



City of Homer

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Planning

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Staff Report PL 20-17

TO: Homer Planning Commission
FROM: Rick Abboud, AICP, City Planner
DATE: February 19, 2020
SUBJECT: SAD priorities for the HAWSP

Introduction

The City Council has asked the Planning Commission for input on criteria for evaluating Special Assessment District (SAD) in resolution 21-012(A), “[t]he Planning Commission is directed to provide recommendations to City Council on criteria for evaluating SAD applications, including prioritization based on the Comprehensive Plan and long-term community planning.”

The City Council is holding a work session on March 9, 2020 to develop updates to the Homer Accelerated Water and Sewer Program (HAWSP).

The staff report starts with background information on the HAWSP manual and the SAD process. It then progresses in to analysis regarding particular scenarios that might affect a recommendation.

Background

First, the HAWSP manual has criteria for existing properties

1. Original subdivision was prior to June 28, 1999
2. Original subdivision was prior to annexation into the City

The criteria for existing properties is to exclude the funds to be used for proposed/new subdivision, which is the responsibility of the developer. It allows for extension of services to lots that existed prior to the creation of the fund or those that were not part of the city at that time. I am not seeing any provision that addresses the status of one or more lots that may have been subdivided in a piecemeal fashion along the route of a proposed project.

Then, the manual lists 10 project criteria that apply to all HAWSP funded project (not just SAD's).

1. Homer Water and Sewer Master Plan inclusion or forwards a goal of the plan
2. Health and Safety
3. Correct deficiencies of existing systems

4. System wide basis versus local need
5. Complete utility loop
6. Encourage economic development
7. Correct problems
8. Reduce maintenance costs
9. Property owner contribution through SAD process
10. Other factors deemed appropriate by the City Council

The ten project criteria seem to be in an order, but I am not absolutely sure that was the idea. It is not stated that these projects are necessarily tied to a SAD. After reviewing the original language of the ballot item from 1999, there is no particular restriction of the type of activity that the dedicated sales tax may support, other than water and sewer system improvements (debt to the sewer treatment plant has been retired).

We can review Title 17, Public Assessments for further guidance.

Basically a SAD is a type of capital improvement that may be created for the benefit of a specific geographic area, rather than the entire city.

A SAD may be initiated by:

1. A resolution, initiated by a Council member, the City Manager, or through the developer reimbursement application process set forth in this title and approved by a vote of not less than three-fourths of Council; or
2. A petition signed by 50 percent of the total record owners who receive notice from the City Clerk's office that they will be assessed a portion of the costs of a single capital improvement.

Now it gets complicated. I will do my best to highlight the process with attention to crucial decision points. For a complete understanding, read the entirety of Title 17.

If owners of real property that would bear 50 percent or more of the assessed cost of the improvement file timely written objections, the Council may not proceed with the improvement unless it revises the improvement plan to reduce the assessed cost of the improvement that is borne by objecting record owners to less than 50 percent of the assessed cost of the improvement.

Otherwise, a district would have to have the support of the majority of the owners of property that represents over 50% of the assessed costs of the improvement. A district boundary could be redesigned to meet this goal. Basically, a SAD needs support of the majority of the benefactors of the project, otherwise the City may have to adjust the assessment if the project is forwarded.

Analysis

Ideally, we would be working with a blank slate of sorts. Then we would just prioritize SAD's that extend into developmentally suitable areas that support higher densities, such as business districts and urban residential, as opposed to those that do not. For specific guidance, the Land Use Recommendation Map in the Comprehensive Plan could be used. The highest priorities are from the central city and outward, with the least priority being the rural residential areas. But, it may not be just not that easy.

Realistically, we have citizens applying for districts that may be dealing with local issues and are in a financial situation to support their proposals. On the other hand, we may have the city pushing to complete a loop with less than ideal support. To further muddle our decision, we may have a very large project vs. a smaller one. We may also have requests for SAD's in area's not so suitable for development and this may just encourage more development in a less than ideal area. Additionally, the HAWSP fund may be flush with money and there may be an appetite for taking on new projects, or not.

Given the choice, perhaps we could order the criteria in the HAWSP manual to give further consideration between to similar competing projects. If we are to continue down the route of reviewing submittals, should it be anything other than first-come first-serve? If projects are in competition with one another, perhaps an analysis of the benefit to all uses could be incorporated. Does it solve an untenable issue? Will it raise maintenance costs overall or will it lead to declining rates by providing a necessary improvement to the system? Is it a choice between water or sewer? Generally, the provision of sewer provides a greater benefit to public health than water.

While we were asked about recommendation about SAD's specifically, it is hard to separate funding SAD's and other items that might be supported with the fund without having better information regarding items other than SAD's (perhaps water plant debt and system maintenance) and information the health of the fund (current balance, future obligation, and expected income). In the end, we can only fund items if we have sufficient current and future resources.

Staff Recommendation

Have a discussion and forward thoughts to the City Council

Attachments

HAWSP manual – June 2016 update

Resolution 20-012(A)

Ordinance 99-14(S)(A)

Water and sewer system overview – 10.30.17

H. A. W. S. P.

(Homer Accelerated Water Sewer Program)

POLICY MANUAL

Updated August 2012

Updated June 2016

HAWSP Original, June 22, 1999
Approved by Council via Resolution 99-53
June 28, 1999 Program Authorized

ERRATA

I. PURPOSE/INTENT – In General

II. QUALIFYING CRITERIA

1. Grandfather list updated, changes to Hillside Acres Sewer and Water and the Addition of West Lakeshore Drive Water and Sewer.
2. Resolution 03-80, deleted the methodology from Qualifying Criteria and placed more appropriately under Financing/Assessments.

III. FINANCING/ASSESSMENTS

1. Ordinance 99-14(S)(A), to use unexpended $\frac{3}{4}$ of 1% sales tax revenues not used for debt retirement for funding water and sewer systems.
2. Resolution 01-21, amended the assessment methodology.
3. Resolution 03-80, amended the interest and payment date.
4. Resolution 03-80, assessment methodology set at equal shares.
5. Ordinance 16-20, amended petition signatures required to record owners of real property that would bear not less than 50% of the assessed cost of the improvement.

IV. SPECIAL PROVISIONS, In Lieu of Agreements, Deferred Assessments

1. Ordinance 02-48, Subdividing. 17.04.095 and 17.04.180; **Ordinance 12-15 - 17.04.100** .
12. Added by Resolution 05-50, Exempting Certain Lands.

GENERAL STATEMENTS

H. A. W. S. P. POLICY MANUAL

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- I. Purpose/Intent – In General**
- II. Qualifying Criteria**
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I. PURPOSE/INTENT – IN GENERAL

1. The H.A.W.S.P. is a combined local funding source of unexpended dedicated sales tax and dedicated sales tax, once the sewer debt is paid, and assessments to upgrade approximately 500+ homes to City water and/or sewer service.
2. The intent of the program is to improve the health and welfare of the Citizens of Homer by connecting residences to City water and/or sewer, thereby increasing the number of users on the system, increasing property values and improving the quality of life.
3. All water and/or sewer connections, upgraded, projects will be to City standards.
4. When practical, the intent of the program is to preclude the destruction of existing water and/or sewer services and, where practical, to eliminate spaghetti lines.
5. The criteria for the H.A.W.S.P. shall be reviewed annually by the Homer City Council.
6. No new subdivisions, formed after June 28, 1999, shall be eligible for this program.
7. Every attempt shall be made to include lots immediately adjacent to the water/sewer main lines within the project limits or boundaries as defined by the Public Works Department.

II. QUALIFYING CRITERIA

The following water and/or sewer Assessment Districts, aka, LIDs or SADs are on the books: These LIDs/SADs should be grandfathered into the program and will receive priority consideration. These LIDs/SADs are listed in chronological order.

These projects have been reassessed, pursuant to Resolution 01-21 for a property owner share of 50%.

The City Council's regular meeting is scheduled for May 28, Memorial Day. The Council may change the meeting date to Tuesday, May 29th.

1. Harrington Heights – Water & Sewer, Public Hearing set for May 28/29/2001. Objection period ends July 27/28, 2001.

2. Mariner Village/Thorn Subdivision – Water & Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
3. Thompson Drive – Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
4. Forest Glen Subdivision/Forest Glen Drive – Water & Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
5. Salt Water Drive – Water and Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
6. East Road – portion – Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
7. Hillside Acres Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
8. Hillside Acres Water, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.
9. W. Lakeshore Drive Water and Sewer, Public Hearing set for May 28/29, 2001. Objection period ends July 27/28, 2001.

Amendments to the schedule can be accomplished only by Council action.

LIDs/SADs Assessment Districts formed after March 27, 2001 shall be assessed 75% property owner share of the project.

All projects will be authorized only after a public hearing to insure public participation in the process pursuant to HCC 17.

The following criteria may be considered for qualifying as a water and/or sewer project.

- a. Health and Safety;
- b. Correct deficiencies of existing systems;
- c. System wide basis versus local needs;

- d. Complete utility loop;
- e. Encourage economic development;
- f. Correct problems;
- g. Reduce maintenance cost;
- h. Build to city standards prior to acceptance;
- i. Property owner contribution through LID/SAD process by paying \$1,100 per half acre increments for water and sewer each. With the exclusion of those 7 projects on the preceding page.
- j. Other factors deemed appropriate by the City Council.

III. FINANCING/ASSESSMENTS

1. Pursuant to Ordinance 99-14(S)(A) the program may utilize the unexpended sales tax revenue dedicated to sewer debt. Upon satisfaction of the sewer debt the $\frac{3}{4}$ of 1% sales tax shall continue and shall be used for water and/or sewer system improvements. Approved by the voters October, 1999.
2. A $\frac{3}{4}$ of one percent (3/4%) dedicated sales tax can be expected to generate approximately \$750,000 annually. The unexpended portion is projected to be approximately \$300,000.
3. The utility improvements will be financed on a combined pay as you go basis as well as possible sale of revenue or assessment bonds, future bond sales or even the need for a General Obligation Bond if so deemed necessary by the Homer City Council and as recommended by staff.
4. The City will attempt to obtain long term financing for up to twenty years for the private share of funding.
5. Interest, if any, generated from the program will remain with the program funds.
6. Abutting property owners will share the cost of the utilities.
7. The City will pay all costs for any additional improvements required when deemed necessary by the City.

8. Assessment payment date, penalty and interest shall be set as soon as the project has been accepted by the Public Works Department.

Interest and Payment Due date will be set by Resolution of the City Council (Resolution 03-80, May 27, 2003).

9. Methodology: Approved by Resolution 02-21 on March 27, 2001. The nine LIDs/SADs Assessment Districts named herein, under Qualifying Criteria, shall be assessed 50% of the project. Districts formed after March 27, 2001 shall be assessed 75% of the project. Via Council action on April 28, 2003 assessment methodology for HAWSP LIDs/SADs Assessment Districts will be equal shares. (Resolution 03-80, May 27, 2003)

10. Expenditures under the HAWSP program are subject to the availability of funds, after maintaining a debt-service coverage ratio of 1.25 or above. (Resolution 16-041(S-2)(A), May 9, 2016)

IV. SPECIAL PROVISIONS

1. Non existing water and sewer improvement districts shall be encouraged whenever possible. District is defined as: lots immediately adjacent to the water/sewer main lines within the project limits/boundaries as defined by Public Works.

2. HCC 17.04.170 Water and sewer connections required. The owner of property in a water or sewer special assessment district that contains an occupied building shall connect to the improvement constructed in the district within one year after the date that the resolution confirming the assessment roll for the district becomes final. (Ordinance 87-30, 1988; revised Ordinance 12-15, 2012)

3. HCC 14.04.020(e), the City sewer is considered as not available to a structure when the nearest City sewer is located more than 200 feet from any point on the boundary of the lot or parcel of land on which the structure is located. Sewer connection will be required within one year of sewer becoming available. (Ordinance 94-17(A))

4. Additional easements required will be paid by this program, at no additional cost to abutting property owners.

5. No parcel shall be double assessed nor shall be included in two like assessment districts.

6. Whenever and wherever practical road improvements shall be done in conjunction with the water and/or sewer project, but not before.
7. HCC 17.04.190, Deferment of assessment payments for senior citizens.
8. HCC 17.04.200, "In lieu of assessment"—determination of amount—terms.
9. HCC 17.04.200 "In lieu of assessments", not to prevent inclusion in of property in future district.
10. 17.04.100 Subdivision after levy of assessments. (a) Except as provided in subsection (b) of this section, upon the subdivision of a property assessed as a single parcel, the amount of the assessment shall be allocated among the resulting lots that benefit from the improvement on the same basis that the assessment originally was allocated. (b) Upon the subdivision of a property assessed as a single parcel in an assessment district where assessments were levied in an equal amount per parcel (i.e., without regard to parcel area, dimension or other characteristic), then no resulting parcel, other than the parcel that contains the original connection to the improvement for which the assessment was levied, may connect to the improvement until a subdivided property connection fee is paid for the parcel. (1) The amount of the connection fee shall be equal to the amount of the original assessment, adjusted up or down by a percentage equal to the change in the Consumer Price Index, All Urban Consumers (CPI-U) for Anchorage, Alaska from the end of the calendar year preceding the original assessment date to the end of the calendar year preceding the date the parcel is connected to the improvement. (2) If the original assessment was payable in installments the city may enter into a written agreement for the payment of the connection fee in installments on terms that are substantially the same as those authorized for the payment of the original assessment, secured by a deed of trust on the parcel. (3) Upon receiving connection fee payments, the city shall allocate such payments to each property assessed in the district in proportion to the amount originally assessed against the property, either by adjusting the original assessment amount or disbursing a payment to the record owner at the time of disbursement. (Ordinance 02-48, December 10, 2002; revised by Ordinance 12-15, April 10, 2012)
11. 17.04.110 Assessments to be liens. Assessments are liens upon the property assessed and are prior and paramount to all liens except those having priority under State law. They shall be enforced in the same manner as property tax liens. (Ordinance 12-15, April 10, 2012)
12. Certain Lands that will not be Developed due to Conservation Easements or Owned by Organizations that Conserve Land for Public Purpose and/or Habitat Protection from the Homer Accelerated Roads Program and the Homer Accelerated Water and Sewer Program Assessment District Assessments on a Case by Case Basis and that Each Program Shall be Amended to Include this Exemption under Special Provisions. (Resolution 05-50(A), April 25, 2005)

**CITY OF HOMER
HOMER, ALASKA**

Mayor/Lord

RESOLUTION 20-012(A)

A RESOLUTION OF THE CITY COUNCIL OF HOMER ALASKA REOPENING THE HOMER ACCELERATED WATER AND SEWER PROGRAM FOR CITIZEN INITIATED SPECIAL ASSESSMENT DISTRICTS UNDER HCC 17.02.040 AND DIRECTING THE PLANNING COMMISSION TO PROVIDE INPUT ON CRITERIA FOR EVALUATION SADS AND SCHEDULING A WORKSESSION FOR COUNCIL TO PROVIDE INPUT ON APPROPRIATE METRICS FOR THE FISCAL HEALTH OF THE FUND.

WHEREAS, The Homer Accelerated Water and Sewer Program (HAWSP) Fund is made up of special assessment district (SAD) payments and a ¾% dedicated sales tax; and

WHEREAS, The HAWSP fund is used to finance water and sewer improvements, including the build out of water and sewer infrastructure through a SAD; and

WHEREAS, According to the City of Homer 2015 Audited Financial Statements, the HAWSP fund had an ending negative balance of \$4,644,761; and

WHEREAS, In 2016 the Homer City Council expressed concern regarding the debt burden HAWSP and its ability to continue to take on new debt; and

WHEREAS, To address these concerns Resolution 16-041(S-2)(A) instituted a minimum debt service ratio of 1.25 in order to initiate new SADs; and

WHEREAS In June of 2016 Homer City Council placed a moratorium on all new SADs pending improved health of the fund and reduced debt burden; and

WHEREAS, The debt service ratio of 1.25 was found to be a confusing metric that was difficult to track over time; and

WHEREAS, Since June of 2016 three property owners have attempted to initiate a water and sewer SAD assessment district for water and/or sewer improvements; and

WHEREAS, It is in the best interest of the City of Homer to reopen the ability of the HAWSP fund to finance SADs for the growth of water and sewer infrastructure; and

WHEREAS, extensive work was done by the Finance Department, City Manager's office, and the Mayor to establish the history of the HAWSP fund transfers; and

WHEREAS, In 2019 Homer City Council hired an independent third party auditor, Altman & Rogers Company, to study the history of the fund and provide recommendations for improving the fiscal health of HAWSP; and

WHEREAS, ~~In order to eliminate the negative balance of the fund, Altman Rogers and Company recommended a transfer of \$3.5 million dollar from water and sewer operations to the HAWSP fund which was accomplished in Ordinance 19-58~~ **Altman & Rogers Co. found, and management concurred, that when the Water and Sewer Utility Fund was converted from an Enterprise Fund to a Special Revenue Fund in 2010, the beginning balances for the Utility Operations and HAWSP funds were incorrectly reported and recommended a transfer of \$3.1 million from Utility Operations into HAWSP to properly reflect balance, which was accomplished by Ordinance 19-58;** and

WHEREAS, The current unaudited balance of the HASWP is \$1.7 million; and

WHEREAS, There remain a number of policy questions that need to be answered to ensure the long-term health and management of the fund in the best interest of the public.

NOW THEREFORE BE IT RESOLVED that the SAD process for water/sewer projects eligible for HASWP funding be opened to allow for the initiation of districts process under 17.02.040

BE IT FURTHER RESOLVED that the Planning Commission is directed to provide recommendations to City Council on criteria for evaluating SAD applications, including prioritization based on the Comprehensive Plan and long-term community planning.

BE IT FURTHER RESOLVED that the City Council shall hold a work session on March 9, 2020 to develop updates to the HAWSP policy manual that address the following, utilizing the November 30, 2016 Planning Commission memo to Council in addition to other resources:

- What is an appropriate metric to gauge the health of the HASWP fund?
- How often should Council review the health of the HAWSP fund?
- Should pending HAWSP projects be taken into considering when evaluating the health of the fund?
- How should system-wide projects be evaluated and prioritized versus citizen-initiated SADs?
- Should the fees be increased to initiate a SAD?
- ~~Does the first come method work, to be tracked by the Clerk's office?~~ **The current method for establishing HAWSP SADs is first come first served, tracked by the**

Clerk's office. Is this the most appropriate method or should a different method be employed?

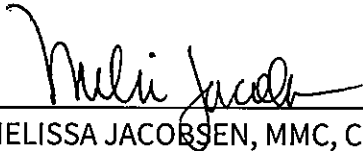
PASSED AND ADOPTED by the City Council this 27th day of January, 2020.

CITY OF HOMER



KEN CASTNER, MAYOR

ATTEST:



MELISSA JACOBSEN, MMC, CITY CLERK



CITY OF HOMER
HOMER, ALASKA

Staff
City Attorney

ORDINANCE 99-14(S)(A)

AN ORDINANCE AMENDING HOMER CITY CODE SECTION 9.16.010(b) TO REDEDICATE CURRENT UNEXPENDED SALES TAX REVENUES COLLECTED UNDER THAT SUBSECTION TO WATER AND SEWER IMPROVEMENTS; AND FURTHER ELIMINATING THE CURRENT TERMINATION DATE OF THE TAX AND REDEDICATING THE ENTIRE TAX TO WATER AND SEWER SYSTEMS IMPROVEMENTS AFTER SATISFACTION OF SEWER TREATMENT PLANT DEBT RETIREMENT OBLIGATIONS.

WHEREAS, HCC Section 9.16.010(b) currently levies a 3/4% sales tax dedicated "for the purpose of funding debt retirement of the sewer treatment plant improvements": and

WHEREAS, there are significant unexpended sales tax revenue generated by that levy in excess of the funds needed currently to fund debt retirement obligations for the sewer treatment plant improvements; and

WHEREAS, the City Council recently authorized the new Homer Accelerated Water and Sewer Program (HAWSP) to promote construction of additional improvements to the City water and sewer systems, and funds are needed to implement the program: and

WHEREAS, the HAWSP is suitable for use for unexpended revenues collected under HCC 9.16.010(b): and

WHEREAS, the tax levy under HCC 9.16.010(b) is scheduled to terminate upon full repayment of the sewer treatment plant debt on or before December 21, 2012, whichever occurs first, and if the levy were extended it could be used in its entirety to fund sewer and water improvements, ~~under HAWSP, or another City program.~~

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. Homer City Code Section 9.16.010(b) is hereby amended to read as follows:

b. An additional consumer's sales tax in the amount of three-quarters percent (3/4%) is hereby levied by the City of Homer on all sales, rents and services within the City except as the purpose of funding debt retirement of the sewer treatment plant improvements, **and to the extent revenues from such tax exceed such debt retirement obligations, for the purpose of funding water and sewer systems improvements.**

Section 2. Section 1 of this Ordinance shall take effect on October 26, 1999 only if the following proposition is approved by the qualified voters of the City of Homer at the General Election of October 5, 1999:

Under Homer City Code Section 9.16.010(b), 3/4 of 1 percent of the sales tax is currently dedicated for the purpose of funding debt retirement of the sewer treatment plant improvements. Shall the dedication be amended to allow current unexpended sales tax revenue in excess of that needed to fund debt retirement to be dedicated to water and sewer system improvements, ~~such as the Homer Accelerated Water and Sewer Program?~~

YES _____ NO _____

Section 3. The sales tax levy imposed by Section 9.16.010(b) shall continue to remain in effect after full repayment of the debt for the sewer treatment plant improvements and after December 31, 2012. Provisions to the contrary in Ordinance 91-19(S)(A) are repealed. After full repayment of the debt of approximately \$6.8 million (as of August 12, 1991, the date of enactment of Ordinance 91-19(S)(A)) for the sewer treatment plant improvements, the entire tax generated by the levy imposed by Section 9.16.010(b) shall be used for the purpose of funding water and sewer systems improvements.

Section 4. Section 3 of this Ordinance shall take effect on October 26, 1999 only if the following proposition is approved by the qualified voters of the City of Homer at the General Election of October 5, 1999:

Under Homer City Code Section 9.16.010(b), 3/4 of 1 percent of the sales tax now dedicated for the purpose of funding debt retirement of the sewer treatment plant improvements is scheduled to terminate upon retirement of \$6.8 million in sewer treatment plant debt or on December 31, 2012, whichever occurs first. Shall this termination provision be repealed and, after the applicable debt has been repaid in full, shall the entire amount of the 3/4 of 1 percent sales tax levy be dedicated to water and sewer systems improvements, ~~such as the Homer Accelerated Water and Sewer Program?~~

YES _____ NO _____

Section 5. Section 1 of this ordinance is of a permanent and general character and shall be included in the City Code if the proposition set forth in Section 2. is approved by the voters. Section 3 of this Ordinance removes a termination date for the current sales tax levy, and the only codification required is the removal of the footnote to HCC 9.16.010(b), if the proposition set forth in Section 4 is approved by the voters. Sections 2 and 4 will not be included in the City Code.

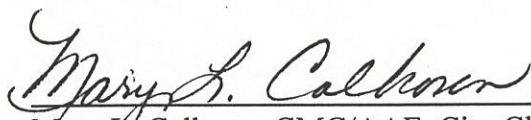
ENACTED BY THE CITY COUNCIL OF THE CITY OF HOMER, ALASKA on this
23rd day of August, 1999.

CITY OF HOMER



Jack Cushing, Mayor

ATTEST:



Mary L. Calhoun, CMC/AEE, City Clerk

AYES: 5
NOES: 0
ABSTAIN: 0
ABSENT: 1

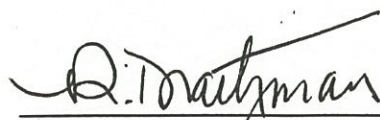
First Reading: 7/12/99

Public Hearing: 7/26/99


Second Reading: 8/23/99

Effective Date: Upon approval by the Voters Oct 5, 1999 &
certification by the Council, scheduled for Oct 11th.

Reviewed and approved as to form and content:



Ronald Wm. Drathman, City Manager



Gordon J. Tans, City Attorney

Fiscal Note: Cost of putting on the ballot and election advertising.

OVERVIEW OF WATER/SEWER SYSTEMS

CITY OF HOMER, ALASKA

The City of Homer, through the Public Works Department, strives to provide high-quality water and sewer services, anticipate future demand, and effectively provide for Homer's growth with the extension of water and sewer into areas identified in the land use plan.

Current Status

Public water and sewer service for the city of Homer is provided by the City of Homer Department of Public Works (DPW). In July 2006, a Water and Sewer Master Plan was completed for the City to provide guidance on future improvements and expansions for each of the utilities. According to the 2006 master plan, approximately 64 percent of the occupied homes in the city were served by the public water system and approximately 54 percent were served by the public sewer system. Current estimates, based on Kenai Peninsula Borough GIS information, indicate that 74% of occupied homes are served with public piped water; 61% with public piped sewer.



Water Treatment Plant built in 2006

Water System

Homer operates a Class A public water system. Water is supplied from a dammed surface water source which forms the 37-acre Bridge Creek Reservoir. This is the City's sole water source; no other groundwater wells or other surface sources are operated by the City. It is important to note that groundwater in Homer is generally unsuitable for residential and commercial water wells due to low yields, shallow groundwater, lack of a significant freshwater aquifer, and saltwater in wells. The City established the Bridge Creek Watershed Protection District in an effort to preserve and protect the city's drinking water source. Based on current population growth projections and current water usage, the Reservoir has adequate capacity for the foreseeable future.

Seasonal summer population fluctuations and increased summer water needs cause summer demand to nearly double the wintertime water production. Average winter water production is currently 350,000 gallons per day (0.35 mgd). Peak winter demand is 500,000 gallons per day (.5 mgd). Average summer demand is currently 800,000 gallons per day (0.8 mgd). Summer peak demand is currently 1,000,000 gallons per day (1.0 mgd). The water treatment plant, built in 2009, has the capacity to produce 2,000,000 gallons per day (2.0 mgd). The plant uses "ultra" filtration to produce high quality drinking water that meets or exceeds EPA drinking water standards. Based on historical population growth rates of 2-3% per year, no new treatment plant capacity will be needed for many years.

Treated water is distributed and stored in three water storage tanks, which have approximately 1,750,000 gallons of operational capacity. An additional tank has been designed and will be built

when funding has been identified. These water storage tanks serve as treated water reservoirs for community water demands and fire emergencies.

The water distribution system consists of approximately 53.5 miles of buried pipe. Pipe materials consist of cast iron, ductile iron, polyvinyl chloride (PVC), and high-density polyethylene (HDPE) pipe. Sizes of pipe range from 4 to 18 inches in diameter. The piping is generally confined to the lower areas of Homer except for two corridors which carry the water down from the treatment plant through low density residential development to the higher densely developed areas. Approximately 1,850 customers are served. There are also 413 fire hydrants connected to the city water distribution system.

Homer residents and businesses not on the public water system typically maintain their own wells

or pay to have private contractors haul potable city water to a holding tank. Because groundwater sources are often difficult to find with sufficient production and water quality, many property owners not connected to the City's system choose to purchase hauled water. Water from Homer's distribution system is also hauled to many residences outside of Homer city limits. In 2016, bulk water accounted for approximately 13% of the water billed.

Sewer System

Homer operates a deep shaft wastewater treatment plant (WWTP). The WWTP is designed to treat 880,000 gallons per day on average (.88mgd), but has the capability for treating 1,400,000 gallons per day (1.4 mgd) peak flow. Homer has an intra-city agreement with Kachemak City to provide sewer service. Currently, the WWTP treats an average winter daily flow of 390,000 gallons per day (610,000 gallons per day average summer flow). However, intense rain storms which contribute to inflow and infiltration (I&I)

can substantially increase flow to the plant. A record of 1.7 million gallons per day has been recorded, but it is rare to see a flow of over 1.2 million gallons per day.



Sewer Treatment Plant (1990)

A study was conducted to better understand the inflow and infiltration (I&I) contribution to Homer's wastewater plant. Inflow is defined as surface water entering the system from various sources (i.e., building sump pumps, roof leaders, foundation drains, or system manhole lids). Infiltration is defined as groundwater entering the system through manhole/pipe cracks, faulty connections, or other openings. The study found inflow/infiltration to be a significant contributor to the overall wastewater collected. During intense rain storms, as much as 50 percent of the overall flows received at the sewer treatment plant may be attributed to inflow and infiltration. During major storm over 1,000,000 gallons per day of flow may be attributed by infiltration and inflow.

The wastewater collection system consists of approximately 55.2 miles of buried gravity sewer mains. Pipe materials consist of asbestos concrete, ductile iron, high density polyethylene

HDPE), and polyvinyl chloride (PVC). About half of the system is constructed with asbestos concrete pipe, especially the oldest sections built in the 1970's. Sizes of pipe range from 6 to 24 inches in diameter, with the majority being 8-inch size mains. The sewer system serves a total of 1,450 customers. In addition, parts of Kachemak City are served by the sewer system under an inter-governmental agreement with the City of Homer.

Because the soils in Homer are silty and relatively impermeable, infiltration is not considered a significant contributor to I&I (pipes and manholes are generally buried in impermeable soils). Inflow is considered to be much more significant, the result of perched groundwater table and generally poor drainage conditions. The lack of inspections of new home construction, poor drainage around homes and business, lack of enforcement provisions in Homer City Code, and the lack of a pipe storm drain systems have led to conditions that have allowed illegal storm drain connections to the sanitary sewer system.

Homer maintains seven sewage pump stations. Lift stations are used to pump sewage from topographical low points to higher portions of the gravity system. There are approximately 11.6 miles of force main pipe from the lift stations. Force main pipes are constructed from ductile iron or high density polyethylene pipe (HDPE) and range from 3 to 6 inches in diameter.

Those Homer residences and business not connected to the public sewer system use on-site wastewater disposal systems. Poor perking soil conditions and a perched groundwater table in Homer are not ideal for on-site systems and many are believed to function poorly. Poorly functioning septic systems have the potential of contaminating surface and ground water, and creating health hazards.

Near-term Priorities

Water: With a relatively new water treatment plant (with adequate capacity), water system near-term priorities should focus on expanding service to areas not served by a piped water system to provide domestic service, fire protection and reduce the potential of health hazards. The high per lot cost of extending water mains into relatively low density residential areas will be problematic. Allowing higher density development in the areas where the water distribution system is being expanded and encouraging infill development in areas already provided with public water infrastructure will be most cost effective, when it comes expansion costs. Spreading the fixed cost of operating and maintaining a water system over a larger number of customers to reduce monthly water fees is best accomplished through infilling.



40' long, 12" HDPE water main sections being "fused" together in preparation for installation along Kachemak Drive

Sewer: Sewer treatment plant priorities should focus on replacing treatment equipment in a 28

year old treatment facility. Sewer collection system near-term priorities should focus on expanding sewer mains to areas not served by a piped sewer system (especially where soil and groundwater conditions make properly functioning on-site systems difficult). The high per lot cost of extending sewer mains into relatively low density residential areas will be problematic. Allowing higher density development in the areas where the sewer collection system is being expanded and encouraging infill development in areas already provided with public sewer will be most cost effective, when it comes to the cost of expansion. Spreading the fixed cost of operating and maintaining a water system over a larger number of customers to reduce monthly water fees is best accomplished through infilling.

Implementation Strategies

Water: Remind stakeholders of the tradeoffs between low density-low impact development and the cost of piped water system improvement infrastructure.

Sewer: Continue upgrading sewer treatment plant equipment to prolong plant life. Reduce inflow by:

- 1) Incorporate enforcement language into City Code providing penalties for illegal connections to sanitary sewer,
- 2) Initiate inspections of all new sewer service connections, including building inspections prior to hook-up,
- 3) Educate the public regarding the costs associated with using expensive sewer treatment plant capacity to treat storm water.
- 4) Complete smoke testing to identify illegal connections to the sewer system,
- 5) Enforce the more stringent sewer connection Code provisions.