenex would be considerable, but the ability to cut back drastically on discharge may save the City considerably in the long run.

Laurel Water Plant



Opening available for addition of flash mixer.





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 Suite 500
 Billings, MT 59101
 Office: 406.652.5000
 Fax: 406.248.1383
 www.greatwesteng.com

CITY OF LAUREL, MONTANA
ON-CALL TASK 6 WATER SYSTEM
PRESSURE ZONE DELINEATION

