City of Kodiak Regular Council Meeting Agenda for February 26, 2015
7:30 p.m., at 710 Mill Bay Road, Assembly Chambers (Room 232)

I. Call to Order/Roll Call
Pledge of Allegiance/Invocation

II. Previous Minutes
Approval of Minutes of the February 12, 2015, Regular Council Meeting.....1

III. Persons to Be Heard
a. Public Comments (limited to 3 minutes) (486-3231)

IV. Unfinished Business
None

V. New Business
a. Resolution No. 2015–08, Adopting an Alternative Method for the FY15 Shared Fisheries Business Tax Program and Certifying That This Allocation Method Fairly Represents the Distribution of Significant Effects of Fisheries Business Activity in Fisheries Management Area 13: Kodiak Island 10
b. Acceptance of Downtown Water, Sewer, and Storm Drain Master Plan, Project No. 07-15/7021 16
c. Authorization of Professional Services Contract with Golder Associates for Updating SPCC Plans and Multi Sector General Permit for SWPPP at the WWTP Project No. 03-01/5035 and Project No. 03-01A/5035 72

VI. Staff Reports
a. City Manager
b. City Clerk

VII. Mayor's Comments

VIII. Council Comments

IX. Audience Comments (limited to 3 minutes) (486-3231)

X. Executive Session
a. Discussion About Contractor Claims Related to the Reconstruction of Pier III 102

XI. Adjournment

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DRAFT

MINUTES OF THE REGULAR COUNCIL MEETING OF THE CITY OF KODIAK HELD THURSDAY, FEBRUARY 12, 2015 IN THE BOROUGH ASSEMBLY CHAMBERS

I. MEETING CALLED TO ORDER/PLEDGE OF ALLEGIANCE/INVOCATION

Mayor Pat Branson called the meeting to order at 7:30 p.m. Councilmembers, Charles E. Davidson, Gabriel T. Saravia, Richard H. Walker, and John B. Whiddon were present and constituted a quorum. Councilmembers Randall C. Bishop and Terry J. Haines were absent. City Manager Aimée Kniaziowski, Deputy Clerk Michelle Shuravloff-Nelson, and Assistant Clerk Catherine Perkins were also present.

After the Pledge of Allegiance, Salvation Army Sergeant Major Dave Blacketer gave the invocation.

II. PREVIOUS MINUTES

Councilmember Whiddon MOVED to approve the minutes of the January 20, 2015, special meeting and January 22, 2015, regular meeting as presented.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

III. PERSONS TO BE HEARD

a. Oath of Office to Fire Chief Jim Mullican, Jr.

The Acting City Clerk administered the oath of office to Fire Chief Jim Mullican Jr. City Manager Kniaziowski and Judy Mullican presented the lapel pins and badge to Fire Chief Mullican. He thanked the City Council and said he was humbled and honored to lead the Kodiak Fire Department.

b. Proclamation: Teen Dating Violence Awareness and Prevention Month

Councilmember Walker read the proclamation, which encourages all citizens of Kodiak to actively support and participate in the ongoing programs designed to reduce and eventually eliminate teen dating violence. Sandra Wilkins, KWRCC Outreach Coordinator, thanked the City Council for the proclamation and gave statistics on teen dating violence.

c. Public Comments

Neil Cooper thanked the City Council for their words on the EPA and encouraged them to continue to look at the budget and make cuts where needed.

IV. UNFINISHED BUSINESS

a. Second Reading and Public Hearing, Ordinance No. 1331, Establishing Supplemental Appropriation No. 1 to the Budget for the Fiscal Year Commencing on the First Day of July 2014 and Ending on the Thirtieth Day of June 2015

Mayor Branson read Ordinance No. 1331 by title. The Supplemental Appropriation No. 1 to the budget for the fiscal year commencing on the first day of July 2014 and ending on the thirtieth day of June 2015 is in the amount of $897,753. It is customary for the City Council to approve at least one supplemental budget annually to authorize the adjustments of current revenues and expenses as detailed in the attachments provided. These adjustments are for the operating funds as well as additions to project funds for grant revenues received and additional expenditures needed that were not known at the time the original budget was adopted. This is the first budget amendment of FY2015.

Councilmember Davidson MOVED to adopt Ordinance No. 1331.

Mayor Branson closed the regular meeting, opened and closed the public hearing when no one came forward to testify, and reopened the regular meeting.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

V. NEW BUSINESS

a. Resolution No. 2015–03, Approving the City Council's Budget Goals for FY2016

Mayor Branson read Resolution No. 2015–03 by title. The Council reviewed a draft list of proposed budget goals for FY2016 at the annual planning meeting on January 31. The goals are similar to those of FY2015 with some changes in layout and suggested deletions of goals that were repetitive. The approved goals will be used by staff in the development of the FY2016 City budget.

Councilmember Walker MOVED to adopt Resolution No. 2015–03.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

b. Resolution No. 2015–04, Adopting the Federal Fiscal Year 2015 Federal Capital Needs and Issues List

Mayor Branson read Resolution No. 2015–04 by title. Each year the City identifies capital improvement projects important to the maintenance and/or improvement of the City's infrastructure as well as issues that are important to the City or larger community. The Council reviewed the resolution outlining the proposed federal requests and issues at the February 10, 2015, work session.

Councilmember Davidson MOVED to adopt Resolution No. 2015–04.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

c. Resolution No. 2015–05, Authorizing the Borrowing from the Alaska Clean Water Fund of an Aggregate Amount Not to Exceed $3,000,000 to Pay Part of the Cost of the Construction of Sludge Composting Facility

Mayor Branson read Resolution No. 2015–05 by title. The City has been working on a solution for long term disposal of biosolids for many years. A sludge disposal study was conducted in 2008 to evaluate potential options and, later, a pilot composting project was conducted in 2010 to verify the feasibility of composting the community's biosolids. The Kodiak Island Borough Assembly approved the transfer of approximately 2.36 acres of land within the landfill property to the City by resolution for the purpose of building a composting facility to produce Class A EQ compost. CH2MHILL completed the design plans, and the permit application to operate the facility was submitted to ADEC, and they are drafting a decision document. The project is ready to advertise to bid. The project was fully funded in the FY2013 budget under Bio-Solid Management, Project No. 7517.

Councilmember Walker MOVED to adopt Resolution No. 2015–05.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

d. Resolution No. 2015–06, Supporting Full Funding for the State of Alaska Harbor Facilities Grant Program in the FY2016 State Capital Budget

Mayor Branson read Resolution No. 2015–06 by title. City of Kodiak Resolution No. 2015–06 supports continued funding for the State of Alaska Harbor Facilities Grant Program in the upcoming fiscal year. The Harbor Facilities Grant program is a matching grant program through which the state and municipality share equally in the cost of replacing aging harbor infrastructure formerly owned by the State of Alaska. The Alaska Association of Harbormasters and Port Administrators (AAHPA) adopted a similar resolution and encourage other communities to do the same.

Councilmember Whiddon MOVED to adopt Resolution No. 2015–06.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

e. Resolution No. 2015–07, Supporting the AML Resolution to the Alaska State Legislature to Fund $60 Million Annually to the Revenue Sharing Program

Mayor Branson read Resolution No. 2015–07 by title. Protecting the State of Alaska's Revenue Sharing program at full funding has been a priority for the Alaska Municipal League (AML) for several years. There has been discussion early this legislative session that the Revenue Sharing program is likely to be cut given the state's fiscal crisis. Because this is a key priority for AML,

local governments have been asked to pass resolutions in the hope of protecting Revenue Sharing.

Councilmember Davidson MOVED to adopt Resolution No. 2015–07.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

f. Authorization of Professional Service Agreement with CH2MHILL for Engineering Services for Final Approval to Operate the UV Water Treatment Facility Project No. 03-14/7023

The City is required to get approval to operate from Alaska Department of Environmental Conservation (ADEC) for any water system modifications or new facility. Compliance regulations required approval from ADEC to construct the new UV Water Treatment Plant and upon completion, the City is required to apply for final approval for the certificate to operate the UV plant. The City submitted two requests for Final Approval to Operate, the last one on September 24, 2014. CH2MHILL received a draft letter from ADEC in early January 2015 proposing an extension of the interim approval to operate until additional EPA guidance is issued for UV Water Treatment. Staff is requesting this additional professional service agreement with CH2MHILL for continued technical support to receive the certificate to operate from ADEC.

Councilmember Walker MOVED to approve a professional services contract with CH2MHILL to support City efforts to acquire a final certificate to operate the UV Water Treatment Facility in an amount not to exceed $50,000 with funds coming from the UV Water Treatment Facility Project No. 03-14/7023 and authorize the City Manager to execute the documents on behalf of the City.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

g. Authorization to Purchase VRLA Batteries for KPD

This authorization would allow the purchase of four new Uninterruptible Power Supply (UPS) batteries for the Kodiak Police Department from a sole source supplier. The current UPS batteries were installed during the building of the new the Kodiak Police Station in 2010. The expected use of the batteries is four to six years and current maintenance report recommends replacing all four batteries. In FY2015 $65,975 was budgeted for the replacement.

Councilmember Davidson MOVED to authorize the purchase of the replacement Uninterrupted Power Supply (UPS) batteries (VRLA batteries) from Emerson Network Power in an amount not to exceed $65,975 with funds coming from the Police Department, Administrative Sub-Department Machine and Equipment and authorize the City Manager to execute the necessary documents.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

VI. STAFF REPORTS

a. City Manager

City Manager Kniaziowski congratulated Chief Mullican and said she looks forward to having his expertise and leadership in the position. She gave an update on Pier III and said they are continuing to work with the project team on unanticipated problems but things are moving forward. She mentioned that DEC is reviewing the composting bid package for loan compliance and she expects to bring the bid award to the Council in April. She thanked Mark Kozak for his hard work. She noted the skate ramps for the new skate part are expected in town at the end of the month and should be installed shortly thereafter.

Manager Kniaziowski said while it is still early, they are keeping an eye on the state's budget and working with Ray Gillespie as needed. She noted they are paying very close attention to the potential Department of Corrections budget cuts. She mentioned that our community jail is consistently at or above capacity and it is important to continue to have that funding. She mentioned she is looking forward to working with Sarah Barton, President of ConsultNorth Project and Strategic Consulting. The next City Council strategic planning meeting is on April 18.

Manager Kniaziowski noted that Parks and Recreation Director Corey Gronn has been sending maintenance staff to plaza to work on clean up and maintain trash pickup and thanked him for his hard work with such a small staff. She noted that she will attend the AML Winter meetings next week in Juneau and said she is looking forward to talking with legislators, as well as the discussions on the impact of marijuana at the local government level. She commented that she had been tasked with finding an economic development trainer and received a commitment from one to provide training in April.

Councilmember Whiddon asked if there is a safety or legal limit with the jail being over booked. Manager Kniaziowski responded that the jail has been over limit in the past, and the new jail is able to accommodate the larger influx of inmates while still keeping a reasonable expectation of safety and required separation of inmates. Councilmember Whiddon responded that he hopes this information is being used to help show the state the importance of DEC funding and the need for it here in Kodiak.

Councilmember Davidson asked if the majority of the prisoners in the jail are there for violating state laws or for violating local ordinances. He asked if the citizens of Kodiak are paying out pocket to keep those inmates there because they have a longer hold time. Manager Kniaziowski responded that the majority of the imamates are there on state charges rather than local violations and the City is paying the difference because of increased costs, but it is less than in the past.

b. City Clerk

Deputy City Clerk Shuravloff-Nelson informed the public of the next scheduled Council work session and regular meeting.

VII. MAYOR'S COMMENTS

Mayor Branson congratulated Chief Mullican. She mentioned that she met with interim City Finance Director Swanson for an overview of the budget said she was pleased with the meeting. She said that it is very important to advocate for revenue sharing not only because it affects Kodiak, but especially the smaller communities. She also noted the importance of advocating for the ferry service.

VIII. COUNCIL COMMENTS

Councilmember Walker congratulated Chief Mullican on his new position. He gave his condolences to the family members of Red West and Ron Sears.

Councilmember Davidson congratulated Chief Mullican.

Councilmember Whiddon congratulated Chief Mullican and said it is a tribute to Kodiak and the retired Coast Guard community. He gave an update on the previous day's Fisheries Work Group meeting.

Councilmember Saravia congratulated Chief Mullican and thanked him for this service to Kodiak.

IX. AUDIENCE COMMENTS

None

X. EXECUTIVE SESSION

a. Manager's Evaluation and Contract Review

The Mayor and City Council will evaluate the City Manager's annual performance per the Manager's employment agreement, sections 2 and 13. The Manager, Mayor, and Council will also discuss the terms of the contract.

Councilmember Davidson MOVED to enter into executive session as authorized by Kodiak City Code Section 2.04.100(b)(2) to evaluate the City Manager's performance and discuss the terms of the employment contract.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

The Council entered into Executive Session at 8:45 p.m.

XI. ADJOURNMENT

The Mayor reconvened the regular meeting at 9:44 p.m.

Councilmember Davidson MOVED to adjourn the meeting.

The roll call vote was Councilmembers Davidson, Saravia, Walker, and Whiddon in favor. Councilmembers Bishop and Haines were absent. The motion passed.

The meeting adjourned at 9:45 p.m.

CITY OF KODIAK

MAYOR

ATTEST:

CITY CLERK

Minutes Approved:

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NEW BUSINESS

MEMORANDUM TO COUNCIL

To: Mayor Branson and City Councilmembers

From: Aimée Kniaziowski, City Manager

Thru: Karl Swanson, Interim Finance Director

Date: February 26, 2015

Agenda Item: **V. a. Resolution No. 2015–08, Adopting an Alternative Method for the FY15 Shared Fisheries Business Tax Program and Certifying That This Allocation Method Fairly Represents the Distribution of Significant Effects of Fisheries Business Activity in Fisheries Management Area 13: Kodiak Island**

SUMMARY: Resolution No. 2015–08 adopts an alternative allocation method and certifies that the allocation method fairly represents the distribution of significant effects of Fisheries Business activity in Fishing Management Area (FMA) 13. This resolution adopts an alternative allocation from the long form, which has been used in the past. This departure from the use of the long/standard form is decided on an annual basis and is being done to maximize city revenues. Staff recommends Council adopt Resolution No. 2015–08.

PREVIOUS COUNCIL ACTION: For the past thirteen years the City Council has approved a resolution certifying the Shared Fisheries Business Tax Program application on the long-form using the standard method. By using the long form, the City of Kodiak has received a greater allocation of the Shared Fisheries Business Tax from the State of Alaska for five of the last seven years.

BACKGROUND: The State of Alaska Shared Fisheries Business Tax Program was created in 1990 to help municipalities impacted by the effects of the rapidly expanding offshore fish processing industry. A previously existing fish tax sharing program (commonly referred to as the Raw Fish Tax Program), administered by the Department of Revenue, shares back to municipalities half of the state fisheries business tax collected from fish processors operating inside municipal boundaries. The Department's program extends tax sharing to include a sharing of fish taxes collected outside of municipal boundaries, primarily from floating processors.

There are two application methods available to the municipalities in each Fisheries Management Area

1. Under the **Standard Method**, each municipality in the FMA must determine and document the cost of fisheries business impacts experienced by the community in the previous calendar year. These impacts are submitted by each municipality in their applications. The

department reviews the applications and determines if the impacts submitted are valid. Once the impacts have been established for each of the municipalities in the FMA, the department calculates the allocation for each municipality using the following formula:

One half of the funding available within a FMA is divided up among participating municipalities on the basis of the relative dollar amount of impact in each municipality. The other half of the funding available to that area is divided equally among all eligible municipalities.

2. Under the **Alternative Method**, municipalities within the FMA agree on a distribution formula. The department only approves the use of a proposed alternative method if all the municipalities in the area agree to use the method, and if the method includes some measure of the relative effects of the fishing industry on the respective municipalities in the area.

   The proposed alternative method would divide half of the funding available equally among all eligible municipalities. The other half would be divided based on population.

Due to the time and expense involved in determining and documenting the standard method, all but one of the FMA's have used the Alternative Method to determine the allocation of the Shared Fisheries Business Tax for the past several years. The Kodiak Management Area, FMA13, is the only FMA in Alaska that used the long form to distribute the Shared Fisheries Taxes to the communities.

DISCUSSION: The municipalities located in this region's FMA include Akhiok, Kodiak, Kodiak Island Borough, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions. The FY2015 program allocation to be shared within this area is estimated to be $189,360.25 compared to be $282,363.03 in FY2014. The program requires that funding be first allocated to fisheries management areas around the state based on the level of fish processing in each area compared to the total fish processing for the whole state. Then the funding is further allocated among the municipalities located within each fisheries management area based on the relative level of impacts experienced by each municipality.

Based on the large capital expenditures made by the other municipalities in FMA13, it appears unlikely that the City of Kodiak will receive a larger piece of the already smaller pie in FY2015 by using the standard method. Using the alternative method this year does not preclude the City from using the standard method in future years.

The standard method used by the Kodiak FMA, has used a study done by the McDowell Group in 2001 that determined the 64 percent of certain (mostly capital) costs are considered significant effects on the community. The Department of Commerce, Community, and Economic

Development has decided that this study does not currently reflect the economics of the Kodiak region and, therefore, will require municipalities to justify how significant their costs are starting next year.

Based on the significantly lower program allocation, the lack of a current study and the significant cost of preparing the standard form, the City of Kodiak feels that the alternative method will provide more money, and less cost, to the City for impacts from fisheries-related activities in the community.

ALTERNATIVES:

1) Adopt Resolution No. 2015–08, which is the staff recommendation, because it provides the City with funding to offset impacts to fisheries business conducted in Kodiak.
2) Council could require the City to complete the standard method application. This is not recommended, because it would result in a smaller share going to the City.

FINANCIAL IMPLICATIONS: By completing this application, the City will receive funding from the Department of Commerce, Community and Economic Development. In FY2014 the City received $106,435.54 through this program. This funding is recorded in the general fund. The Shared Fisheries Tax Program provides for a sharing of State Fisheries Business Tax with municipalities that can demonstrate they suffered significant effects during the program base year from fisheries business activity in their respective fisheries management area.

STAFF RECOMMENDATION: Staff recommends Council adopt Resolution No. 2015–08, in order for the City to receive funding using the alternative method.

CITY MANAGER'S COMMENTS: The City has received for funds through this program since its inception, and Council approves application process for the funds by resolution each year. Receipt of the shared fisheries tax helps to offset expenses that result from impacts to the City's facilities, operations, and services created by fisheries activities. I support staff's recommendation that Council adopt Resolution No. 2015–08.

ATTACHMENTS:

Attachment A: Resolution No. 2015–08
Attachment B: DCCED FY15 Shared Fisheries application letter

PROPOSED MOTION:

Move to adopt Resolution No. 2015–08.

Attachment A

CITY OF KODIAK
RESOLUTION NUMBER 2015–08

A RESOLUTION OF THE COUNCIL OF THE CITY OF KODIAK ADOPTING AN ALTERNATIVE ALLOCATION METHOD FOR THE FY15 SHARED FISHERIES BUSINESS TAX PROGRAM AND CERTIFYING THAT THIS ALLOCATION METHOD FAIRLY REPRESENTS THE DISTRIBUTION OF SIGNIFICANT EFFECTS OF FISHERIES BUSINESS ACTIVITY IN FISHERIES MANAGEMENT AREA 13: KODIAK ISLAND

WHEREAS, AS 29.60.450 requires that for a municipality to participate in the FY15 Shared Fisheries Business Tax Program, the municipality must demonstrate to the Department of Commerce, Community, and Economic Development that the municipality suffered significant effects during calendar year 2013 from fisheries business activities; and

WHEREAS, 3 AAC 134.060 provides for the allocation of available program funding to eligible municipalities located within fisheries management areas specified by the Department of Commerce, Community, and Economic Development; and

WHEREAS, 3 AAC 134.070 provides for the use, at the discretion of the Department of Commerce, Community, and Economic Development, of alternative allocation methods which may be used within fisheries management areas if all eligible municipalities within the area agree to use the method, and the method incorporates some measure of the relative significant effect of fisheries business activity on the respective municipalities in the area; and

WHEREAS, The City of Kodiak proposes to use an alternative allocation; and

WHEREAS, method for allocation of FY15 funding available within the Fisheries Management Area 13: Kodiak Island in agreement with all other municipalities in this area participating in the FY15 Shared Fisheries Business Tax Program.

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Kodiak, Alaska, certifies that the following alternative allocation method fairly represents the distribution of significant effects during 2013 of fisheries business activity in FMA 13: Kodiak Island:

All municipalities share equally 50% of allocation; all municipalities share the remaining 50% on a per capita basis.

The Kodiak Island Borough population is reduced by the population of the Cities of Akhiok, Kodiak, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions

CITY OF KODIAK

_____

MAYOR

ATTEST:

_____

CITY CLERK

Adopted:

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development
DIVISION OF COMMUNITY AND REGIONAL AFFAIRS
P.O. Box 110809
Juneau, Alaska 99811-0809
Main: 907.465.4733
Programs fax: 907.465.4761

Attachment B

November 14, 2014

I am pleased to present to you the FY15 Shared Fisheries program application. The application is due by February 15, 2015. As I discussed with staff when I visited your community in September, FMA 13 is unique in that a long form application using the standard method has been chosen due to the absence of an agreed upon allocation amongst all the communities in your FMA. However, the communities have agreed to use the study from 2001 by the McDowell Group regarding the measurement of impact that the fishing industry creates within the Kodiak Borough. If you do not have a copy of the study, please let me know and I will forward a copy to you by email. I was able to obtain it from the McDowell Group in October.

While visiting each community, it was almost unanimous that exploring an alternative allocation would be favorable. However, that decision must be unanimous in order for the agreed upon allocation to be accepted by DRCA. I encourage your Mayors to have those discussions amongst themselves if they should be so inclined. With that in mind, I did attach a couple of samples (these are just examples and the possibilities are endless on the allocation as long as the guidelines are followed) for you to review. If an allocation were to be explored, DCRA must receive notice of the agreement by January 15, 2015. If your FMA continues to use the standard method, the application with the Significant Effects forms must be received by February 15th.

If you have any questions, please feel free to contact me. Since I worked with staff in each of the seven communities on the significant effects forms, I am confident that they are now more user-friendly to all.

Sincerely,

Danielle Lindoff

Danielle Lindoff
Acting Program Manager
Community Aid and Accountability
Division of Community and Regional Affairs

MEMORANDUM TO COUNCIL

To: Mayor Branson and City Councilmembers

From: Aimée Kniaziowski, City Manager

Thru: Mark Kozak, Public Works Director MK

Date: February 26, 2015

Agenda Item: **V. b. Acceptance of Downtown Water, Sewer, and Storm Drain Master Plan, Project No. 07-15/7021**

SUMMARY: Staff recommended and the City Council approved the Downtown Water, Sewer and Storm Drain Master Plan in October 2007. The City advertised an RFP for the downtown master plan and two engineering firms submitted proposals. The City selected DOWL and the project was awarded. The primary goal was to evaluate existing utilities for sizing and particularly routing in order to begin the replacement of the old utility system. DOWL presented the final draft of the Master Plan to the City Council at the January 6, 2015 work session and comments and corrections were completed. Staff is recommending the Council accept by motion the Downtown Water, Sewer and Storm Drain Master Plan and we beginning working on the improvements as funds can support the phased projects.

PREVIOUS COUNCIL ACTION: In October 2007 the City Council authorized a professional services contract with DOWL Engineers for the Downtown Water, Sewer and Storm Drain Master Plan.

BACKGROUND: The water and sanitary sewer utilities in downtown Kodiak were replaced with asbestos-cement (AC) pipe immediately after the 1964 earthquake and tsunami that destroyed most of the downtown area. This AC pipe is at the end of its useful life (30 year expected life) and needs to be replaced. The storm drains are corrugated metal pipe that are rusting out and need to be replaced as well.

The primary reason the City desired to use a master plan for its downtown utility replacement project is because of the way the utilities are laid out in the downtown core and the tremendous impact utility replacement projects will have on the entire downtown area.

DISCUSSION: In October 2007 the Council authorized a downtown master plan be written to begin the replacement of the existing water, sewer, and storm drainage utilities. The project started with an extremely detailed survey of the entire utility system, which included an effort to locate all of the existing water and sewer connections. The purpose of this level of detail was to evaluate the sequencing of the utility replacement, as well as the potential to eliminate some of the existing water system.

An example of this planning is the water system around the Mall consists of water mains in both front and back of the buildings. When the Mall was developed some of the buildings have domestic water services off the front and fire lines off the back. The main in the front section of the Mall is at basement

level and within a couple of feet of the building foundations. This main is extremely high risk because of the potential damage to the buildings in the event of a failure. By working toward getting all buildings around the Mall off the back water main, we can eliminate the water main in front of the buildings. This will help reduce overall cost as well as reduce potential conflict between water and sewer if we tried to move the utilities out away from the buildings.

A primary goal of the Master plan was to re-route the utilities to eliminate some of the water system and at the same time improve service to all the buildings. We also are correcting separation deficiencies between the water and sewer/storm systems to meet current regulation requirements.

The sequencing of the phases for the entire downtown focused on meeting current and projected system needs with a goal of reducing the amount of work that is overlapped while under construction. In order to make the improvements, particularly in the Mall, we have to start at the outside and work our way in to the interior. By working from the outside in, we can eliminate the small section of the utilities around the inside of the Mall.

Another component included in each phase of the downtown replacement project includes coordination with other utilities such as KEA, ACS and GCI. Each of these utilities has service thorough out the area. Many of the KEA infrastructures are of the same age as our water and sewer systems. As we plan, design and build projects, the other utility companies will be able to replace and upgrade their system as well.

The need for the upgrades is critical; however, the cost of each phase of the project will require multiple years to put together adequate funding. Funding will be the determining factor in the timing of each phase to rebuild the downtown utilities.

Another significant impact is the effect the State funding level has on the Alaska Municipal Matching Grant (AMMG) program. The City has been extremely successful utilizing this program. Since 2003 almost all of the water and sewer projects have received AMMG funding assistance. Within resent years the funding for this program has dropped from the mid-$20 million to under $10 million this year. Each community in the State that operates a public water or sewer system completes for these grant funds. In State FY2016 only four communities are in the budget to receive AMMG funds.

ALTERNATIVES: The existing utilities are well beyond expected service life. The amount of work that went into the Downtown Master plan has prepared a solid document that can be used well into the future for a systematic approach in replacing the existing utilities within the downtown core area. This project is about providing continuous dependable water and sewer utility service to our processing industry as well as our downtown businesses. We need to work toward a funding plan to support this replacement in order to avoid the extremely serious situation of failing utility service.

FINANCIAL IMPLICATIONS: The Downtown Water, Sewer and Storm Drain Master Plan are based on a phased approach with each project dovetailing off the previous project. The total estimated value of construction is roughly $24 million at today's cost. This does not include taking each phase from approximately 35 percent design to final design, permitting, bidding, and construction management. The construction estimate does not include the normal 10 percent contingency that we would consider appropriate. During the master plan work geo-tech work was performed on Center Street and Marine Way. This test work revealed some potential environmental issues with petroleum contamination within the right-of-way. This is a very limited sample, but it shows each project is at risk of having to deal with environmental contamination that will require response by the City at unknown cost.

In order to successfully rebuild the downtown area, utility rates need to be set to include this ongoing capital improvement plan. Continued effort to acquire AMMG or EPA grant funding for water and sewer replacement is critical, since paying for these projects from rate payers alone is not realistic. In future utility rate setting, decisions will have to be made to determine the use of ADWF or ACWF loans. Part of the rate studies can include evaluating the impact on rates and determine if the uses of loans are beneficial to the rate payers in the long term.

A critical part of the downtown project funding is the roughly 30 percent of the cost that is the responsibility of the Street fund (general fund). The water and sewer utilities cannot cover the cost of storm drainage and a lot of the surface improvements. Experience from past utility projects show the cost sharing is really close to even thirds between water, sewer and storm and street responsibilities. The current general funding for the street project is not covering its responsibilities on our utility replacement projects. If the general fund can cover its responsibilities, this in turn reduces the impact to utility rates for water and sewer.

STAFF RECOMMENDATION: Staff recommends that the City Council accept the Downtown Water, Sewer and Storm Drain Master Plan by motion.

CITY MANAGER'S COMMENTS: *[Any additional comments will be made at the meeting.]*

ATTACHMENTS:

Attachment A: Downtown Water, Sewer and Storm Drain Master Plan

PROPOSED MOTION:

Move to accept the 2015 Downtown Water, Sewer, and Storm Drain Master Plan from DOWL.

Attachment A

CITY OF KODIAK

Downtown Water, Sewer, and Storm Drain Master Plan

February 2015

DOWL

CITY OF KODIAK
DOWNTOWN WATER, SEWER, AND STORM DRAIN
MASTER PLAN

Prepared for:

City of Kodiak
2410 Mill Bay Road
Kodiak, Alaska, 99615

Prepared by:

DOWL
4041 B Street
Anchorage, Alaska 99503
(907) 562-2000

W.O. 59822

February 2015

FIGURES **Page**

TABLES

APPENDICES (See attached CD)

LIST OF ACRONYMS

ACP ..... asbestos cement pipe
ACS ..... Alaska Communication System
cfs ..... cubic feet per second
City ..... City of Kodiak
CMP ..... corrugated metal pipe
CPEP ..... corrugated polyethylene pipe
DEC ..... Department of Environmental Conservation
DIP ..... ductile iron pipe
DOT&PF ..... Department of Transportation and Public Facilities
fps ..... feet per second
GCI ..... General Communications Inc.
gpm ..... gallons per minute
HDPE ..... high-density polyethylene
I/I ..... Inflow and Infiltration
KEA ..... Kodiak Electric Association
MCMT ..... Mill Creek Management Technology
MGD ..... million gallons per day
PVC ..... polyvinyl chloride
ROW ..... right-of-way
VEI ..... VEI Consultants

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EXECUTIVE SUMMARY

Key Aspects of the Plan:

- A comprehensive analysis of the existing infrastructure, the existing demand and capacity of the water, sewer, and storm drain utility lines. The plan identifies required infrastructure needs and discusses proposed alternatives and alignment improvements throughout the Downtown Area.
- The plan proposes six phased projects to accommodate the proposed improvements. It also includes a planning level cost estimate for each phase.

Other Important Points:

DOWL HKM prepared the attached plan, with help and input from City of Kodiak staff. Several subconsultants were also included during the development of the plan as identified in this report.

The emphasis of the proposed improvements is to allow for;

- an increase in efficiency in the sanitary sewer system through improved network layout and by increasing the capacity of the sanitary sewer system,
- an increase in water system redundancy and available supply of water to Kodiak's downtown, primary industrial sector, and
- upgrades to the storm drain system, including repairs to the primary outfall lines that pass below/next to the old Food-For-Less building, and realignment of storm drain mains to reduce construction costs.

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1.0 INTRODUCTION

The Downtown Kodiak Water, Sewer, and Storm Drain Master Plan investigates water, sanitary sewer, and storm drain utility lines running in and through the downtown Kodiak area (Figure 1). The goals of the Master Plan consist of determining existing and future water demand and sewage flows, capacity of the infrastructure, and recommending improvements and potential realignment of these utilities to better serve the community.

The initial scope of work to achieve the goals of the plan began with an evaluation of the downtown area to determine the project limits and form project boundaries. The City of Kodiak assisted by identifying utility corridors that were vital to their system operations and sections of utility lines that exhibited issues in the past. These issues include observed high flows in the sanitary sewer system, a history of deteriorated storm drain mains, and the recognition of the need for system redundancy and potentially higher service capacity in the water distribution system.

Once the boundaries were defined, field investigations began that included a topographic base map survey of the project area and geotechnical investigations. These field investigations were coupled with a review of record drawings and system operational data from water metering, water storage, and wastewater treatment facilities received from the City of Kodiak Public Works Department to allow basic system modeling and capacity evaluations. Also included in the original scope was the development of a Landscaping Master Plan to be implemented as part of the proposed reconstruction. Public outreach was included as an additional service and complimented the Landscape Master Plan effort.

A conceptual utility layout was formed, followed by the development of additional scopes of work added to fill in unknown information. These scopes included;

- a detailed review of water and sanitary sewer services (approx. 130 services, including fire service connections),
- a Phase 1 Environmental Site Investigation, and
- a storm drain structural assessment.

These topics are discussed in more detail in later sections of this report.

Figure 1: City of Kodiak Vicinity Map

2.0 EXISTING CONDITIONS

The project area, as shown in Figure 2, is approximately 25 acres and contains a dense development of approximately 50 businesses. Seven industrial seafood processors are located along Shelikof Street and Marine Way. The seasonal fluctuations associated with the fishing industry create a high and varying demand for potable water. Large amounts of inflow and infiltration upstream of the project area place stress on the sanitary sewer utilities during portions of the year. The downtown area collects and transfers sanitary sewage and stormwater through gravity mains that originate from outside the project area, primarily in the higher elevations to the north. The project area is an essential link for these major utilities.

2.1 Recent Improvements

In 2008, the Alaska Department of Transportation and Public Facitlites (DOT&PF) completed the reconstruction of the Kodiak Wye Intersection. The project corridor included approximately 800 feet of Rezanof Drive and 400 feet of Lower Mill Bay Road, extending from Marine Way north past the wye intersection of Lower Mill Bay Road to Thorsheim Street. Prior to the road improvements, in May of 2007 the City of Kodiak performed utility upgrades through this high traffic area. These utility upgrades are the initial phase of the Downtown Master Plan Improvements. The primary utility improvements included upsizing sanitary sewers, and water mains and redirecting the storm drain into the right-of-way (ROW).

2.2 Locating Existing Utilities

DOWL HKM efforts began with a survey of the existing utilities in the project area (Figure 2). Water and sewer service locations were revised based on review of record drawings and the Public Works Department's extensive experience in the project area. The information was then combined into a final utility base map (Appendix A). Using available data, the base map reflects the location of utility mains and services, to the extent practical, throughout the downtown area. A thorough understanding of the existing utilities was critical when evaluating proposed alignments.

Figure 2: Project Area

2.3 Water Distribution System

Existing Water Infrastructure and Operation

The potable water supply for the downtown Kodiak area originates from the Monashka and Pillar Creek Reservoirs, and is pumped into the Upper Bettinger dam. The raw water is piped and treated at the chlorination treatment plant and then stored in storage tanks on Pillar Mountain Road. Water is then supplied by gravity flow to the city. The water system in the Downtown project area operates at a static pressure of approximately 110 psi and a residual pressure of approximately 85 psi.

The majority of the water main infrastructure in the downtown area was constructed in the early 1960s, ranging in diameter from 6-inch through 12-inch and composed of asbestos cement pipe (ACP). This pipe is nearing the end of its design life as indicated by an increase in emergency repairs.

Typical deficiencies include broken services due to freezing conditions and inadequate valves for isolation. The water services for Key Bank at 422 Marine Way and Subway at 326 Center Street burst during the winter of 2011/2012. There was a break in the main line located in Center Street near the Baranov Museum the same winter. The break occurred at a valve that controlled an uncapped stub out and caused extensive damage to the roadway section.

The Safeway Liquor Store, Henry's Restaurant, and the Treasury are served by the same water main located at the rear of the buildings. The existing valves do not allow for isolation of the Safeway Liquor Store at 512 Marine Way. The water can only be turned off by closing the main line valves which interrupts service to the other businesses as well. Existing utilities and businesses are shown in further detail in the base map located in Appendix A.

2.3.1 Existing Water Alignments

Water flows to the downtown area through transmission mains extending from the City of Kodiak's (City) water treatment plant on Pillar Mountain Road. Over the last seven years, the City has implemented several water main improvement projects within the Aleutian Homes Subdivision and along Rezanof Drive that increased the diameter of the transmission main

serving the downtown area to 20 inches. Figure 3 illustrates the existing water main distribution system.

The existing downtown water system (Figure 3) consists of 6-, 8-, and 12-inch ACP. Alignments are generally located near the edge of pavement with the exception in the Mall area. Most of the Mall businesses receive their domestic water from a main located below the Mall sidewalk approximately four to six feet from the building foundations. Several of the Mall businesses receive their fire protection from main lines located at the rear of each building.

Existing Water Demand and Capacity

Water service and supply facilities for businesses and residential consumers within the project area has met the existing demand.

Water meter information provided by the City of Kodiak spanning 5 years from January 2007 to December 2011 was used to estimate current water usage. The primary water demand within and adjacent to the project area are seafood processors. The average monthly water use by seafood processors was calculated as summarized in Table 1.

Figure 3: Existing Water Mains

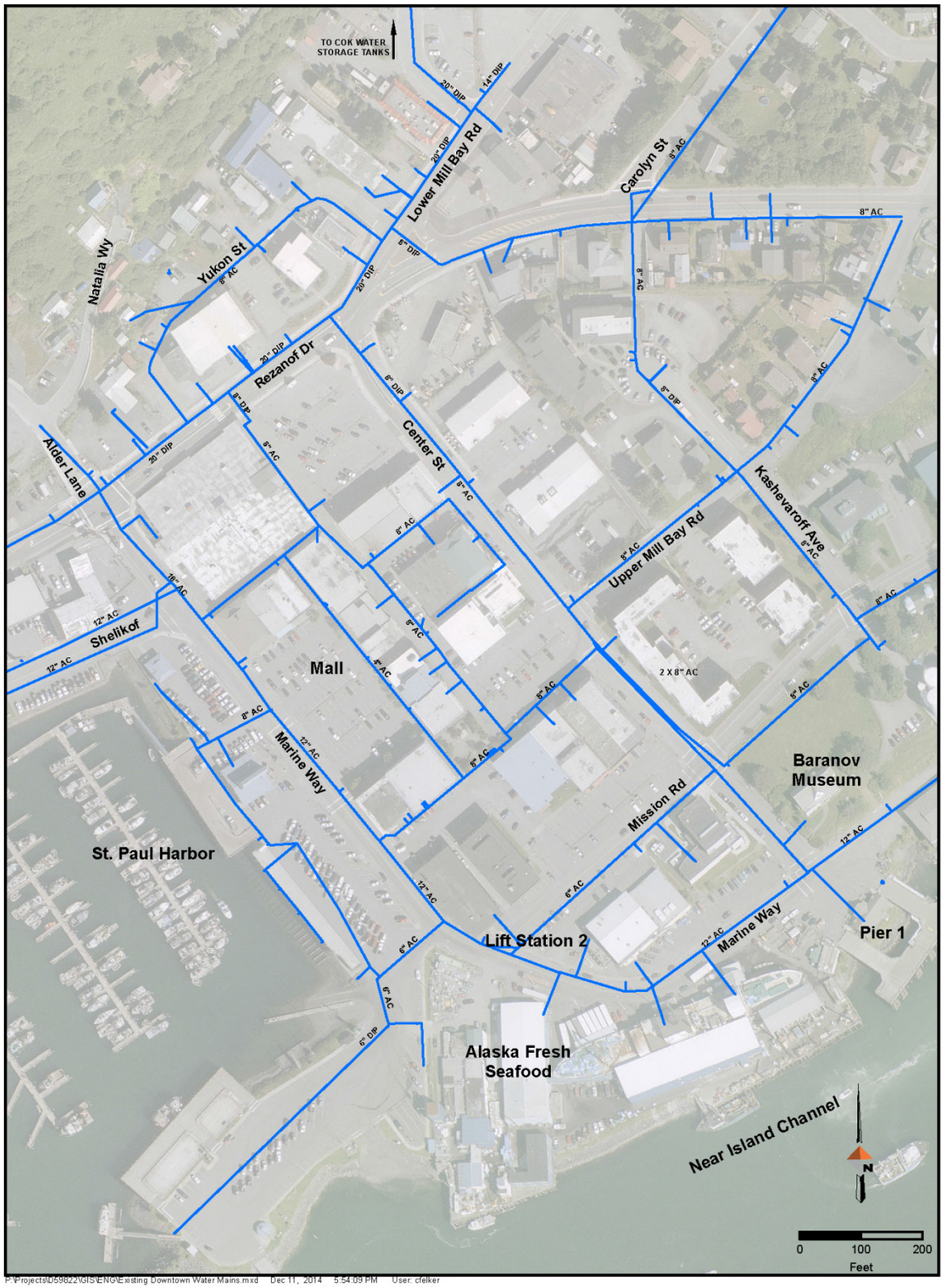


Table 1: Seafood Processor Information and 5-Year Average Monthly Water Usage (2007-2011)

Seafood Processor	Downtown Area	Shelikof Area	Marine Way (Outside Project Area)	Address	Average Monthly Water Usage (Gallons)
*Alaska Fresh Seafoods	X			105 Marine Way	1,383,987
Trident Seafoods Corporation	X			111 Marine Way	2,704,284
Trident Seafoods Corporation	X			111 Marine Way	4,099,622
Trident Seafoods Corporation	X			111 Marine Way	7,298,209
Alaska Pacific Seafoods (shrimp plant)		X		627 Shelikof	10,900,865
Alaska Pacific Seafoods (crab plant)		X		627 Shelikof	743,615
Kodiak King Crab Inc.		X		621 Shelikof	5,379,400
Kodiak King Crab Inc. (Ocean Beauty Seafoods)		X		621 Shelikof	442,879
Kodiak King Crab (Ocean Beauty Seafoods)		X			6,509,702
Kodiak King Crab		X		New Freezer Bldg	96,954
Kodiak Fishmeal		X		911 Gibson Cove	1,050,825
Pacific Pearl c/o International Seafoods		X		517 Shelikof Street	10,105,815
Western Alaska Fisheries		X		521 Shelikof	464,280
Western Alaska Fisheries		X		521 Shelikof	7,499,282
Western Alaska Fisheries		X		Shelikof Street, 1111 3rd Ave Bldg	937,040
Western Alaska Fisheries		X		521 Shelikof Street	4,588,634
Island Seafoods		X		317 Shelikof St	732,939
Island Seafoods		X		317 Shelikof St	541,627
International Seafoods (Bunkhouse Eagle)			X	714 Marine Way	75,550
International Seafoods of Alaska			X	612 Marine Way	162,520
Global Seafoods			X	800 Marine Way East	4,343,527
Global Seafoods			X	800 Marine Way East	2,496,842
				Total	**72,558,398**

*Facility was removed in 2014. A new Trident processing plant is scheduled for construction in the winter of 2014.

Table 2 summarizes the seafood processor water usage by project area.

Table 2: Seafood Processor Water Usage by Area

Seafood Processors By Area	Seafood Processing Water Use Distribution 2007-2011 (gallons per month)	% of Total Seafood Processor Use
Downtown	15,486,102	21%
Shelikof Area	49,993,857	69%
Marine Way East (Outside Project Area)	7,078,439	10%
Total	**72,558,398**	**100%**

To demonstrate the importance of providing redundancy in the system and maintaining service at all times to the seafood processors, the seafood processor water usage was compared against that used by the entire City of Kodiak as shown in Table 3. During the highest demand months, the seafood processors account for nearly 80 percent of the water used in Kodiak.

Table 3: City of Kodiak Versus Seafood Processor Water Usage (2007-2011)

	Time Period	City of Kodiak	Seafood Processors	% of Total City of Kodiak Use
Lowest Water Demand - Gallons per Month	December 2010	73,256,000	6,301,720	9%
Highest Water Demand - Gallons per Month	March 2011	216,401,000	171,333,380	79%
Gallons per Day		7,213,367	5,711,113	-
Gallons per Hour		300,557	237,963	-
Gallons per Minute		5,009	3,966	-
Average Water Demand - Gallons per Month	2007 - 2011	146,425,483	72,558,398	50%
Gallons per Day		4,880,849	2,418,613	-
Gallons per Hour		203,369	100,776	-
Gallons per Minute		3,389	1,680	-

City of Kodiak peak hour flow was recorded on March 19, 2011, at 7,600 gpm (gallons per minute). Applying the 79 percent of total City of Kodiak use from Table 3, the estimated peak hour demand by the seafood processors is estimated at 6,000 gpm.

2.4 Sanitary Sewer Collection System

Summary of Previous Studies

In 2005, the City of Kodiak contracted CH2M Hill to conduct an Inflow and Infiltration (I/I) Study to identify and reduce sources of I/I in the sanitary sewer system and to provide recommendations that included cost effective analyses for upgrades and repairs throughout the system. A model of the sanitary sewer system, calibrated using available data, was developed for the study using the citywide sanitary sewer system as it was in 2005. The model assumed a 5-year, 24-hour rainfall event which CH2M Hill cited as a basis for developing capital improvements projects. For purposes of the I/I study, the model was very generalized and did not closely evaluate the capacity of existing sewer mains in the downtown area. For purposes of this study, additional analysis and modeling was performed to properly evaluate the downtown sewer mains.

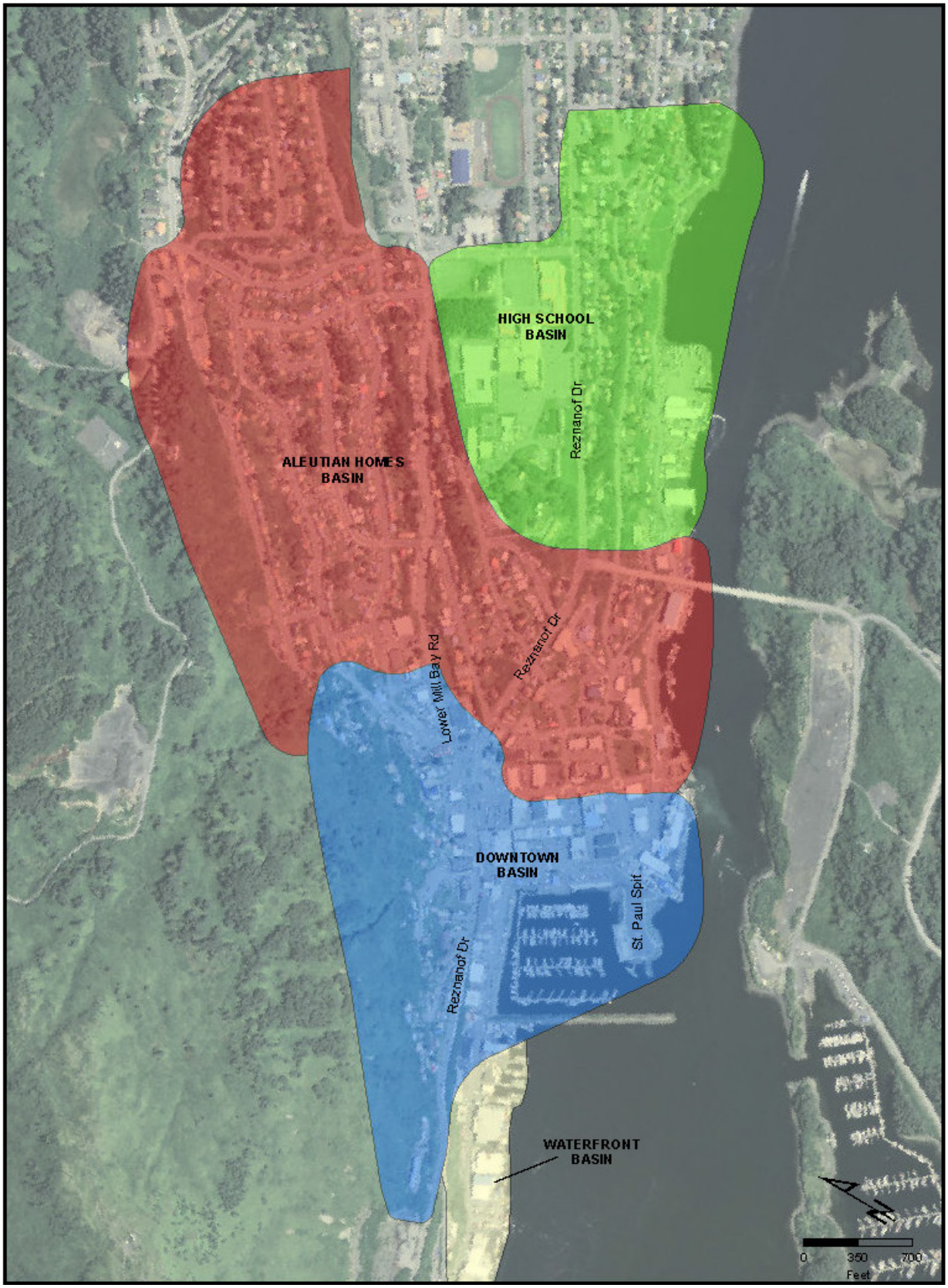
In 2012, DOWL HKM submitted an evaluation of Lift Stations 1 & 2. This evaluation looked at sewage flows into and from the lift stations and their surrounding basins. The results of the evaluation included upgrades to the lift stations with increased pumping capacity, increased storage capacity, and improvements to the electrical and control systems.

Existing Sanitary Sewer Infrastructure and Operation

Sanitary sewer service and capacity within the project area currently meets the sewage flows from area businesses and residential services.

The downtown sanitary sewer system collects wastewater from the Downtown Basin and transfers wastewater flowing from the Waterfront basin and the Aleutian Homes Basin (Figure 4).

Figure 4: Sanitary Sewer Drainage Basins



The downtown sewer system consists of 8-, 10-, and 12-inch asbestos cement mains (Figure 5). The gravity flow system collects at the southeast corner of downtown at Lift Station 2 and is located near the intersection of Mission Road and Marine Way. Lift Station 2 pumps the collected effluent through an 8-inch force main east along Marine Way to a manhole at the intersection with Center Avenue. Wastewater then gravity flows out of the downtown area northeast towards the wastewater treatment facility through a series of gravity and force mains that run along Marine Way outside the project area. The existing pump flow rate out of Lift Station 2 is approximately 700 gpm.

Waterfront Basin: Sanitary sewer flow enters the downtown area from the east through two 12-inch mains, one following West Rezanof Drive, and the other on Shelikof Street. This flow consists of sanitary sewer collected from approximately:

- 12 businesses;
- 35 residences; and
- 12 industrial facilities (primarily seafood processing plants).

Note that the industrial facilities contribute only their domestic wastewater to the system. Processing wastewater is discharged separately. Peak flow generated in the Waterfront Basin and entering the Downtown Basin is estimated at 130 gpm based on historical flows at Lift Station 1. The existing pump flow rate out of Lift Station 1 is approximately 540 gpm.

Aleutian Homes Basin: Flow enters the downtown area from the northeast via an 8-inch main and a 12-inch main, both originating on Lower Mill Bay Road. The 12-inch main exits Lower Mill Bay Road into a utility easement to the Erskine Subdivision to the southeast and the 8-inch main extends southwest along Lower Mill Bay Road to tie into a 10-inch main located on East Rezanof Drive. This flow is generated in the Aleutian Homes residential district from:.

- two businesses;
- 556 residences; and
- one industrial facility.

Figure 5: Existing Sanitary Sewer System

The City of Kodiak Public Works Department has identified capacity issues with the 12-inch sewer main extending from the Aleutian Homes Sewer Basin to East Marine Way. The 12-inch main that connects these two points originates at Lower Mill Bay Road and extends along utility easements to Center Avenue, and then follows Center Avenue to Marine Way. The capacity of this main is summarized in Table 4.

Table 4: Capacity of Existing 12-inch Sanitary Sewer from Lower Mill Bay to Center Avenue

Pipe Segment	Flow at Full Capacity	Flow at 50% Capacity
MH on Lower Mill Bay Road to MH at L109	964	288
MH at L109 to MH NW of Carolyn	964	288
MH NW of Carolyn St to MH at Carolyn St	740	221
MH at Carolyn Street to MH at E. Rezanof	964	288
MH at E. Rezanof to MH in Easement	636	190
MH in Easement to MH at Kashevarof Cir	1,244	372
MH at Kashevarof Cir to MH at 2nd Easement	5,053	1,509
MH at 2nd Easement to MH at Center St	2,123	634
MH at Center St to MH at Mill Bay	1,439	430
MH at Mill Bay to MH at Mission Rd	1,148	343
MH at Mission Rd to MH NW of Marine Way	1,723	514
MH NW of Marine Way to MH at Marine Way East	4,625	1,381

A summary of the hydraulic analysis is contained in Appendix B.

During extended rain events, this system exceeds the capacity of the 12-inch main due to excessive I/I and uses a 4-inch overflow line on Lower Mill Bay road, which has been observed to run completely full. The 4-inch overflow line allows some of the wastewater flow to divert into the 8-inch main on Lower Mill Bay Road, which then flows into the 10-inch main further southeast. The City had considered increasing the diameter of this overflow line to a 6-inch line in the future. Following further analysis of the main downstream of the bypass and along Rezonof drive, the 8- and 10-inch mains to the southeast do not have the capacity to accommodate an increase in the size of the bypass line. Table 5 shows the existing capacity of the gravity main from the overflow to the manhole on Rezanof Street at the intersection of Marine Way. The slope of the pipe is the variable used to determine the capacity.

Table 5: Capacity of Existing Sanitary Sewer from the Bypass Pipe to Rezanof Street

Pipe Segment	Flow at Full	Flow at 50%
MH at Overflow to 1st MH SW of Overflow	1,515	452
1st MH SW of Overflow to MH NE of Thorsheim	676	202
MH NE of Thorsheim to MH at Thorsheim	1,063	318
MH at Thorsheim to MH at Yukon Street	979	292
MH at Yukon Street to MH at Y Intersection	790	236
MH at Y Intersection to 1st MH Past Center	589	176
1st MH Past Center to 2nd MH Past Center	668	200
2nd MH Past Center to MH at Marine Way	668	199

A summary of the hydraulic analysis is contained in Appendix B.

Downtown Basin: The downtown basin encompasses the downtown study area and adjacent neighborhoods to the north and northwest and consists of:

- 35 businesses;
- 111 residences; and
- three industrial facilities.

Current peak flow passing through the Downtown Basin is estimated at 800 gpm based on existing flow data from Lift Station 2.

Flow capacities vary in each pipe segment due to change in pipe slope. Table 6 shows the current capacity of the sewer main along Marine Way.

Table 6: Capacity of Existing Sanitary Sewer Main on Marine Way

Pipe Segment	Flow at Full	Flow at 50%
Rezanof MH to MH SE of Rezanof	2,249	671
MH SE of Rezanof to Shelikof	2,061	616
MH at Shelikof to MH at Liquor Store	1,364	407
MH at Liquor Store to MH at Mecca Store	1,124	336
MH at Mecca Store to MH at Wells Fargo	1,123	335
MH at Wells Fargo to MH by LS2	1,376	411

A summary of the hydraulic analysis is contained in Appendix B.

2.5 Stormwater Collection System

2.5.1 Summary of Previous Studies

A drainage study of the downtown Kodiak area was completed by VEI Consultants (VEI) in 1992. The VEI drainage study was completed in support of the Alaska DOT&PF initiated Kodiak "Y" Intersection Improvement Project and was supplemental to the Mill Bay Road Drainage Study completed in 1991. (The Mill Bay Road Drainage Study was not available for review at the time of the present study.) The 1992 VEI Wye Basin Drainage Study, including a letter from VEI to the City of Kodiak Public Works Department summarizing recommendations, is included in Appendix C. The VEI study defined the area draining to the downtown area as the "Wye Basin," shown on page 5-2 of the attached study. The Wye Basin was divided into six subbasins for hydrologic and hydraulic modeling. Upon review of the VEI documentation, several shortcomings were identified that limit the effectiveness of the drainage study in evaluating the capacity of the existing storm drain systems relative to predicted peak flows. The identified limitations include:

- The drainage study does not identify the design storm used for recommending storm drain pipe sizes and capacities. A precipitation of 1.28 inches is included in the computations, but the source of this precipitation value is unknown. Readily available precipitation values used for estimating design storm events are several orders of magnitude higher than 1.28 inches. For example, 24-hour precipitation depths published in NOAA Atlas 14, Volume 7, Version 2 for the Kodiak Wastewater treatment plant are 4.01 inches, 4.76 inches, 5.37 inches, and 6.03 inches for the 10-, 25-, 50-, and 100 year storm events, respectively.
- The drainage study does not include the drainage basins encompassing Alder Lane and Natalia Way (to the northwest of the downtown area), the Aleutian Homes subdivision (to the northeast of the downtown area), or the southwest portion of the downtown area draining to Mission Road and Marine Way West. These areas all contribute stormwater runoff to the downtown area. As the storm drain systems are interconnected, having estimates for peak flows from all of these areas is necessary to accurately evaluate system capacities.

- Much of the area defined as Subbasin III in the VEI drainage study drains south along Center Street and Kasheverof Avenue to Mission Road, and not north to the Wye storm drain system as described in the drainage study. Due to the modeling program used in the VEI drainage study and the limited information provided, it is difficult to estimate the peak flows actually being contributed to each system under existing conditions.
- The area defined as Subbasin VI drains south across Rezanof Drive at existing conditions and does not contribute stormwater runoff to the downtown storm drain systems. This was noted in the VEI drainage study. This area was included in the study under the assumption that runoff from this area may someday be routed northwest along Rezanof Drive to the downtown area. The VEI study states that including Subbasin VI in their analysis does not result in significant changes affecting the required pipe sizes but this cannot be readily confirmed.

2.5.2 Existing Stormwater Design Criteria

To determine the effectiveness of the existing storm drain systems, the hydraulic capacity of the existing pipes must be compared to peak flow estimates for a design storm event. The City of Kodiak does not currently have specific design criteria specifying the design storm event to be used for sizing storm drain systems. A 10-year design storm, having an exceedance probability of 10 percent, is a commonly used design storm for residential storm drain systems and is used by the Municipality of Anchorage and Matanuska-Susitna Borough. The DOT&PF has specific criteria for sizing storm drain systems listed in the Alaska Highway Drainage Manual. The DOT&PF specifies a 25-year design storm for all storm drain system trunk lines with a 50-year design storm specified for systems in primary highways. As the City of Kodiak has experienced several 50-year storms and one 100-year storm in the past decade, we recommend that storm drain design should consider a 50-year storm at minimum. Existing storm drain systems will be evaluated for 50-year storm capacity for this study. We recommend that future storm drain improvements consider providing capacity for the 100-year storm.

2.5.3 Hydrologic Analysis

The existing storm drain system in the downtown area is an interconnected system of pipes consisting of four primary systems. The four primary systems are identified as the North System,

Northwest System, West System, and South System, as shown in Figure 6. The size of existing trunk lines is also included in Figure 6. The four systems collect stormwater runoff from the downtown area as well as significant drainage areas to the north and east on Pillar Mountain The existing storm drain alignments generally follow a sidewalk but can also be found below the roadway. Historically, the four systems drained to three separate outfalls, with flows from the Northwest System contributing to flows from the North System. However, with increased development in the downtown region over the past 50 years, the four systems have been subsequently interconnected. Stormwater runoff from all four systems combines along Marine Way West and discharges into St. Paul Harbor south of St. Paul Spit near Alaska Fresh Seafood cannery.

Four drainage basins were defined in order to determine runoff for 10-, 25-, 50-, and 100-year storm events. A map of drainage basins is presented in Figure 7. The drainage basins were defined based upon existing topographic maps and storm drain systems. The basins are primarily located within developed regions of Kodiak and the Southeast slope of Pillar Mountain, including undeveloped partially forested hillside. Figures 6 and 7 include the contributing size of each basin, in acres.

Hydrologic analyses were performed to determine peak flows for the design recurrence intervals. The 10-, 25-, 50- and 100-year peak flows were used to evaluate existing drainage infrastructure for flood conveyance capacities. The hydrologic data for this study was computed using the Soil Conservation Service (SCS) Graphical Peak Discharge Method. The SCS Method is based upon the United States Department of Agriculture National Resources Conservation Service's (NRCS) Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds. The input data required for the SCS Method includes the drainage areas, runoff curve numbers (RCN), the time of concentration (TC) and the associated precipitation values. The precipitation values were acquired from NOAA Atlas 14, Volume 17. TR-55 specifies that a Type I storm should be used for all of Alaska. However, the DOT&PF Highway Drainage Manual recommends using a Type IA storm for coastal regions of Alaska. This selection seems logical in this case as the coastal climate of Kodiak is more compatible to the coastal climate of Oregon and Washington, where Type IA storms are specified for use in TR-55, than to the interior regions of Alaska where Type I storms are specified.

Figure 6: Existing Storm Drain Systems

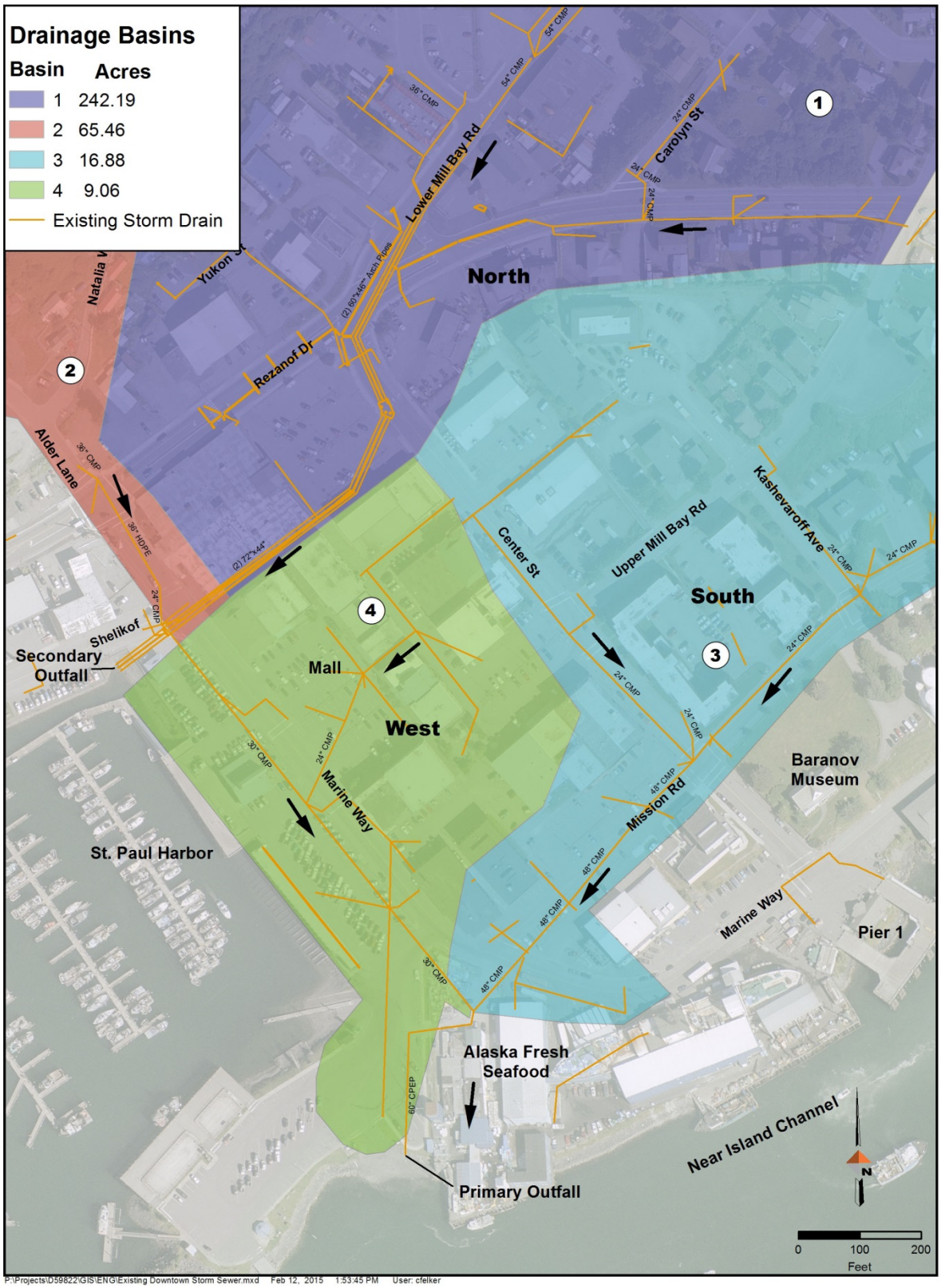
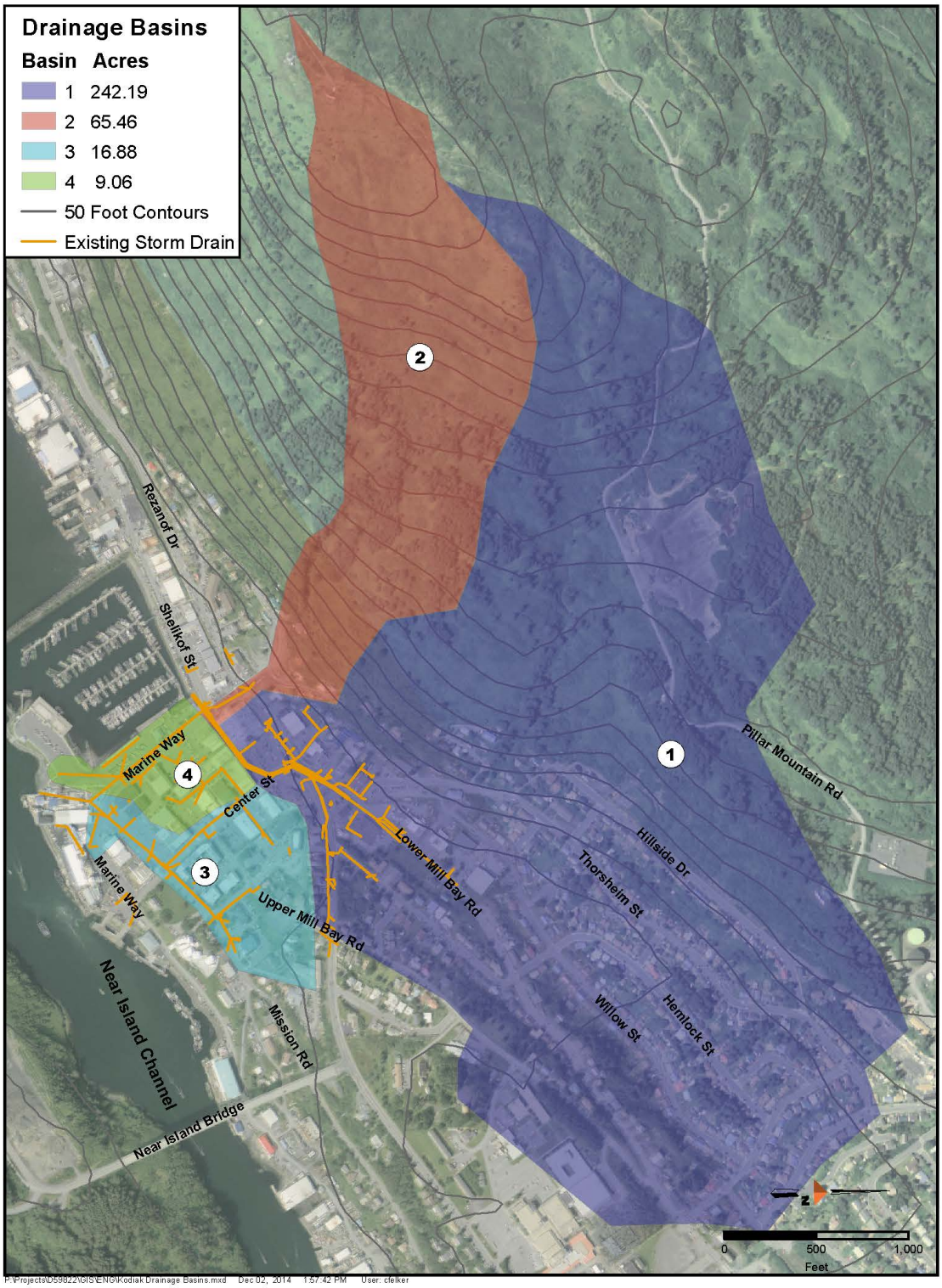


Figure 7: Drainage Basin Map



The SCS curve numbers are used to describe the surface characteristics of the drainage area and are based upon land cover and hydrologic soil type. Soils are grouped as Type A, B, C, or D based upon rates of hydrologic conductivity, where Group A soils have the most potential for infiltration and Group D soils have the least potential for infiltration. For this analysis, it was decided to classify all of the soils as Type C in order to be conservative in determining peak runoff flows and to take into account the fact that disturbed soils typically result in higher runoff quantities than undisturbed soils. After determining the hydrologic soil type, the RCN is determined based upon the land cover. For this analysis, an RCN of 72 was selected to represent partially forested areas (woods-grass combination, good condition), an RCN of 83 was selected to represent residential areas (¼ acre lots), an RCN of 94 was selected to represent commercial areas, and an RCN of 98 was selected to represent impervious areas, rooftops, and paved roads.

The T_c is the total time required for the runoff to flow from the most hydraulically remote point in the drainage basin to the point of investigation. Average basin slopes and flow lengths were determined for all four basins based upon topographical information. Slopes ranged from as low as 0.03 percent to 40 percent. The T_c was obtained using procedures described in TR-55 for each basin. The total T_c is the sum of the overland sheet flow, shallow concentrated flow and channel flow. The TR-55 computations for the SCS Method are included in Appendix C.

Results of the SCS Method for estimating runoff from the four basins are presented in Table 7.

Table 7: Summary of Peak Flow Estimates

Basin	Area (acre)	$Q_{10, 24hr}$ (cfs)	$Q_{25, 24hr}$ (cfs)	$Q_{50, 24hr}$ (cfs)	$Q_{100, 24hr}$ (cfs)
North	**237.9**	95	132	163	198
Northwest	**65.3**	19	28	36	45
West	**8.8**	8	10	11	13
South	**17.0**	14	17	20	23
Combined	**329.5**	**131**	**181**	**224**	**272**

2.5.4 Existing Stormwater System and Hydraulic Analysis

The four existing storm drain systems are evaluated below based on available survey data and information gathered from record drawings. Pipe capacities are compared to peak flows calculated in our hydrologic analysis as discussed below and summarized in Table 8: Summary

of Existing Storm Drain Systems. Storm drain systems were evaluated under the following assumptions:

- The hydraulic capacity of existing pipes was determined using Manning's equation based upon the flattest slopes of the trunk lines. Where pipe slopes could not be determined from survey data, slopes were taken from record drawings or assumed based on existing slopes of vicinity pipes and roadway surfaces.
- All hydraulic capacities were estimated assuming gravity flow. Pressurized flow was not assumed for any of the evaluated systems.
- Capacity estimates assume the existing pipes are in good condition and free of debris, sediment, and corrosion. However, considering the age of some of the existing systems, along with observed sedimentation in some systems, it is likely the hydraulic capacities of some pipes are less than the estimated values.

North System

Three general areas in and adjacent to the project area contribute runoff to the North System and are summarized as follows:

- The slope of Pillar Mountain uphill of Hillside Drive and East Hillcrest Avenue is included in the North System. Much of the runoff from this slope drains into the project area through a channel that terminates above Thorsheim Street to the south of the intersection with Lightfoot Avenue.
- The area encompassing Yukon Street and Hillcrest Street to the north of Lower Mill Bay Road, the northern portion of Center Street and area encompassing the "Y" intersection of Rezanof Drive and Lower Mill Bay Road, and much of the area to the north of Rezanof Drive (including portions of Carolyn Street and Mill Bay Road) are included in the North System.

The Aleutian Homes area of Kodiak (consisting of the residential area including Thorsheim Street, Cedar Street, Lower Mill Bay Road, and much of the encompassing area) drains to the North System. The upstream portion of the North System consists of two parallel 60-inch by 46-inch corrugated metal pipe arches, draining roughly west along Lower Mill Bay Road from the

intersection of Thorsheim Street. This portion of the system receives combined runoff from the Aleutian Homes area and Lower Mill Bay Road. The two 60-inch by 46-inch pipe arches drain to a concrete vault in Center Street. The 60-inch by 46-inch pipe arches and vault were constructed as part of the DOT&PF Kodiak "Y" Intersection Improvements project constructed in 2008. The capacity of the two 60-inch by 46-inch pipe arches are equivalent to two 54-inch corrugated metal pipe (CMP) round pipes, and was modeled this way. The pipe arches were installed at an approximate slope of 1.1 percent, resulting in a hydraulic capacity of approximately 224 cfs.

The North System continues downstream from the concrete vault on Center Street as two parallel 72-inch by 44-inch corrugated metal pipe arches, also modeled as the equivalent to two 54-inch CMP round pipes. The pipe arches drain west on the south side of the former Food4Less and parking lot from Center Street to Marine Way West. A 12-inch CMP located adjacent to the sidewalk in front of Food4Less does not have sufficient cover and frequently freezes during winter months. The two 72-inch by 44-inch pipes were installed in the late 1960's. Survey data indicates that the pipe slope range from approximately 0.2 percent to approximately 1.2 percent. The resultant hydraulic capacity of two pipe arches is approximately 95 cfs, estimated for the downstream slope of 0.2 percent. This is approximately half of the hydraulic capacity of the new 60-inch by 46-inch pipe arches located east (upstream) of Center Street. The system enters a concrete vault in Marine Way West.Historically, runoff from the concrete vault in Marine Way West drained west through dual 72-inch by 44-inch pipe arches to St. Paul Harbor (southwest of the intersection of Marine Way West and Shelikof Drive). Sedimentation has been a documented problem at this outfall with sediment building up in the downstream portions of the pipe and in St. Paul Harbor. Poor circulation within the harbor exacerbates sediment accumulation. Periodic dredging has been required to remove accumulated sediment from the harbor. As a result, the vault in Marine Way West was modified with a weir directing runoff from the North System south via a 36-inch CMP trunk line connecting to the West System. The inlet of the 36-inch CMP was installed at the vault so that it is approximately two feet below the inverts of the existing 72-inch by 44-inch pipe arches. During smaller storm events, the majority of runoff from the North System is conveyed south and combined with runoff in the West System. During large storm events, excess runoff exceeding the capacity of the 36-inch CMP can overflow the weir and drain west to the existing outfall at St. Paul Harbor.

Our hydrologic analysis predicts a 50-year peak flow of approximately 163 cfs and a 100-year peak flow of approximately 198 cfs for the storm drain reach downstream of Center Street (the dual 72-inch by 44-inch pipe arches). The 50-year peak flow of 163 cfs greatly exceeds the hydraulic capacity (95 cfs) of the existing 72-inch by 44-inch pipe arches located downstream of Center Street. The two 60-inch by 46-inch pipe arches recently installed upstream of Center Street have adequate capacity (224 cfs) to convey these peak flows.

Northwest System

The Northwest System receives runoff from the area north of Rezanof Drive encompassing Alder Lane and Natalia Way. This system includes the slope of Pillar Mountain above Alder Way. The majority of the runoff from this slope drains via a channel that terminates at the corner of Alder Way and West Hillcrest Avenue.

Stormwater from the Alder Lane and Natalia Way area is collected by a piped storm drain system and routed south across Rezanof Drive via an existing 36-inch corrugated polyethylene pipe (CPEP) system. In Marine Way West, between Rezanof Drive and Shelikof Street, the 36-inch CPEP trunk line connects with an existing 30-inch CMP system. The 36-inch CPEP system has a hydraulic capacity of approximately 86 cfs (at an approximate slope of 1.4 percent), while the downstream 30-inch CMP system has a hydraulic capacity of approximately 39 cfs (at an approximate slope of 3.0 percent). The 30-inch CMP connects with the two 72-inch by 44-inch pipe arches conveying runoff from the North System at the concrete vault in Marine Way West.

Our hydrologic analysis predicts a 50-year peak flow of 36 cfs and 100-year peak flow of 46 cfs draining to the Northwest System. The 36-inch CPEP system has adequate capacity to convey these flows, but the downstream 30-inch CMP system capacity would be exceeded during a 100-year storm. The 30-inch CMP does have adequate capacity to convey the 50-year peak flow.

West System

The trunk line of the West System consists of a 36-inch CMP installed parallel to and immediately west of Marine Way West. This system drains an area encompassing the downtown area between Marine Way West and Center Street to the south of the Food For Less building and to the north of Mission Road. Catch basins at three points along Marine Way West convey runoff to the 36-inch trunk line. Several existing catch basins in the City of Kodiak public parking lots

located around the Kodiak Mall are connected to a 12- to 24-inch storm drain system that ultimately conveys runoff to the 36-inch trunk line at Marine Way West. The West System also receives runoff from the North System. The northern end of the existing 36-inch CMP in Marine Way West was connected to an existing storm drain vault near the intersection of Shelikof Street to reroute stormwater south and reduce sedimentation and associated dredging requirements in St. Paul Harbor.

The slope of the 36-inch CMP system ranges from approximately 0.2 percent to approximately 0.5 percent. The resultant hydraulic capacity of the system is approximately 16 cfs, estimated for the downstream slope of 0.2 percent. Even when discounting the runoff contributed by the West basin, this system is significantly undersized for the peak 50-year flow of 198 cfs and 100-year peak flow of 244 cfs contributed by the North and Northwest Systems, though high flows can overflow from the vault to St. Paul Harbor when the 36-inch CMP is at capacity. The West basin contributes additional runoff to the existing 36-inch CMP, with peak flows of 11 and 13 cfs predicted for the 50- and 100-year storms.

Runoff from the West System joins with runoff from the South System near the intersection of Marine Way West and Mission Road. Currently, the combined stormwater runoff from the West System (36-inch CMP) and South System (48-inch CMP) drains via a 60-inch CMP to the existing outfall location south of St. Paul Spit, crossing Trident Seafood property. The hydraulic capacity of the existing 60-inch CMP is unknown. As part of planned expansion at the Trident Seafood plant, the existing 60-inch CMP storm drain outfall is being relocated west to City property on the St. Paul Spit and replaced with a 60-inch CPEP pipe. Assuming a slope of 0.5 percent, which is typical of other pipes in the area, the capacity of the proposed 60-inch CPEP would be approximately 200 cfs. The proposed outfall is undersized for the 50-year peak flow of 224 cfs and 100-year peak flow of 274 cfs, but provides ample capacity for the 10-year peak flow of 131 cfs.

South System

The trunk line of the South System consists of 48-inch CMP installed in Mission Road between Marine Way West and Center Street. The system drains west to a manhole north of the Alaska Fresh Seafood processing facility, where stormwater runoff is combined with runoff from the West System before being discharged south of the St. Paul Spit via a 60-inch CMP. Existing catch basins located along Mission Road collect runoff and discharge through a 12-inch CMP to the 48-inch CMP trunk line. The system has a slope ranging from approximately 1.6 percent to approximately 3.4 percent, resulting in a hydraulic capacity of approximately 96 cfs (estimated for the downstream slope of 1.6 percent).

Upstream (east) of Center Street, the storm drain system branches, with two trunk lines draining to the 48-inch CMP system. A piped system consisting of 24-inch CMP trunk lines extends to the east along Mission Road, collecting stormwater runoff from the encompassing area. Our hydrologic analysis predicts a 50-year peak flow of 20 cfs and a 100-year peak flow of 23 cfs. The 24-inch CMP system has a capacity of 28 cfs, based on an approximate existing slope of 5.2 percent, which is adequate to convey these peak flows. The other branch of storm drain system is located in Center Street and consists of an 18-inch CMP trunk line draining south from approximately Kodiak Motors to Mill Bay Road. At Mill Bay Road, the pipe size increases to 24-inch CMP and continues to drain south to the 48-inch CMP at Mission Road. The 18-inch CMP has a hydraulic capacity of approximately 4.8 cfs (at an approximate slope of 0.7 percent) and the 24-inch CMP has a hydraulic capacity of approximately 9.5 cfs (at an approximate slope of 0.6 percent).

As future improvements are designed in the area, new storm drain systems should be designed to provide adequate hydraulic capacity based on the predicted peak flows.

Table 8: Summary of Existing Storm Drain Systems summarizes the existing storm drain systems in the downtown Kodiak area including the trunk lines of the four primary systems described above. Where available, the estimated peak flows contributing to the existing storm drain systems are listed.

Table 8: Summary of Existing Storm Drain Systems

System	Pipe Description	Discharge Point	Minimum Slope	Q_{full} (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
North	Dual 60"x46" pipe arches	Dual 72"x44" pipe arches in North System	1.1%	224	95	132	163	198
North	Dual 72"x44" pipe arches	36" CMP in West System/Outfall in St. Paul Harbor	0.2%	95	95	132	163	198
Northwest	36" CPEP in Alder Way	30" CMP in Marine Way West	1.4%	86	19	28	36	46
Northwest	30" CMP in Marine Way West	36" CMP in West System/Outfall in St. Paul Harbor	3.0%	39	19	28	36	46
North & Northwest Combined	36" CMP	60" CMP and outfall south of St. Paul Spit	0.2%	16	113	159	198	242
West	36" CMP	60" CMP and outfall south of St. Paul Spit	0.2%	16	8	10	11	13
South*	18" CMP in Center Street	24" CMP in Center Street	0.7%	4.8	-	-	-	-
South*	24" CMP in Center Street	48" CMP in Mission Road	0.6%	9.5	-	-	-	-
South*	24" CMP in Mission Road	48" CMP in Mission Road	5.2%	28	-	-	-	-
South	48" CMP	60" CMP and outfall south of St. Paul Spit	1.6%	96	14	17	20	23
All Systems Combined	60" CPEP	Outfall south of St. Paul Spit	0.5%**	200	131	181	224	272

*Peak flows not estimated for 18- and 24-inch pipes in upper reaches of South System.

**New outfall pipe is in design. Slope assumed based on slopes of other pipes in vicinity and to be conservative.

2.5.5 Adjacent Systems

An existing storm drain system is located to the north of the City of Kodiak Pier 1 at the intersection of Marine Way East and Center Street. The localized system consists of 12-inch CMP trunk lines and collects runoff from the intersection and discharges to Near Island Channel near Pier 1. The system has a hydraulic capacity of approximately 3.1 cfs (at an approximate slope of 2.7 percent). The peak flows draining to this system are unknown. If future drainage improvements are proposed for this area, consideration should be given to upgrading this system to increase capacity and alleviate demand on the St. Paul Spit outfall. The use of 30-inch CPEP, with a full-flow capacity of 31 cfs at a slope of 0.5 percent, is recommended as a minimum to provide adequate capacity to convey 100-year flows from the area and redirect runoff from the South System.

An existing storm drain system in Shelikof Street consists of 18- and 24-inch CMP trunk lines. This system collects stormwater runoff along Shelikof Street and portions of Rezanof Drive and drains west to an outfall along the north side of the St. Paul Harbor. The pipe capacities and peak flows draining to this system are unknown. Redirecting stormwater from Alder Lane (the Northwest System) to the outfall on Shelikof Street would alleviate demand on the existing 30-inch CMP in Marine Way West and reduce peak flows at the St. Paul Spit outfall. Rerouting runoff from the Northwest System would require installing new pipe draining west down Shelikof Street from Alder Lane. The use of 36-inch CPEP, with a full-flow capacity of 51 cfs at a slope of 0.5 percent, is recommended to provide capacity for the 100-year flow from the Northwest basin. Upgrading the existing storm drain system in Shelikof Street would likely be completed as part of a future street improvement project in this area.

2.5.6 Pipe Arch Condition Assessment

Being a critical segment of the City's storm drain system, the pair of 72-inch by 44-inch pipe arches passing through downtown Kodiak were evaluated for relocation. These culvert pipes, constructed in the 1960s, run parallel to each other for approximately 640 feet between a recently constructed vault on Center Street to the secondary outfall at the waterfront near Shelikof Street. They pass beneath several buildings located in the downtown area. This location is not ideal for operation and maintenance purposes, as well as posing a potential risk to safety and property if the pipe arches reach the end of their service life. The initial realignment evaluation determined

that relocating the storm drain pipes to Center Street would require deep and expensive excavation through a narrow road corridor bordered by multistory buildings. A decision was made to evaluate the possibility of maintaining the storm drain pipes in place.

Inspection Process

In November of 2013, the City of Kodiak contracted DOWL HKM to complete an inspection of approximately 600 feet of dual 72-inch by 44-inch storm drain pipe arch culvert. DOWL HKM subconsulted Extreme Access, Inc. to travel to Kodiak and inspect the storm pipes from the inside. Extreme Access, Inc. is an Oregon-based inspection and testing company specializing in projects that are complicated by difficult access and where traditional access and evaluation methods are unavailable. They have been providing inspection and testing services for over 23 years.

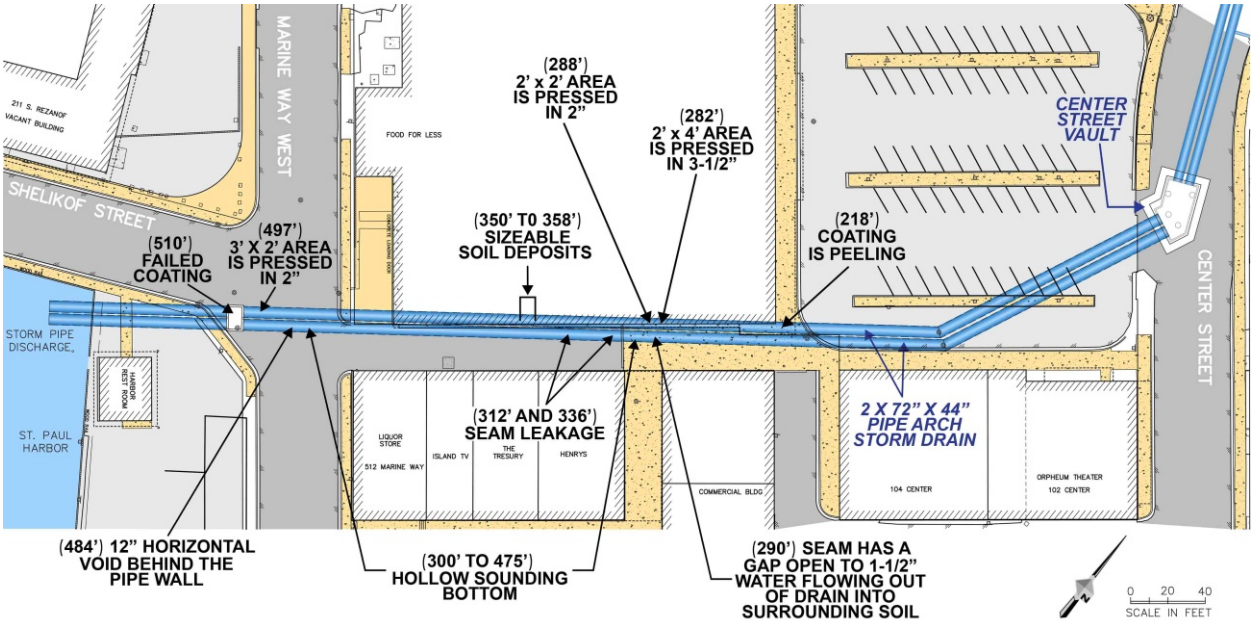
The scope of the inspection included ultrasonic wall thickness sampling, wall condition examination, coating examination, hammer sounding for missing fill, and seam condition examination.

Inspection Results

The inspection took place on February 12th and 13th of 2014. The condition of the pipe arches were determined to be in fair condition. A thick mastic coating that was applied during installation is still intact and in most locations has protected the steel from corrosion. At locations where lateral lines or manholes were torch cut into the pipe arches, the coating was damaged and corrosion was evident. Up to 11 inches of sediment was found inside the storm drain pipes.

There were noticeable defects including depressions on the top section of the pipe, minor lateral joint spreading, minor seam gaps, and potential voids behind the pipe walls, as shown in Figure 8. A full summary of the findings can be found in Appendix D - *Kodiak Storm Drain Inspection Report*.

Figure 8: Storm Drain Pipe Arch Assessment



Note: Distances shown are from Center Street vault.

3.0 DESIGN CRITERIA

Based on the goals and objectives of the Master Plan, the following design criteria are used for recommended upgrades to the utility systems. Most of these criteria can also be found inside the City of Kodiak's Standard Construction Specifications & Standard Details 2012.

Water Improvements

- Service lines shall have accessible separate isolation valves to allow for shut down for maintenance and operations.
- Main lines shall have isolation valve configurations to allow for isolation of separate sections of water mains for maintenance and operations.
- Water main separation distance from sanitary sewer or storm drain lines shall be a minimum of 10-horizontal feet, where practical.
- Water mains and service lines shall be buried at a depth allowing a minimum depth of cover of 5 feet, or installed with insulation board, for frost protection.

- Average day domestic/industrial demand = 4.88 Million Gallons per Day (MGD)
- Peak day domestic/industrial demand – 8.7 MGD.
- Peak hour domestic/industrial demand = 7,600 gpm.
- Fire flow requirements are 1,500 gpm.

Sewer Improvements

- Sanitary sewer mains and service lines will be reconfigured and reconstructed to match or exceed the existing pipe capacity.

Stormwater Improvements

A design storm event needs to be established to guide future storm drain improvements and allow for consistent evaluation of existing storm drain system capacities. Storm drain design criteria are typically based on design storm events. Conveyance design storms in other communities range from 10-year events (10 percent exceedance probability) to 50-year events (2 percent exceedance probability). Due to the high levels of precipitation common in Kodiak and numerous large storm events experienced in recent years, we suggest establishing the 50-year storm as the design event for future storm drain upgrades of City owned systems. Where cost effective and when design constraints allow, providing capacity for 100-year storm events should be considered. Storm drain improvements tying into DOT&PF storm drain systems should be designed to convey the 25-year peak discharge, at a minimum, to be consistent with DOT&PF storm drain criteria.

3.1 PROJECTED GROWTH

The City of Kodiak anticipates minimal renovations/additions to the downtown area. Among these are: a potential expansion to the Kodiak Inn, increasing the hotel's capacity by 80 rooms, and a potential transformation of Food for Less into office and retail space. These future improvements are not expected to have significant impacts on future water demand in the project area.

4.0 RECOMMENDED CAPACITY UPGRADES

4.1 Recommendations for Water System Capacity Upgrades

Assuming the Downtown seafood processors are served from Rezanof, the water main along Center Street or Marine Way will need to remain in service at all times. Currently only the water main along Marine Way is sized adequately to serve the seafood processors during peak flows. Reasonably sized pipes can be estimated from Equation 1:

$$\text{Equation 1: } D = \sqrt{\frac{C_f Q}{V}}$$

D = Estimate of required diameter
C_f = Unit conversion factor = 0.41 for Q in gpm, D in inches, V in ft/s
Q = Peak flow (gpm)
V = Maximum allowable velocity (ft/s).

Maximum allowable velocities are subjective and can vary from two feet per second (ft/s) to 10 ft/s depending on the system and the length of pipe in question. For the purposes of this evaluation, the maximum allowable velocity was assumed to be seven ft/s.

Design peak flows for the water main were estimated along Marine Way and Center Street for the following scenarios.

Scenario 1: Peak hour: Applying the peak hour seafood processor demand of 6,000 gpm as discussed in Section 2.2 and applying the 21 percent demand as summarized in Table 2, resulting in a peak flow 1,260 gpm for the water main serving the Downtown seafood processors.

Scenario 2: Peak day plus fire flow: Applying the peak day seafood processor demand of 3,966 listed in Table 3 and applying the 21 percent demand as summarized in Table 2 which equals 833 gpm. Adding a typical fire flow of 1,500 gpm results in a total peak day design flow of 2,333 gpm.

Scenario 2 results in the highest design flow and was used for the hydraulic analysis summarized in Table 9.

Table 9: Estimated Water Velocities at Peak Day Flow Plus Fire Flow

Estimated Flow by Area based on Peak Day Flow	With Contingency for Fire Flow (1,500 GPM)	Flow Velocity in 8-inch Main (FPS)	Flow Velocity in 12-inch Main (FPS)	Flow Velocity in 16-inch Main (FPS)
846	2,333	14.9	6.6	3.7

Using Equation 1, the preferred pipe diameter was estimated at 11.7 inches or a 12-inch nominal pipe diameter.

The remaining network of water mains serving the project area should be replaced with looped 8-inch mains meeting industry standards.

4.2 Recommendations for Sanitary Sewer Capacity Upgrades

Gravity Main

Based on the results of the capacity analysis of the gravity main systems entering the project area, increasing the pipe size of the Aleutian Homes Basin bypass from 4- to 6-inches is not recommended. The main line running along Rezanof Street does not have the capacity to accommodate the projected 500 gpm of additional flow that would come from the larger bypass pipe. This section of main would have to be replaced with a larger diameter main, which is not desirable due to the recent reconstruction of the roadway.

A long term solution for this problem is to upgrade the 12-inch sewer main from the Aleutian Homes Basin between Lower Mill Bay Road and East Marine Way. A preliminary sizing analysis shows that by increasing this mainline size to 16 inches, the capacity of this line would increase by at least 900 gpm. This could help reduce the flows that are bypassing this gravity system and reduce the flow of wastewater into Lift Station 2, and thereby reducing the operational and maintenance costs of pumping the wastewater. A summary of the hydraulic analysis is contained in Appendix B.

The remaining network of gravity sanitary sewer mains should be 8-inch diameter and at a slope to promote self-cleaning flow velocities of three feet per second (fps) where pipe slopes can be accommodated.

Force Main

It is generally desirable to have minimum velocities of 3 fps in force mains. It has been found that velocities of 3 fps will typically resuspend any solids that deposit in the force main when the pumps are not operating.

Velocities were calculated for a flow of 800 gpm with the following results summarized in Table 10.

Table 10: Proposed Force Main Diameters for Design Flow of 800 gpm

Diameter (inches)	Pipe Type Class / SDR	Flow Velocity (FPS)
8 (Existing)	DIP CL52	4.64
8	HDPE SDR21	5.44
8	HDPE SDR17	5.73
8	HDPE SDR11	6.74
10	HDPE SDR21	3.50
10	HDPE SDR17	3.69
10	HDPE SDR11	4.34

A summary of the hydraulic analysis is contained in Appendix B.

From the results above, and with no anticipated change in flows, we recommend a 10-inch high-density polyethylene (HDPE) force main. By increasing the pipe diameter, the friction head will be reduced and allow for future growth capacity. HDPE pipe is an ideal choice for force mains due to the longevity of the material.

4.3 Recommendations for Storm Drain Capacity Upgrades

The existing dual 72-inch by 44-inch pipes arches between Center Street and Marine Way West provide approximately half of the hydraulic capacity of the new dual 60-inch by 46-inch pipe arches installed upstream as part of the Rezanof Drive improvements. However, no known hydraulic capacity issues have been observed with the existing 72-inch by 44-inch pipe arches, likely due to available overflow capabilities to St. Paul Harbor, and the pipes are functioning well. Although the dual 72-inch by 44-inch pipe arches are roughly 50 years old, the assessment conducted by Extreme Access, Inc. in 2014 indicates the pipes are in fair condition, with pipe walls and corrosion-resistance coating in good condition. Repairing the deficiencies noted in the

assessment report, included in Appendix D, will likely significantly increase the design life of the pipes and prevent a costly full-system replacement.

If opportunity or need arises to replace the existing 72-inch by 44-inch pipe arches, the replacement system should ideally provide hydraulic capacity for the predicted 100-year peak flow of 198 cfs. Providing capacity for the 100-year storm would also provide similar capacity to the upstream pipes (approximately 224 cfs). Adequate capacity could be obtained by installing similar sized smooth-walled Type S CPEP pipes, as plastic pipe has a lower friction coefficient than metal pipe, providing twice the hydraulic capacity at equivalent diameters. The use of dual 48-inch CPEP pipes at a 0.4 percent slope would provide a hydraulic capacity of 197 cfs. Installing new CPEP of larger diameter or at greater slopes would also provide increased capacity. For example, a single 60-inch CPEP pipe installed at a 0.5 percent slope would provide a hydraulic capacity of approximately 200 cfs.

The existing 36-inch CMP culvert along Marine Way West is significantly undersized for the runoff routed through the West System. The existing 36-inch CMP has a capacity of approximately 16 cfs. The predicted 100-year peak flow from the West basin is only 13 cfs. However, the combined peak 100-year flow from the North and Northwest Systems predicted to drain to the West System is 242 cfs. At a minimum, a 48-inch CPEP trunk line is recommended for future upgrades to provide equivalent capacity to the existing 72-inch by 44-inch pipe arches draining to Marine Way West. A 48-inch CPEP at 0.5 percent has a capacity of 110 cfs, exceeding the 95 cfs capacity of the 72-inch by 44-inch pipe arches and roughly adequate for the combined 10-year peak flow of 113 cfs contributed by the North and Northwest Systems.

We understand that the combined outfall near the St. Paul Spit is being relocated off of Trident Seafood property and onto City property at the spit. The St. Paul Spit outfall receives combined flow from all four investigated storm drain systems and is the primary outfall for stormwater runoff from the downtown area. We recommend the existing 60-inch CMP be replaced with 60-inch CPEP, if cover constraints allow. A 60-inch CPEP trunk line at a slope of 0.5 percent would have a capacity of 200 cfs, adequate to convey the combined 25-year peak flow of 181 cfs and providing greatly improved capacity over the existing pipe. Upgrading an additional outfall at another location in the downtown area, such as on Shelikof Street, and routing runoff to the

second outfall would further alleviate capacity concerns at the St. Paul Spit outfall. All proposed outfalls should be evaluated with regard to tidal fluctuations and water surface elevations at discharge points to minimize backwatering of storm drain systems and resultant sedimentation within pipes. The use of CPEP is recommended for all future storm drain upgrades in the downtown area due to the corrosive effects of the marine environment on steel pipe.

Water treatment should also be considered as part of proposed storm drain improvements to improve the water quality of stormwater discharged from the City storm drain systems in the project area. The installation of structural treatment devices such as oil-grit separators (including proprietary swirl separators) is one option for removing sediment and pollutants from stormwater prior to discharging collected runoff. The Alaska Department of Environmental Conservation (DEC) regulates water quality of discharged stormwater and has criteria governing the use of oil-grit separators. The DEC requirements state that oil-grit separators should remove 50 percent of the 20-micron particles present in stormwater.

5.0 RECOMMENDED ALIGNMENTS

5.1 Proposed Water Main Alignments

The proposed upgrades to the water system will replace existing ACP with 8- and 12-inch ductile iron pipe (DIP) or polyvinyl chloride (PVC) pipe. It is recommended that an alternative to metal pipe is considered due to the potential for corrosion given this is a marine environment. The main line in Center Street will be increased from 8- to 12-inch, while most of the other proposed pipe diameters will remain unchanged.

The proposed alignments differ from existing at the Mall. The plan abandons the water main located below the sidewalk of the Mall. The proposed main line located at the rear of the buildings will provide domestic water and fire protection to each business. Proposed utility alignments are shown in the 35% drawing included in Appendix E.

5.2 Proposed Sewer Main Alignments

The proposed sewer system will consist of 8- and 12-inch PVC. The 8- and 12-inch pipes will replace the remaining gravity fed system with like diameters. The proposed alignments will

closely follow the existing alignments at or near the roadway centerline. Proposed utility alignments are shown Appendix E.

5.3 Proposed Stormwater Main Alignments

The proposed storm drain system alignment will follow the same general alignment between Henry's and Food4Less. Runoff will continue down Marine Way through a proposed 48-inch CPEP and will tie into the existing outfall near Alaska Fresh Seafood. Proposed utility alignments are shown in Appendix E.

Following a review of potential alternative alignments for replacing the 72-inch by 44-inch pipe arches with a new system in Center Street, it was determined that excessive excavation would likely be required in close proximity to structures along Center Street. Further evaluation was executed to look into the alternative of maintaining the current pipe arch storm drain lines in service.

DOWL HKM consulted with Mill Creek Management Technology (MCMT), a consultant specializing in trenchless design, to review the inspection report and provide recommendations for trenchless remedial actions for the storm drain pipe arches. The MCMT Report and Assessment of Condition and Recommended Repair Options is included in Appendix F.

Based on the inspection from Extreme Access and the report from MCMT, the following follow-up inspection and repairs are recommended.

5.3.1 Additional Inspection

Additional inspection is recommended along the pipe where sediment covered the bottom during the initial inspection. Additional inspection will further evaluate if there are additional voids beneath the pipe at these locations. This inspection is anticipated to be performed as part of future design services.

The hollow sounding bottom of both drains should be investigated by drilling three to five small 1/8-inch pilot holes in each 175-foot pipe section and probing with a light welding wire. This will also serve to inspect the fill around the pipe for voids. The holes should be sealed with epoxy, silicone, or with self-sealing sheet metal screws.

5.3.2 Repair

High Priority Repairs: finding and then pressure grouting (cementitious and acrylamide or urethane) under the invert where cavities were detected at several locations during the inspection and in several joints that are infiltrating groundwater. An example is the seam at 290 feet that should be sealed within Drain B.

Low Priority Repairs: basic redressing of coatings, including an inexpensive cleaning and caulking with a mastic or similar type coating at locations where there is exposed steel at separated and offset joints and along the pipe inverts. An example is the coating at 218 feet and 510 feet that should be repaired within Drain A.

6.0 WATER AND SEWER SERVICE IMPACTS

Given the proposed water and sewer main realignments, it was essential to understand how businesses were currently served and potential impacts resulting from utility realignment. This effort was documented by cataloging all businesses and residences throughout the downtown area (Appendix G). The water and sewer service table found in Appendix G lists the address, the type of service, the service size, the assumed location for the connection inside the building, the assumed location for the connection to the main, and how the information was obtained for each user. Overall there were approximately 85 water services, 85 sewer services, 20 dedicated fire suppression services, and five combined water and fire services. The location of each known service was verified through discussions with the City of Kodiak Public Works. After the initial evaluation, there were several services with locations that were still unknown.

A field investigation by DOWL HKM and Public Works personnel was conducted to perform locates for those remaining unknown services. The investigation included identifying where each water service entered the building by locating the water valve at the property line and recording where that service tied into the main line. Each sanitary sewer service was located by introducing dye into the pipe through an entry point inside the building and observing the dye in the downstream manhole. The few sections of storm drain that were unknown were also dye tested to verify their location.

The service base map and table allowed for a detailed evaluation that new alignments would have on existing services. The evaluation focused on what effect abandoning the existing water main within the Mall would have on services for adjacent businesses. The proposed improvements would provide water services through the rear of the buildings where the existing mainline currently only provides fire protection service to most of the businesses. Table 11 presents a summary of the impacts to individual services within the Mall.

Table 11: Impact to Individual Services

	Service	Current Location	Proposed Location
Henry's Restaurant	Water	Breezeway	Tie into Fire - Alley by Food 4 Less
	Fire	Alley by Food 4 Less	No Change
Tony's Bar	Water	Breezeway	Tie into Fire - Alley by Food 4 Less
	Fire	Alley by Food 4 Less	No Change
Port Gifts	Water	The Mall	Alley Behind Bldg (Might Need New Service)
	Fire	No Service	Alley Behind Bldg (Might Need New Service)
Key Bank	Water	Alley Behind Bldg	No Change
	Fire	Alley Behind Bldg	No Change
Norman's Gifts	Water	The Mall	Alley Behind Bldg (Might Need New Service)
	Fire	No Service	Alley Behind Bldg (Might Need New Service)
Ardinger's Furniture	Water	The Mall	Tie into Fire - Alley Behind Bldg
	Fire	Alley Behind Bldg	Alley Behind Bldg
The Village Bar	Water	Alley Behind Bldg	No Change
	Fire	Alley Behind Bldg	No Change
The Mecca Jewelry/AT&T		Alley Behind Bldg	No Change

The most significant change to the sanitary sewer alignment consists of eliminating the sanitary sewer line in the breezeway between Henry's Restaurant and Tony's Bar. This will have no impact on individual services.

7.0 UTILITY CONFLICTS

There are three primary "dry" utilities located in the downtown area. The type and operator are as follows:

- Electric - Kodiak Electric Association (KEA)
- Communications - Alaska Communications System (ACS)
- Cable - General Communications Inc. (GCI)

KEA owns several underground and overhead high voltage systems throughout the downtown area. There are also many low voltage lines connected to the street lighting system. The underground systems are primarily within the ROW and are connected to pedestal type junction boxes. The overhead systems are pole mounted and are located in the ROW and in utility easements.

ACS does not have a facility map for the downtown area. Based on their service area it is likely that facilities will be impacted during the utility replacement.

GCI owns buried cables primarily connected to the businesses located in the local Mall and the downtown area. The systems are primarily outside of the downtown ROW and have the potential for impacts during the utility replacement at crossings.

8.0 TEST BORING INVESTIGATION

Nine 15 foot deep test borings were drilled in Center Street, Marine Way, Mission Road and Kashevarof Avenue on December 2, 4 and 5, 2011. The purpose of these borings was to determine the approximate depth to bedrock in support of the Downtown Water, Sewer, and Strom Drain Master Plan project. Bedrock was found between seven to 15 feet below grade. The Test Boring Investigation Memorandum is included as Appendix H.

8.1 Findings

The depth to bedrock was difficult to determine in the test borings. The bedrock is overlain with fill composed of gravel that looks the same as the samples taken in the weathered rock. Much of the rock could be drilled with the hollow stem auger and the weathered rock broke up during

sampling to a sand and gravel. The test boring logs show interpretation of the soil and rock. The depth to bedrock was estimated based on drill action, sample blow counts, observation of the recovered samples and correlation with bedrock outcrops and previous excavations by Public Works. The results of particle size distribution tests performed on selected samples follow the boring logs.

The bedrock in the study area is nearly vertically bedded and rock quality can change from soft, easily excavated rock to hard, unrippable rock in short horizontal distances. The surface of the bedrock is very irregular, so the depth to bedrock can also vary dramatically in short distances. This area of Kodiak has been extensively reworked over the years and some borings may have hit old utility excavations made into the rock and the rock surface could be much shallower a short distance away.

Boring 3 encountered a void between eight and 10 feet below existing grade. It is assumed that this was an abandoned storm drain because the sampler suddenly encountered resistance at a depth of eight feet and after 35 blows broke through the obstruction and dropped two feet. The auger was retracted from the 7.5 foot depth and the rig moved about 3 feet away and the boring continued as Boring 4. The bedrock surface was interpreted to be at a depth of 14 feet in Boring 4. This is deeper than expected and may not be accurate.

Boring 5 encountered bedrock at a depth of about 15 feet. This is deeper than anticipated. The adjacent Kodiak National Wildlife Visitor Center building on the southeast corner of Center Street and Mission Road is founded on shallow bedrock and bedrock outcrops can be observed in the cut on the Marine Way side of the Wildlife Visitor Center and the Baranof Museum lot. Boring 6 in Marine Way encountered bedrock at a depth of about 13 feet. Although this boring location is near the bedrock outcrops, this boring is believed to accurately depict a steeply dipping bedrock surface.

No environmental testing or monitoring was conducted as a part of this investigation. However, a hydrocarbon odor and sheen was noticed in Boring 4 below a depth of about 10 feet.

8.2 Engineering Analysis and Recommendations

The bedrock penetrated with the hollow stem auger can be excavated with considerably more effort than required to excavate dense gravel. There are likely to be near vertical layers within the bedrock formation that cannot be excavated without the use of a large hydraulic hammer to fracture the rock. Blasting is not desirable considering the close proximity of utilities and structures. Should blasting be required, it should be performed in conformance with the City of Kodiak Standard Construction Specifications.

The construction contractor should expect a large backhoe equipped with a rock bucket and a large hydraulic hammer will be required for any rock excavation.

9.0 PHASE I ENVIRONMENTAL ASSESSMENT

DOWL HKM performed the Phase I Environmental Site Assessment in conformance with the scope and limitations of the American Society for Testing and Materials Practice E1527 of the Subject Property. The report, Appendix I, represents the results of the Phase I Environmental Site Assessment. The terrain of the project area is mostly flat land that has been graded and developed. There are several recognized contaminated sites within a mile of the proposed project site, including several within a quarter mile of the project site. A few of these sites are still active, and located at equal or higher elevations in relation to the Subject Property. Additionally, recognized environmental conditions exist within the Subject Property. Although the project will include ground disturbing activities, the potential for encountering recognized environmental conditions is low to moderate, due to the close proximity, elevation, status, and high number of contaminated sites present. Unknown contamination has been encountered in the project area before, during site investigations and other ground disturbing activities, thus the potential exists for undocumented or unknown contamination to be present in the area.

10.0 PHASING RECOMMENDATIONS

The proposed improvements consist of six phases that were created by evaluating each for the following criteria:

- Length of proposed pipe replaced.
- Minimize rework required to perform next phases.

- Minimize interruption to service.
- Feasible to build in one construction season.

The phasing plan is shown in Figure 9. Table 12 summarizes the proposed construction schedule and planning level estimate for each phase. The estimate is based on past utility replacement projects in Kodiak with similar scope based on a per-linear foot of roadway and utility length.

Table 12: Planning Level Estimate and Schedule

Proposed Phases of Utility Upgrades	Year of Construction	Storm Drain (lf)	Sanitary Sewer (lf)	Water Main (lf)	Total Length (lf)	Total Cost Estimate
Phase 3 - Center Street, (Rezanof Drive - Pier I)	2017	140	1,020	1,340	3,560	$ 3,900,000
Phase 4 - Marine Way East, (Mecca Lounge - Pier I)	2019	1,020	1,375	860	3,255	$ 3,700,000
Phase 5 - Marine Way West and Mall, (Rezanof Drive - Mecca Lunge)	2021	1,345	1,115	605	3,065	$ 3,600,000
Phase 6 - Alley to North of Mall, American Legion, Sunaq Tribe	2023	550	1,090	1,540	3,180	$ 4,700,000
Phase 7 - Mission Road, (Marine Way - Kashevarof Avenue)	2025	910	420	615	1,945	$ 2,900,000
Phase 8 - Kashevarof, (Rezanof Drive - Mission Road)	2027	930	1,150	1,250	3,330	$ 5,000,000

Figure 9: Proposed Project Phasing

MEMORANDUM TO COUNCIL

To: Mayor Branson and City Councilmembers

From: Aimée Kniaziowski, City Manager

Thru: Mark Kozak, Public Works Director MK

Date: February 26, 2015

Agenda Item: **V. c. Authorization of Professional Services Contract with Golder Associates for Updating SPCC Plans and Multi Sector General Permit for SWPPP at the WWTP Project No. 03-01/5035 and Project No. 03-01A/5035**

SUMMARY: Environmental Protection Agency (EPA) Oil Pollution Prevention regulations apply to any facility that has more than 1,320 gallons combined in above ground storage of oil products whether inside facility buildings or outside. Regulations require any facility that meets these criteria to have a Spill Prevention Control and Countermeasure Plan (SPCC). This project will complete the five-year plan updates for the Harbor, Police, and Public Works Departments as required by regulation. In addition, it will update the Multi-Sector General Permit for Storm Water (MSGP) at the WWTP. Regulations require any WWTP that has flow in excess of one million gallons per day to have a Storm Water Pollution Prevention Plan (SWPPP) for the facility. The State of Alaska is issuing a new MSGP for SWPPP and we must update our plan to be compliant with the new permit. Staff recommends this regulatory compliance assistance project be awarded to Golder Associates on a time and materials basis with estimates for the SPCC plan updates of $19,500 and for the MSGP SWPPP plan of $14,700. Because the project is on a time and materials basis, staff requests the Council approve a not-to-exceed contract in the amount of $40,000 with funds coming from the Street Capital Improvement project number 5035.

PREVIOUS COUNCIL ACTION: In 2002 Council approval was given to prepare SPCC plans for use at both the Harbor Used Oil Facility and Public Works Maintenance Facility. In September 2009 the EPA did an inspection of the Public Works and Harbor facilities. During the inspection it was found our SPCC plans were in need of the required five-year updates. In the FY2010 supplemental budget, we added funds for updating the SPCC plans, as well as correction of identified deficiencies at the Public Works Maintenance facility that were identified during the EPA inspection. At the April 27, 2010, Council meeting, Council approved amending the existing MSGP project contract with USKH to provide assistance responding to the Notice of Violation (NOV) letter from EPA dated March 15, 2010, stemming from the inspection on September 11, 2009. This work was completed before the April 14, 2010, deadline.

BACKGROUND: EPA regulations for compliance with oil pollution prevention apply to any facility with more than 1,320 gallons of oil products in above ground storage, including heating fuel tanks,

storage drums (55 gallon drums), and used oil tanks. By regulation, any facility that has or exceeds the threshold quantity of oil product must have an SPCC plan. The Harbor's Used-Oil facility and the Public Works Maintenance facility had a joint SPCC plan. On September 11, 2009, the Harbor's Used-Oil facility and the Public Works Maintenance facility were inspected by EPA officials and a consultant working for the EPA. During this inspection, deficiencies were identified at the Public Works Maintenance facility. On March 15, 2010, the City received the letter from EPA identifying these deficiencies, requiring a written response and an explanation about how the City would correct the identified deficiencies. USKH assisted staff with the response to EPA, and it was mailed on April 14, 2010. This response included a draft SPCC plan correcting the written plan deficiencies and identifying an approach to correcting physical deficiencies in the facility. Changes to the EPA regulation since the 2002 plans were prepared required all SPCC plans to be updated to the new regulations by November 2010. Council approved a contract with USKH to provide assistance to complete the updates to the SPCC plans and complete an audit of numerous other City facilities to make sure other facilities did not require SPCC plans as well. It was determined that the new Police Station needs an SPCC because of the size of their onsite outdoor above ground heating oil tank. The audit also showed that our WWTP needs to have a SWPPP because of the daily total flow through the plant.

USKH completed the SPCC plan updates, and in the process, created separate plans for the Harbor (three different facilities), Police Department, and Public Works Department. They also prepared a SWPPP for the WWTP in order to bring that facility into compliance with EPA storm water discharge regulations.

DISCUSSION: Regulations require the SPCC plans must be reviewed at least once every five years or if there have been significant changes to the facility design, construction, or operation of the facility. The existing plans were completed and signed by the engineer in November 2010. In order to maintain compliance with 40 CFR 112.5(b), we have to review the plans no later than November of this year.

In addition, the State is in the process of adopting a new MSGP for Storm Water discharges. This process has been in the works since the last MSGP expired in September 2013. The State's website states they expect to issue the new permit by the fall of 2014 or spring of 2015. The most recent update on the site indicates final review was completed on January 27, 2015. Once the new MSGP is issued, we must update the existing plan to comply with new requirements and file a new Notice of Intent (NOI) to operate under the new permit.

In order to maintain compliance with both sets of regulations, staff requested quotes from Golder Associates for review and updates of the SPCC plans for Harbor, Police, and Public Works facilities, as well as review and update of the SWPPP for the storm water discharge at the WWTP.

Golder Associates has provided design and inspections services to the City for quite some time. They designed the Monashka Dam upgrade project and provided inspection and construction management

service on that project, which was completed in December 2003. They have provided our Periodic Dam Safety Inspections since before 2000, as well as provided emergency technical support and design to fix the rock slide that occurred on the Shelikof Pedestrian Improvement project in May 2013. There are several other projects they have completed for the City of Kodiak.

During the Shelikof slide repair staff found out that Golder also provides SPCC plan compliance and SWPPP work. Staff has found Golder to be very responsive and flexible while doing a very good job on all of the City's projects.

Staff checked with another engineering firm that does this work, but did not receive a quote to provide the service after several discussions and request.

ALTERNATIVES:

1) Staff recommends Council authorize the professional services contract with Golder Associates. This contract is necessary to comply with EPA and ADEC regulations. During and inspection by the EPA in 2009 we were found out of compliance with written plans and in violation of several regulations at the Public Works facility. EPA issued a violation notice and compliance requirements. It is critical to keep these plans up-to-date and avoid serious risk of penalties and fines for being out of compliance.
2) There is no alternative recommendation.

FINANCIAL IMPLICATIONS: This work increases operation cost due to the monthly inspections that are completed by staff, reporting requirements, and maintaining compliance. In addition, the SPCC plans must be prepared and certified by a registered engineer that is familiar with the part 112 of Title 40 of the CFRs. These requirements increase the cost of maintaining compliance.

This project was added during the Supplement Budget Amendment No. 1. Because of compliance timing, staff was concerned if we waited until the FY2016 budget we might not have been able to meet the November date for our five-year SPCC plan updates as required by regulation. In addition, it appears the State will issue the new MSGP for storm water compliance very soon, and we must update our existing permit as soon as the new regulation is finalized.

STAFF RECOMMENDATION: Staff recommends Council authorize this professional service contract with Golder Associates for updating our existing Spill Prevention Control and Countermeasure (SPCC) plans and the (SWPPP) as required by regulation with a not-to-exceed amount of $40,000 with funds coming from the Streets Capital Improvement Fund Project 5035.

CITY MANAGER'S COMMENTS: *[Any additional comments will be made at the meeting.]*

ATTACHMENTS:

Attachment A: Golder Proposal for SPCC Plan Updates

Attachment B: Golder Proposal for Multi-Sector General Permit Update for Storm Water

PROPOSED MOTION:

Move to authorize a professional services contract with Golder Associates for updating Spill Prevention Control and Countermeasure Plans and Multi Sector General Permit for Storm Water Pollution Prevention Plan at the Wastewater Treatment Plant in an amount not to exceed $40,000, with funds from the Streets Capital Improvement Fund Project 5035.

ATTACHMENT:A

January 26, 2015 P1520362

Mr. Mark Kozak
Public Works Director
City of Kodiak
2410 Mill Bay Road
Kodiak, Alaska 99615

RE: PROPOSAL TO UPDATE THE POLICE DEPARTMENT, HARBOR, AND PUBLIC WORKS FACILITY SPCC PLANS, KODIAK, ALASKA

Dear Mr. Kozak:

Golder Associates Inc. (Golder) is pleased to present this proposal to the City of Kodiak for a scope of work and cost estimate for providing Spill Prevention Control & Countermeasure (SPCC) services for the City of Kodiak in Kodiak, Alaska.

This proposal was prepared per your emailed request on January 5, 2015 and is based on our current knowledge of the federally regulated Aboveground Storage Tanks (ASTs) bulk tank systems that store used oil, heating oil, and diesel fuel (oil) at the City of Kodiak's Police Department, Public Works Facility, and three Harbor Facilities. A brief project description, scope of work, proposed schedule, and costs estimate are presented below.

1.0 PROJECT DESCRIPTION

The City of Kodiak has three separate facilities with federally regulated AST systems that store oil, and each of these facilities require an SPCC plan. All three facilities are in Kodiak, Alaska, and include:

- Police Department at 2160 Mill Bay Road
- Public Works Facility at 2410 Mill Bay Road
- Harbor Facilities, which includes:
  - Pier 2 Used Oil Facility
  - Pier 2 Warehouse
  - St. Herman Harbor Boatlift Facility

The previous SPCC plans for the above facilities were drafted in October and November 2010, and the federal SPCC regulations state that these SPCC plans must be reviewed and amended every five years.

2.0 SCOPE OF WORK

Our proposed scope of work for each of the facilities is as follows:

- Review the existing SPCC plans.
- Conduct a site visit to each facility to review the facility layout and operation. A site specific health and safety plan (HASP) will be prepared prior to the site visit.
- Prepare an SPCC plan, and submit a draft for the City of Kodiak's review. We are assuming that applicable text and figures from the existing plans may be used for the amended plans.

Golder Associates Inc.
2121 Abbott Road, Suite 100
Anchorage, AK 99507 USA
Tel: (907) 344-6001 Fax: (907) 344-6011 www.golder.com

- Finalize the SPCC plan after receiving comments or approval from the City of Kodiak.

Two hard copies of each of the final SPCC Plans will be provided to the City of Kodiak. The Microsoft Word files and drawing files will also be provided to City of Kodiak, along with an electronic PDF version of the SPCC plans.

3.0 SCHEDULE AND COST ESTIMATE

After receiving the notice to proceed, we will schedule our site visit to occur in the spring, once any snow cover has melted. We are assuming that the site visit will take two days with an overnight stay in Kodiak for our personnel mobilizing out of Anchorage. While onsite, we are assuming personnel familiar with the facility will be available during our site visit to show us around and answer questions. The draft SPCC plan will be submitted within four weeks after the site visit.

Golder will complete the tasks outlined above on a time and materials basis with an estimated cost of $19,500. Actual costs will be invoiced in accordance with the attached 2014 Rate Schedule. Subcontractors and expenses will be subject to a 15 percent additional fee. This proposal is valid for 60 days from the date of this proposal. We are assuming that all the facilities can be visited over a two-day period that included travel from Anchorage to and from Kodiak.

4.0 AUTHORIZATION

If you are in agreement with this proposal, please acknowledge your authorization to proceed by signing, and completing the address information on the last page of the attached Agreement for Consulting Services, and returning a copy to us.

Thank you for the opportunity to submit this proposal. Please call us at (907) 344-6001 if you have questions or would like to discuss any aspect of our proposal.

Sincerely,

GOLDER ASSOCIATES INC.

Christopher A. Valentine, PE
Project Engineer

Steven L. Anderson, PE
Associate and Senior Geotechnical Engineering Consultant

Attachments: Table 1 – Cost Estimate
Golder Associate Inc. 2014 Rate Schedule
Golder Associates Inc. Agreement for Consulting Services

CAV/SLA/mlp

COST ESTIMATE FOR

Updating the SPCC Plans for the Police Department, Harbors, and Public Works Facilities in Kodiak, Alaska

Task & Subtask Description	Name, Rate & Projected Hours										Golder Costs			Subcontractor or Direct Costs					TASK TOTAL
	GOLDER ASSOCIATES																		
	Sr Practice Leader	Practice Leader	Senior Consultant	Sr. Engr/Geo	Sr. Project Engr/Geo	Project Engineer	Staff Engineer	Engr/Geo	Drafter / Engr. Tech	Admin Support	Labor	Estimated Misc. Expenses (Estimated as 7% of labor)	Total Golder Labor & Expense	No.	Unit Rate	Subcontractor or Direct Cost	Markup	Total Subcontractor or Direct Cost plus Markup	
Billing Level	8	7	6	5	4	3	2	1	D3	B3							15%		
Billing Rate	$250	$230	$190	$165	$140	$120	$100	$90	$105	$90									
1. Record Review																			
Review Past SPCC Plans for the Facilities					6						$ 840	$ 59	$ 899			$ -	$ -	$ -	$ 899
TASK TOTAL	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**$ 840**	**$ 59**	**$ 899**			**$ -**	**$ -**	**$ -**	**$ 899**
2. Field Inspection of the Police Department, Harbors, and Public Works Facilities																			
HASP preparation			1		2						$ 375	$ 26	$ 401		$ -	$ -	$ -	$ -	$ 401
Site Visit / Inspection					20						$ 2,800	$ 196	$ 2,996		$ -	$ -	$ -	$ -	$ 2,996
Expenses											$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Airfare											$ -	$ -	$ -	1	$ 700	$ 700	$ 105	$ 805	$ 805
Hotel											$ -	$ -	$ -	1	$ 150	$ 150	$ 23	$ 173	$ 173
Car Rental											$ -	$ -	$ -	1	$ 150	$ 150	$ 23	$ 173	$ 173
Meals - Per Diem											$ -	$ -	$ -	2	$ 50	$ 100	$ 15	$ 115	$ 115
TASK TOTAL	**0**	**0**	**1**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**$ 3,175**	**$ 222**	**$ 3,397**			**$ 1,100**	**$ 165**	**$ 1,265**	**$ 4,662**
3. Analysis and Report																			
Prepare Draft Report			6		24	24			24	3	$ 10,170	$ 712	$ 10,882			$ -	$ -	$ -	$ 10,882
Finalize Report			3		12				3	3	$ 2,835	$ 198	$ 3,033	1	$ 50	$ 50	$ 8	$ 58	$ 3,091
TASK TOTAL	**0**	**0**	**9**	**0**	**36**	**24**	**0**	**0**	**27**	**6**	**$ 13,005**	**$ 910**	**$ 13,915**			**$ 50**	**$ 8**	**$ 58**	**$ 13,973**

GRAND TOTAL = $ 19,534

Golder Associates

GOLDER ASSOCIATES INC.
ANCHORAGE, ALASKA
PROFESSIONAL RATE SCHEDULE FOR CALENDAR YEAR 2014

Invoices from Golder Associates Inc. include all labor charges, other direct costs, and costs associated with in-house services. Charges include only those services directly attributable to the execution of the work. Time spent when traveling in the interest of the work will be charged in accordance with the hourly rates. Rates for Professional services related to expert testimony, including time spent in depositions and the preparation and presentations of testimony, are available upon request.

Labor charges are based upon standard hourly billing rates for each category of staff. The billing rates include costs for salary, payroll taxes, insurance associated with employment, benefits (including holiday, sick leave, and vacation), administrative overheads, and profit. Rates by labor category are as follows:

Billing Level	***Personnel Category***	***Hourly Rate (U.S.$)***
C8	Sr.Practice/Program Leader	$250
C7	Practice/Program Leader	$230
C6	Senior Consultant	$190
C5	Senior Engineer/Scientist	$165
C4	Senior Project Engineer/Scientist	$140
C3	Project Engineer/Scientist	$120
C2	Staff Engineer/Scientist	$100
C1	Engineer/Scientist	$90
D3	Senior Draftsperson	$105
D2	Staff Draftsperson	$85
D1	Draftsperson	$70
T3	Senior Technician	$100
T2	Staff Technician	$90
T1	Technician	$70
B3	Senior Admin Support	$90
B2	Staff Admin Support	$80
B1	Admin Support	$70

Other direct costs, including materials, travel, subsistence, and subcontractor costs, will be invoiced at cost plus a minimum general and administrative fee of 15%.

Non-labor direct project costs listed below will be billed at the following rates:

SERVICE	**RATE**
CAD/GIS Computers	$20/hour
Color Photocopies	$0.15/page
Color Plotter (D&E size)	$12/plot
Vehicle (local use)	Government Rate

Rates for laboratory services and use of equipment owned by Golder Associates Inc. will be provided upon request.

City of Kodiak ("CLIENT")

and GOLDER ASSOCIATES INC. ("GOLDER") agree that the following terms and conditions will apply to any services, including subsequent services and changes, (collectively "Services") to be provided by GOLDER relating to Proposal No. P1520362, dated January 26, 2015 (collectively the "Agreement"):

1. STANDARD OF CARE

Services performed by GOLDER will be conducted in a manner consistent with that level of care and skill ordinarily exercised by other professionals currently practicing under similar conditions in the same locality, subject to the time limits and financial, physical or other constraints applicable to the Services. No warranty, express or implied is made.

2. INVOICES AND PAYMENT TERMS

A. Unless otherwise specified in any proposal, GOLDER will submit monthly invoices to CLIENT and a final bill upon completion of Services. CLIENT shall notify GOLDER within ten (10) days of receiving an invoice of any dispute with the invoice and the parties shall promptly resolve any disputed items. Full payment is due prior to delivery of GOLDER's final deliverable. Payment on undisputed invoice amounts is due upon receipt of invoice by CLIENT and is past due thirty (30) days from the date of the invoice. CLIENT agrees to pay a finance charge of one and one-half percent (1-1/2%) per month (18% per annum), or the maximum rate allowed by law, on past due accounts. If payment remains past due sixty (60) days from the date of the invoice, then GOLDER shall have the right to suspend or terminate all Services under this Agreement, without prejudice or penalty. CLIENT will pay all reasonable demobilization and other suspension or termination costs. CLIENT agrees to pay attorneys' fees, legal costs and all other collection costs incurred by GOLDER in pursuit of past due payments.

B. Where the cost estimate for the Services is "not to exceed" a specified sum, GOLDER shall notify CLIENT before each limit is exceeded, and shall not continue to provide Services beyond such limit unless CLIENT authorizes an increase in the amount of the limitation. If a "not to exceed" limitation is broken down into budgets for specific tasks, the task budget may be exceeded without CLIENT authorization as long as the total limitation is not exceeded.

3. CHANGES

CLIENT and GOLDER recognize that it may be necessary to modify the scope of Services, schedule, and/or cost estimate proposed in this Agreement. Such changes shall change the Services, schedule, and/or the cost, as may be equitable under the circumstances. GOLDER shall notify CLIENT in a timely manner when it has reason to believe a change to the Agreement is warranted. GOLDER shall prepare a change order request outlining the changes to the scope, schedule, and/or cost of the project. CLIENT has a duty to promptly consider the change order request and advise GOLDER in a timely manner in writing on how to proceed. If after a good faith effort by GOLDER to negotiate modifications to the scope of Services, schedule, and/or cost estimate, an agreement has not been reached with the CLIENT, then GOLDER shall have the right to terminate this Agreement, without prejudice or penalty, upon written notice to the CLIENT.

4. DELAYS AND FORCE MAJEURE

A. If site or other conditions prevent or inhibit performance of Services or if unrevealed hazardous materials or conditions are encountered, Services under this Agreement may be delayed. CLIENT shall not hold GOLDER responsible for damages or delays in performance caused by acts or omissions of CLIENT, its subcontractors, governmental authorities, regulatory agencies, civil or labor unrest, acts of God, nature, or terror, disruptions of the Internet, GOLDER's

electronic telecommunications or hosting services or any other events that are beyond the reasonable control of GOLDER. In the event of any such delays, the contract completion date shall be extended accordingly and CLIENT shall pay GOLDER for Services performed to the delay commencement date plus reasonable delay charges. Delay charges shall include personnel and equipment rescheduling and/or reassignment adjustments and all other related costs incurred including but not limited to, labor and material escalation, and extended overhead costs, attributable to such delays.

B. Delays in excess of thirty (30) days within the scope of this Article shall, at the option of either party, make this Agreement subject to termination or to renegotiation.

5. INDEPENDENT JUDGMENTS OF CLIENT

If the Services include the collection of samples and data, then GOLDER's obligation to perform those Services is subject to CLIENT's assumption of all Subsurface Risks (such risks being more fully described in Article 12, Subsurface Risks). GOLDER will not be responsible for the independent conclusions, interpretations, interpolations or decisions of CLIENT, or others, relating to the Services. Under no circumstances do GOLDER's Services include making any recommendation, or giving any advice as to whether CLIENT should or should not proceed with any transaction regarding any site related to the Services. CLIENT assumes all responsibility and risk associated with decisions it makes based on the Services.

6. INDEMNIFICATION

A. GOLDER agrees to indemnify, but not defend, CLIENT and its officers, directors, and employees from and against all claims, damages, losses or expenses arising from personal injury, death, or damage to third-party property, and for reimbursement of defense costs, to the extent that all such claims, damages, losses, expenses, or costs are finally determined to result directly from GOLDER's negligence. Such indemnification, as limited by Article 7, Limitation of Liability, shall be CLIENT's sole and exclusive remedy against GOLDER.

B. CLIENT shall, at all times, defend, indemnify and save harmless GOLDER and its subcontractors, consultants, agents, officers, directors and employees from and against all claims, damages, losses and expenses (including but not limited to reasonable attorneys' fees, and court and arbitration costs), arising out of or resulting from the Services of GOLDER, including but not limited to claims made by third parties, or any claims against GOLDER arising from the acts, errors or omissions of CLIENT, its employees, agents, contractors and subcontractors or others. To the fullest extent permitted by law, such indemnification shall apply regardless of breach of contract or strict liability of GOLDER. Such indemnification shall not apply to the extent that such claims, damages, losses or expenses are finally determined to result directly from GOLDER's negligence.

7. LIMITATION OF LIABILITY

A. CLIENT shall immediately notify GOLDER in writing of any deficiencies or suspected deficiencies arising directly or indirectly from GOLDER's negligent acts, errors or omissions. Failure by CLIENT to notify GOLDER shall relieve GOLDER of any further responsibility and liability for such deficiencies. To the extent permitted by law, CLIENT and GOLDER agree that all liability arising directly or indirectly from this Agreement or the Services of GOLDER shall expire no later than one (1) year from the date of GOLDER's acts, errors, or omissions or prior to the last date allowed in the applicable statute of limitation, whichever occurs first in time.

B. CLIENT agrees to limit the liability of GOLDER, its affiliates, and their respective employees, officers, directors, agents, consultants and subcontractors ("GOLDER Group") to CLIENT, its employees, officers, directors, agents, consultants and subcontractors, whether in contract, tort, or otherwise, which arises from GOLDER's acts, negligence, errors or omissions, such that the total aggregate liability of the GOLDER Group to all those named shall not exceed Fifty Thousand

Dollars ($50,000) or GOLDER's total fee for the Services rendered under this Agreement, whichever is greater.

C. Neither party shall be responsible to the other for lost revenues, lost profits, cost of capital, claims of customers, loss of data or any other special, indirect, consequential or punitive damages.

8. INSURANCE

A. GOLDER maintains insurance coverage with the following limits:

(i) Workers' Compensation in compliance with statutory limits

(ii) Automobile Liability
Combined Single Limit $1,000,000

(iii) Commercial General Liability:
Each Occurrence $1,000,000
General Aggregate $2,000,000

(iv) Professional Liability Insurance
Any One Claim $1,000,000
Policy Aggregate $3,000,000

B. CLIENT shall not require GOLDER to sign any document or perform any Service which in the judgment of GOLDER would risk the availability or increase the cost of its Professional or Commercial General Liability insurance.

9. PROFESSIONAL WORK PRODUCT

A. The Services provided by GOLDER are intended for one time use only. All documents, including but not limited to, reports, plans, designs, boring logs, field data, field notes, laboratory test data, calculations, and estimates and all electronic media prepared by GOLDER are considered its professional work product (the "Documents"). GOLDER retains all rights to the Documents.

B. CLIENT understands and acknowledges that the Documents are not intended or represented by GOLDER to be suitable for reuse by any party, including, but not limited to, the CLIENT, its employees, agents, subcontractors or subsequent owners on any extension of a specific project not covered by this Agreement or on any other project, whether CLIENT's or otherwise, without GOLDER's prior written permission. CLIENT agrees that any reuse unauthorized by GOLDER will be at CLIENT's sole risk and that CLIENT will defend, indemnify and hold GOLDER harmless from any loss or liability resulting from the reuse, misuse or negligent use of the Documents.

10. DATA AND INFORMATION

CLIENT shall provide to GOLDER all reports, data, studies, plans, specifications, documents and other information ("Project Information") which are relevant to the Services. GOLDER shall be entitled to rely upon the Project Information provided by CLIENT or others and GOLDER assumes no responsibility or liability for the accuracy or completeness of such. CLIENT waives any claim against GOLDER, and agrees to defend, indemnify and hold GOLDER harmless from any claim or liability for injury or loss allegedly arising from errors, omissions, or inaccuracies in the Project Information. GOLDER will not be responsible for any interpretations or recommendations generated or made by others, which are based, whole or in part, on GOLDER's data, interpretations or recommendations.

11. RIGHT OF ENTRY

CLIENT will provide for the right of entry for GOLDER, its subcontractors, and all necessary equipment in order to complete the Services under this Agreement. If CLIENT does not own the site,

CLIENT shall obtain permission and execute any required documents for GOLDER to enter the site and perform Services. It is understood by CLIENT that in the normal course of work some surface damage may occur, the restoration of which is not part of this Agreement.

12. SUBSURFACE RISKS

A. Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions. Even a comprehensive sampling and testing program implemented in accordance with a professional Standard of Care may fail to detect certain conditions. The environmental, geological, geotechnical, geochemical, hydrogeological and other conditions that GOLDER interprets to exist between sampling points may differ from those that actually exist. Furthermore, CLIENT recognizes that, passage of time, natural occurrences, direct or indirect human intervention at or near the site may substantially alter discovered conditions.

B. Subsurface sampling may result in damage or injury to underground structures or utilities and unavoidable contamination of certain subsurface areas not known to be previously contaminated such as, but not limited to, a geologic formation, the groundwater, or other hydrous body. GOLDER will adhere to the standard of care during the conduct of any subsurface investigation. When the Services include subsurface sampling, CLIENT waives any claim against GOLDER, and agrees to defend, indemnify and hold GOLDER harmless from any claim or liability for injury, loss, or expense (including but not limited to legal fees) which may arise as a result of alleged or actual cross-contamination caused by any subsurface investigation or any damage or injury to underground structure, formation, body, or utilities.

13. DISPOSAL OF SAMPLES, MATERIALS AND CONTAMINATED EQUIPMENT

A. All samples obtained pursuant to this Agreement remain the property and responsibility of CLIENT. Uncontaminated soil and rock samples or other specimens maybe disposed of thirty (30) days after submission of the work product due pursuant to the Proposal. Upon written request, GOLDER will store uncontaminated samples for longer periods of time or transmit the samples to CLIENT for a mutually acceptable charge.

B. All contaminated samples and materials (containing or potentially containing hazardous constituents), including, but not limited to soil cuttings, contaminated purge water, and/or other environmental wastes obtained pursuant to this Agreement remain the property and responsibility of CLIENT and shall be returned to CLIENT for proper disposal. All laboratory and field equipment that cannot readily and adequately be cleansed of its hazardous contaminants shall become the property and responsibility of CLIENT. All such equipment shall be charged and turned over to CLIENT for proper disposal. Alternate arrangements to assist CLIENT with proper disposal of such equipment, materials and samples may be made at CLIENT's direction and expense. In such event, CLIENT agrees to have a representative available to sign all certifications, manifests, and other documents reasonably required by GOLDER and associated with the transportation, treatment and disposal, or handling of hazardous substances, waste or materials from the project property site, and derived from GOLDER's performance of the Services, including investigation derived wastes. If such CLIENT representative is unavailable and GOLDER is required to execute any such documents on CLIENT's behalf, CLIENT acknowledges that GOLDER shall be acting only as offeror or agent on behalf of CLIENT. It is understood and agreed that GOLDER is not, and has no responsibility as, a handler, generator, operator, treater, storer, arranger, transporter, or disposer of hazardous substances, waste or materials found or identified at or around the project site property. CLIENT agrees to waive any claim against GOLDER and to defend, indemnify and hold GOLDER harmless from and against any claims, losses, damages, expenses (including, but not limited to, legal fees), and liabilities of any type arising out of the discovery and disposal of any alleged or actual hazardous substances, wastes or materials found or identified at or around the project site property.

14. CONTROL OF WORK AND JOB-SITE SAFETY

A. GOLDER shall be responsible only for its activities and that of its employees and subcontractors. GOLDER's Services under this Agreement are performed for the sole benefit of the CLIENT and no other entity shall have any claim against GOLDER because of this Agreement or the performance or nonperformance of Services hereunder. GOLDER will not direct, supervise or control the work of other consultants and contractors or their subcontractors. GOLDER does not guarantee the performance of, and shall have no responsibility for, the acts or omissions of any other contractor, subcontractor, supplier or other entities furnishing materials or performing any work on the project.

B. Insofar as job site safety is concerned, GOLDER is responsible only for the health and safety of its employees and subcontractors. Nothing herein shall be construed to relieve CLIENT or any other consultants or contractors from their responsibilities for maintaining a safe job site. GOLDER shall not advise on, issue directions regarding, or assume control over safety conditions and programs for others at the job site. Neither the professional activities of GOLDER, nor the presence of GOLDER or its employees and subcontractors, shall be construed to imply that GOLDER controls the operations of others or has any responsibility for job site safety.

15. PUBLIC RESPONSIBILITY

CLIENT has a duty to comply with applicable codes, standards, regulations and ordinances, with regard to public health and safety. While GOLDER performs the Services it will endeavor to alert CLIENT to any matter of which GOLDER becomes aware and believes requires CLIENT's immediate attention to help protect public health and safety, or which GOLDER believes requires CLIENT to issue a notice or report to certain public officials, or to otherwise comply with applicable codes, standards, regulations or ordinances. If CLIENT decides to disregard GOLDER's recommendations in these respects, (i) GOLDER shall determine in its sole judgment if it has a duty to notify public officials, and (ii) GOLDER has the right immediately to terminate this Agreement upon written notice to the CLIENT and without penalty.

16. NOTIFICATION AND DISCOVERY OF HAZARDOUS MATERIALS

A. Prior to commencing the Services and as part of Project Information defined in Article 10, Data and Information, CLIENT shall furnish to GOLDER all documents and information known to CLIENT that relate to past or existing conditions of the site and surrounding area, including the identity, location, quantity, nature or characteristics of any hazardous materials or suspected hazardous materials or subterranean utilities. GOLDER may rely on such information and documents. CLIENT hereby warrants that, if it knows or has any reason to assume or suspect that hazardous materials may exist at the project site, it has so informed GOLDER.

B. CLIENT acknowledges that if unanticipated hazardous materials or suspected hazardous materials are discovered on the project site property or on properties surrounding or adjacent to such site, it is CLIENT's responsibility, and not GOLDER's, to inform the owner of any affected property not owned by CLIENT of such discovery. CLIENT also recognizes that any such discovery may result in a significant reduction of the property's value. CLIENT waives any claim against GOLDER and agrees to defend, indemnify and hold harmless GOLDER from any claim or liability for injury or loss of any type arising from the discovery of hazardous materials or suspected hazardous materials on the project property site or on surrounding property, whether or not owned by CLIENT. CLIENT agrees that discovery of unanticipated hazardous materials shall constitute a changed condition for which GOLDER shall be fairly compensated.

17. TERMINATION

Either party may terminate this Agreement as a result of a material breach of the other party if the other party does not commence and continue to cure the breach within thirty (30) days of receipt of written notice of the breach from the non-breaching party. In the event of termination, GOLDER shall

be paid for Services performed to the termination notice date, reasonable termination expenses, and a portion of its anticipated profits not less than the percentage of the contract services performed as of the termination notice date. GOLDER may complete such analyses and records as are necessary to complete its files and may also complete a report on the Services performed to the date of notice of termination or suspension. The expenses of termination or suspension shall include all direct costs of GOLDER in completing such analyses, records and reports.

18. DISPUTES

A. All disputes, claims, and causes one party makes against the other, at law or otherwise, including third party or "pass-through" claims for indemnification and/or contribution, which amount to a claim of more than $50,000 shall be initiated, determined, and resolved by arbitration in accordance with the American Arbitration Association and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof. Notwithstanding the foregoing, any claims by GOLDER against CLIENT involving failure to make payment pursuant to Article 2, Invoices and Payment Terms, as well as an alleged misappropriation or misuse of GOLDER's Intellectual Property pursuant to article 19, or confidential information may be resolved through any legal or equitable means or any form of alternative dispute resolution.

B. In the event that one party makes a claim against the other, at law or otherwise, and then fails to prove such claim, then the prevailing party shall be entitled to all costs, including attorneys' fees incurred in defending against the claim.

19. INTELLECTUAL PROPERTY

A. If the Services require GOLDER to provide CLIENT with the right to use or access proprietary GOLDER software, programs, information management solutions, hosting services, technology, designs, information or data ("GOLDER Products"), GOLDER grants CLIENT during the term of the project a non-exclusive, non-transferable, non-assignable license to use the GOLDER Products for CLIENT's internal purposes, solely in connection with the Services. Except for this limited license, GOLDER expressly reserves all other rights in and to the GOLDER Products.

B. GOLDER's Right to Use CLIENT Materials - If the Services require CLIENT to provide GOLDER with the right to use or access proprietary CLIENT software, programs, technology, information or data ("CLIENT Products"), CLIENT grants GOLDER a perpetual, non-exclusive, non-transferable, non-assignable, royalty free world-wide license to use and access the CLIENT Product as necessary to provide CLIENT with Services.

C. Intellectual Property General - GOLDER shall own all Intellectual Property (as hereinafter defined) associated with the Services and the GOLDER Products, together with any modifications, updates or enhancements to said Intellectual Property. GOLDER grants no right or license to such Intellectual Property to CLIENT except as expressly provided in this Agreement. CLIENT conveys to GOLDER any interest in any such Intellectual Property rights that, notwithstanding the foregoing, would otherwise be deemed by law to vest in CLIENT. "Intellectual Property" includes patents, patent applications, trademarks, trademark applications, copyrights, moral rights or other rights of authorship and applications to protect or register the same, trade secrets, industrial rights, know-how, privacy rights and any other similar proprietary rights under the laws of any jurisdiction in the world. GOLDER may use and publish the CLIENT's name and give a general description of the Services rendered by GOLDER for the purpose of informing other clients and potential clients of GOLDER's experience and qualifications.

D. GOLDER shall use reasonable efforts to provide the Services without infringing on any valid patent or copyright and without the use of any confidential information that is the property of others; provided, however, reasonable efforts of GOLDER shall not include a duty to conduct or prepare a patent or copyright search and/or opinion. If GOLDER performs its Services in a manner consistent with the above, then to the fullest extent permitted by law, CLIENT shall

indemnify, defend and hold harmless GOLDER and its officers, directors, agents and employees against all liability, cost, expense, attorneys' fees, claims, loss or damage arising from any alleged or actual patent or copyright infringement resulting from the Services under this Agreement.

20. INFORMATION MANAGEMENT

A. CLIENT acknowledges that electronic media is susceptible to unauthorized modification, deterioration, and incompatibility and therefore CLIENT cannot rely upon the electronic media versions of the Documents. In the event of any discrepancy, GOLDER's hardcopy shall prevail.

B. Some GOLDER Products may be offered to CLIENT via the Internet and some GOLDER Products may utilize wireless radio communications. Atmospheric, meteorological, topographical and other conditions can affect the performance of any wireless device, software or technology (including, but not limited to information management solutions, hosting services, ftp and extranet services), just as application size, traffic, bottlenecks and other conditions can affect Internet access and upload and download speeds. CLIENT acknowledges that these types of conditions and other similar conditions are beyond the reasonable control of GOLDER and that GOLDER makes no representations or guarantees that CLIENT will be able to access any particular GOLDER Product at any given time without any error or interruption.

21. MISCELLANEOUS

A. This Agreement supersedes all other agreements, oral or written, and contains the entire agreement of the parties. No cancellation, modification, amendment, deletion, addition, waiver or other change in this Agreement shall have effect unless specifically set forth in writing signed by the party to be bound thereby. Titles in this Agreement are for convenience only.

B. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns provided that it may not be assigned by either party without consent of the other. It is expressly intended and agreed that no third party beneficiaries are created by this Agreement, and that the rights and remedies provided herein shall inure only to the benefit of the parties to this Agreement.

C. CLIENT acknowledges and agrees that GOLDER can retain subconsultants, who may be affiliated with GOLDER, to provide Services for the benefit of GOLDER. GOLDER will be responsible to CLIENT for the Services and work done by all of its subconsultants and subcontractors, collectively to the maximum amount stated in Article 7 Limitation of Liability. CLIENT agrees that it will only assert claims against and seek to recover losses, damages or other liabilities from GOLDER and not GOLDER's affiliated companies. To the maximum extent allowed by law, CLIENT acknowledges and agrees it will not have any legal recourse, and waives any expense, loss, claim, demand, or cause of action, against GOLDER's affiliated companies, and their employees, agents, officers and directors.

D. No waiver of any right or remedy in respect of any occurrence on one occasion shall be deemed a waiver of such right or remedy in respect of such occurrence on any other occasion.

E. All representations and obligations (including without limitation the obligation of CLIENT to indemnify GOLDER in Article 6 and the Limitation of Liability in Article 7) shall survive indefinitely the termination of the Agreement. CLIENT acknowledges that it may not use GOLDER's name or any reference to the Services in any press release or public document without the express, written consent of GOLDER.

F. Any provision, to the extent found to be unlawful or unenforceable, shall be stricken without affecting any other provision of the Agreement, so that the Agreement will be deemed to be a valid and binding agreement enforceable in accordance with its terms.

G. All questions concerning the validity and operation of this Agreement and the performance of the obligations imposed upon the parties hereunder shall be governed by the laws of Georgia unless the law of another jurisdiction must apply for this Agreement to be enforceable.

H. All notices required or permitted to be given hereunder, shall be deemed to be properly given if delivered in writing via facsimile machine, e-mail, regular mail, hand delivery or express courier addressed to CLIENT or GOLDER, as the case may be, at the addressee set forth in the Proposal Acceptance Form in regard to the CLIENT, and as listed on the Proposal in regard to GOLDER, with postage thereon fully prepaid if sent by mail or express courier.

I. CLIENT represents and warrants that the individual signing the Proposal Acceptance Form is an authorized representative of CLIENT and has authority to bind the CLIENT.

22. AUTHORIZATION TO PROCEED

By signing below, CLIENT hereby authorizes GOLDER to proceed with the Services outlined in the Proposal and in accordance with this Agreement, which includes terms relating to *payment, limitation of liability, insurance and indemnity*, among many other important provisions. CLIENT also represents that any "purchase order" type document which CLIENT may issue subsequent to executing this Agreement, shall be for administrative or accounting purposes only, and that this Agreement shall supersede any such terms or conditions attached thereto in governing the performance of the Services.

GOLDER ASSOCIATES INC.	**CLIENT:**
	(Name)
Signature	Signature
Steven L. Anderson, PE	
Name	Name
Associate and Senior Geotechnical Engineering Consultant	
Title	Title
I have authority to bind the corporation.	I have authority to bind the corporation.

Please address invoices to:	Please address deliverables & notices* to: Same as invoices: Yes / No, address to:
ATTN:	ATTN:

**All notices required or permitted to be given hereunder shall be in writing and shall be delivered in person, sent by facsimile machine or mailed, properly addressed and stamped with the required postage to the intended recipient.*

P1520362 - January 26, 2015

ATTACHMENT: B

Golder Associates

January 26, 2015 P1520365

Mr. Mark Kozak
Public Works Director
City of Kodiak
2410 Mill Bay Road
Kodiak, Alaska 99615

RE: PROPOSAL TO UPDATE STORM WATER POLLUTION PREVENTION PLAN FOR THE KODIAK WASTEWATER TREATMENT PLANT, KODIAK, ALASKA

Dear Mr. Kozak:

Golder Associates Inc. (Golder) is pleased to present this proposal to the City of Kodiak to update the existing Storm Water Pollution Prevention Plan (SWPPP) for the Kodiak Wastewater Treatment Plant in Kodiak, Alaska. This proposal was prepared per your emailed request on January 5, 2015. A brief project description, scope of services, proposed schedule, and costs estimate are presented below.

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) amended the Multi-Sector General Permit (MSGP) on September 29, 2008 (2008 MSGP) with the Alaska specific provisions approved on February 27, 2009. The 2008 MSGP expired on September 29, 2013, but an administrative continuance of issued permits remains in effect until a new permit is issued.

The Alaska Department of Environmental Conservation (ADEC) is currently in the process of reissuing the Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (Permit Number AKR060000), and expects to reissue the MSGP in early 2015.

The previous SWPPP of the Kodiak Wastewater Treatment Plant was completed in October 2009.

2.0 SCOPE OF SERVICES

Our proposed scope of services will include:

- Review of the existing SWPPP
- Conduct a site visit to the Kodiak Wastewater Treatment Plant to review the layout and operation. A site-specific health and safety plan (HASP) will be prepared prior to the site visit.
- Reformatting and updating the existing SWPPP to comply with the 2015 MSGP, and submittal of a draft version for the City of Kodiak's review. We are assuming that applicable text and figures from the existing plans may be used for the amended plan.
- Finalize the SWPPP after receiving comments or approval from the City of Kodiak and submitting the Notice of Intent (NOI) with the ADEC's Wastewater Discharge Authorization Program.

Two hard copies of the final SWPPP will be provided to the City of Kodiak. The Microsoft Word and drawing files will also be provided to City of Kodiak, along with an electronic PDF version of the SWPPP.

Golder Associates Inc.
2121 Abbott Road, Suite 100
Anchorage, AK 99507 USA
Tel: (907) 344-6001 Fax: (907) 344-6011 www.golder.com

3.0 SCHEDULE AND COST ESTIMATE

After receiving the notice to proceed, we will schedule our site visit to occur in the spring, after any snow cover has melted. The site visit is expected to take one day for our personnel mobilizing out of Anchorage without an overnight stay in Kodiak. While onsite, we are assuming personnel familiar with the Kodiak Wastewater Treatment Plant and operations will be available during our site visit to show us around and answer questions. The draft SWPPP will be submitted within six weeks after the site visit. The final SWPPP and NOI can usually be prepared and submitted within one week after receiving comments.

Golder will complete the scope of services outlined above on a time and materials basis with an estimated cost of $14,700. Actual costs will be invoiced in accordance with the attached 2014 Rate Schedule. Subcontractors and expenses will be subject to a 15 percent additional fee. This proposal is valid for 60 days from the date of this proposal. The cost estimate assumes that the site visit can be completed in a day, including travel time between Anchorage and Kodiak.

4.0 AUTHORIZATION

If you are in agreement with this proposal, please acknowledge your authorization to proceed by signing, and completing the address information on the last page of the attached Agreement for Consulting Services, and returning a copy to us.

Thank you for the opportunity to submit this proposal. Please call us at (907) 344-6001 if you have questions or would like to discuss any aspect of our proposal.

Sincerely,

GOLDER ASSOCIATES INC.

Christopher A. Valentine, PE
Project Engineer

Steven L. Anderson, PE
Associate and Senior Geotechnical Engineering Consultant

Attachments: Table 1 – Cost Estimate
Golder Associate Inc. 2014 Rate Schedule
Golder Associates Inc. Agreement for Consulting Services

CAV/SLA/mlp

COST ESTIMATE FOR

Updating the Stormwater Pollution Prevention Plan for the Wastewater Treatment Plant in Kodiak, Alaska

Task & Subtask Description	Name, Rate & Projected Hours										Golder Costs			Subcontractor or Direct Costs					TASK TOTAL
	GOLDER ASSOCIATES																		
	Sr Practice Leader	Practice Leader	Senior Consultant	Sr. Engr/Geo	Sr. Project Engr/Geo	Project Engineer	Staff Engineer	Engr/Geo	Drafter / Engr. Tech	Admin Support	Labor	Estimated Misc. Expenses (Estimated as 7% of labor)	Total Golder Labor & Expense	No.	Unit Rate	Sub-contractor or Direct Cost	Markup	Total Sub-contractor or Direct Cost plus Markup	
Billing Level	8	7	6	5	4	3	2	1	D3	B3							15%		
Billing Rate	$250	$230	$190	$165	$140	$120	$100	$90	$105	$90									
1. Record Review																			
Review Past SWPP Plan					8						$ 1,120	$ 78	$ 1,198			$ -	$ -	$ -	$ 1,198
TASK TOTAL	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**$ 1,120**	**$ 78**	**$ 1,198**			**$ -**	**$ -**	**$ -**	**$ 1,198**
2. Field Inspection of the Kodiak Wastewater Treatment Plant																			
HASP preparation			1		2						$ 375	$ 26	$ 401		$ -	$ -	$ -	$ -	$ 401
Site Visit / Inspection					12						$ 1,680	$ 118	$ 1,798		$ -	$ -	$ -	$ -	$ 1,798
Expenses											$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Airfare											$ -	$ -	$ -	1	$ 700	$ 700	$ 105	$ 805	$ 805
Hotel											$ -	$ -	$ -	0	$ 150	$ -	$ -	$ -	$ -
Car Rental											$ -	$ -	$ -	1	$ 150	$ 150	$ 23	$ 173	$ 173
Meals - Per Diem											$ -	$ -	$ -	1	$ 50	$ 50	$ 8	$ 58	$ 58
TASK TOTAL	**0**	**0**	**1**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**$ 2,055**	**$ 144**	**$ 2,199**			**$ 900**	**$ 135**	**$ 1,035**	**$ 3,234**
3. Analysis and Report																			
Prepare Draft Report			4		24		24		8	2	$ 7,540	$ 528	$ 8,068			$ -	$ -	$ -	$ 8,068
Finalize Report			2		4		8		2	1	$ 2,040	$ 143	$ 2,183	1	$ 50	$ 50	$ 8	$ 58	$ 2,240
TASK TOTAL	**0**	**0**	**6**	**0**	**28**	**0**	**32**	**0**	**10**	**3**	**$ 9,580**	**$ 671**	**$ 10,251**			**$ 50**	**$ 8**	**$ 58**	**$ 10,308**

GRAND TOTAL = $ 14,740

Golder Associates

GOLDER ASSOCIATES INC.
ANCHORAGE, ALASKA
PROFESSIONAL RATE SCHEDULE FOR CALENDAR YEAR 2014

Invoices from Golder Associates Inc. include all labor charges, other direct costs, and costs associated with in-house services. Charges include only those services directly attributable to the execution of the work. Time spent when traveling in the interest of the work will be charged in accordance with the hourly rates. Rates for Professional services related to expert testimony, including time spent in depositions and the preparation and presentations of testimony, are available upon request.

Labor charges are based upon standard hourly billing rates for each category of staff. The billing rates include costs for salary, payroll taxes, insurance associated with employment, benefits (including holiday, sick leave, and vacation), administrative overheads, and profit. Rates by labor category are as follows:

Billing Level	*Personnel Category*	*Hourly Rate (U.S.$)*
C8	Sr.Practice/Program Leader	$250
C7	Practice/Program Leader	$230
C6	Senior Consultant	$190
C5	Senior Engineer/Scientist	$165
C4	Senior Project Engineer/Scientist	$140
C3	Project Engineer/Scientist	$120
C2	Staff Engineer/Scientist	$100
C1	Engineer/Scientist	$90
D3	Senior Draftsperson	$105
D2	Staff Draftsperson	$85
D1	Draftsperson	$70
T3	Senior Technician	$100
T2	Staff Technician	$90
T1	Technician	$70
B3	Senior Admin Support	$90
B2	Staff Admin Support	$80
B1	Admin Support	$70

Other direct costs, including materials, travel, subsistence, and subcontractor costs, will be invoiced at cost plus a minimum general and administrative fee of 15%.

Non-labor direct project costs listed below will be billed at the following rates:

SERVICE	RATE
CAD/GIS Computers	$20/hour
Color Photocopies	$0.15/page
Color Plotter (D&E size)	$12/plot
Vehicle (local use)	Government Rate

Rates for laboratory services and use of equipment owned by Golder Associates Inc. will be provided upon request.

City of Kodiak ("CLIENT")

and GOLDER ASSOCIATES INC. ("GOLDER") agree that the following terms and conditions will apply to any services, including subsequent services and changes, (collectively "Services") to be provided by GOLDER relating to Proposal No. P1520365, dated January 26, 2015 (collectively the "Agreement"):

1. STANDARD OF CARE

Services performed by GOLDER will be conducted in a manner consistent with that level of care and skill ordinarily exercised by other professionals currently practicing under similar conditions in the same locality, subject to the time limits and financial, physical or other constraints applicable to the Services. No warranty, express or implied is made.

2. INVOICES AND PAYMENT TERMS

A. Unless otherwise specified in any proposal, GOLDER will submit monthly invoices to CLIENT and a final bill upon completion of Services. CLIENT shall notify GOLDER within ten (10) days of receiving an invoice of any dispute with the invoice and the parties shall promptly resolve any disputed items. Full payment is due prior to delivery of GOLDER's final deliverable. Payment on undisputed invoice amounts is due upon receipt of invoice by CLIENT and is past due thirty (30) days from the date of the invoice. CLIENT agrees to pay a finance charge of one and one-half percent (1-1/2%) per month (18% per annum), or the maximum rate allowed by law, on past due accounts. If payment remains past due sixty (60) days from the date of the invoice, then GOLDER shall have the right to suspend or terminate all Services under this Agreement, without prejudice or penalty. CLIENT will pay all reasonable demobilization and other suspension or termination costs. CLIENT agrees to pay attorneys' fees, legal costs and all other collection costs incurred by GOLDER in pursuit of past due payments.

B. Where the cost estimate for the Services is "not to exceed" a specified sum, GOLDER shall notify CLIENT before each limit is exceeded, and shall not continue to provide Services beyond such limit unless CLIENT authorizes an increase in the amount of the limitation. If a "not to exceed" limitation is broken down into budgets for specific tasks, the task budget may be exceeded without CLIENT authorization as long as the total limitation is not exceeded.

3. CHANGES

CLIENT and GOLDER recognize that it may be necessary to modify the scope of Services, schedule, and/or cost estimate proposed in this Agreement. Such changes shall change the Services, schedule, and/or the cost, as may be equitable under the circumstances. GOLDER shall notify CLIENT in a timely manner when it has reason to believe a change to the Agreement is warranted. GOLDER shall prepare a change order request outlining the changes to the scope, schedule, and/or cost of the project. CLIENT has a duty to promptly consider the change order request and advise GOLDER in a timely manner in writing on how to proceed. If after a good faith effort by GOLDER to negotiate modifications to the scope of Services, schedule, and/or cost estimate, an agreement has not been reached with the CLIENT, then GOLDER shall have the right to terminate this Agreement, without prejudice or penalty, upon written notice to the CLIENT.

4. DELAYS AND FORCE MAJEURE

A. If site or other conditions prevent or inhibit performance of Services or if unrevealed hazardous materials or conditions are encountered, Services under this Agreement may be delayed. CLIENT shall not hold GOLDER responsible for damages or delays in performance caused by acts or omissions of CLIENT, its subcontractors, governmental authorities, regulatory agencies, civil or labor unrest, acts of God, nature, or terror, disruptions of the Internet, GOLDER's

electronic telecommunications or hosting services or any other events that are beyond the reasonable control of GOLDER. In the event of any such delays, the contract completion date shall be extended accordingly and CLIENT shall pay GOLDER for Services performed to the delay commencement date plus reasonable delay charges. Delay charges shall include personnel and equipment rescheduling and/or reassignment adjustments and all other related costs incurred including but not limited to, labor and material escalation, and extended overhead costs, attributable to such delays.

B. Delays in excess of thirty (30) days within the scope of this Article shall, at the option of either party, make this Agreement subject to termination or to renegotiation.

5. INDEPENDENT JUDGMENTS OF CLIENT

If the Services include the collection of samples and data, then GOLDER's obligation to perform those Services is subject to CLIENT's assumption of all Subsurface Risks (such risks being more fully described in Article 12, Subsurface Risks). GOLDER will not be responsible for the independent conclusions, interpretations, interpolations or decisions of CLIENT, or others, relating to the Services. Under no circumstances do GOLDER's Services include making any recommendation, or giving any advice as to whether CLIENT should or should not proceed with any transaction regarding any site related to the Services. CLIENT assumes all responsibility and risk associated with decisions it makes based on the Services.

6. INDEMNIFICATION

A. GOLDER agrees to indemnify, but not defend, CLIENT and its officers, directors, and employees from and against all claims, damages, losses or expenses arising from personal injury, death, or damage to third-party property, and for reimbursement of defense costs, to the extent that all such claims, damages, losses, expenses, or costs are finally determined to result directly from GOLDER's negligence. Such indemnification, as limited by Article 7, Limitation of Liability, shall be CLIENT's sole and exclusive remedy against GOLDER.

B. CLIENT shall, at all times, defend, indemnify and save harmless GOLDER and its subcontractors, consultants, agents, officers, directors and employees from and against all claims, damages, losses and expenses (including but not limited to reasonable attorneys' fees, and court and arbitration costs), arising out of or resulting from the Services of GOLDER, including but not limited to claims made by third parties, or any claims against GOLDER arising from the acts, errors or omissions of CLIENT, its employees, agents, contractors and subcontractors or others. To the fullest extent permitted by law, such indemnification shall apply regardless of breach of contract or strict liability of GOLDER. Such indemnification shall not apply to the extent that such claims, damages, losses or expenses are finally determined to result directly from GOLDER's negligence.

7. LIMITATION OF LIABILITY

A. CLIENT shall immediately notify GOLDER in writing of any deficiencies or suspected deficiencies arising directly or indirectly from GOLDER's negligent acts, errors or omissions. Failure by CLIENT to notify GOLDER shall relieve GOLDER of any further responsibility and liability for such deficiencies. To the extent permitted by law, CLIENT and GOLDER agree that all liability arising directly or indirectly from this Agreement or the Services of GOLDER shall expire no later than one (1) year from the date of GOLDER's acts, errors, or omissions or prior to the last date allowed in the applicable statute of limitation, whichever occurs first in time.

B. CLIENT agrees to limit the liability of GOLDER, its affiliates, and their respective employees, officers, directors, agents, consultants and subcontractors ("GOLDER Group") to CLIENT, its employees, officers, directors, agents, consultants and subcontractors, whether in contract, tort, or otherwise, which arises from GOLDER's acts, negligence, errors or omissions, such that the total aggregate liability of the GOLDER Group to all those named shall not exceed Fifty Thousand

Dollars ($50,000) or GOLDER's total fee for the Services rendered under this Agreement, whichever is greater.

C. Neither party shall be responsible to the other for lost revenues, lost profits, cost of capital, claims of customers, loss of data or any other special, indirect, consequential or punitive damages.

8. INSURANCE

A. GOLDER maintains insurance coverage with the following limits:

(i) Workers' Compensation in compliance with statutory limits

(ii) Automobile Liability
Combined Single Limit $1,000,000

(iii) Commercial General Liability:
Each Occurrence $1,000,000
General Aggregate $2,000,000

(iv) Professional Liability Insurance
Any One Claim $1,000,000
Policy Aggregate $3,000,000

B. CLIENT shall not require GOLDER to sign any document or perform any Service which in the judgment of GOLDER would risk the availability or increase the cost of its Professional or Commercial General Liability insurance.

9. PROFESSIONAL WORK PRODUCT

A. The Services provided by GOLDER are intended for one time use only. All documents, including but not limited to, reports, plans, designs, boring logs, field data, field notes, laboratory test data, calculations, and estimates and all electronic media prepared by GOLDER are considered its professional work product (the "Documents"). GOLDER retains all rights to the Documents.

B. CLIENT understands and acknowledges that the Documents are not intended or represented by GOLDER to be suitable for reuse by any party, including, but not limited to, the CLIENT, its employees, agents, subcontractors or subsequent owners on any extension of a specific project not covered by this Agreement or on any other project, whether CLIENT's or otherwise, without GOLDER's prior written permission. CLIENT agrees that any reuse unauthorized by GOLDER will be at CLIENT's sole risk and that CLIENT will defend, indemnify and hold GOLDER harmless from any loss or liability resulting from the reuse, misuse or negligent use of the Documents.

10. DATA AND INFORMATION

CLIENT shall provide to GOLDER all reports, data, studies, plans, specifications, documents and other information ("Project Information") which are relevant to the Services. GOLDER shall be entitled to rely upon the Project Information provided by CLIENT or others and GOLDER assumes no responsibility or liability for the accuracy or completeness of such. CLIENT waives any claim against GOLDER, and agrees to defend, indemnify and hold GOLDER harmless from any claim or liability for injury or loss allegedly arising from errors, omissions, or inaccuracies in the Project Information. GOLDER will not be responsible for any interpretations or recommendations generated or made by others, which are based, whole or in part, on GOLDER's data, interpretations or recommendations.

11. RIGHT OF ENTRY

CLIENT will provide for the right of entry for GOLDER, its subcontractors, and all necessary equipment in order to complete the Services under this Agreement. If CLIENT does not own the site,

CLIENT shall obtain permission and execute any required documents for GOLDER to enter the site and perform Services. It is understood by CLIENT that in the normal course of work some surface damage may occur, the restoration of which is not part of this Agreement.

12. SUBSURFACE RISKS

A. Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions. Even a comprehensive sampling and testing program implemented in accordance with a professional Standard of Care may fail to detect certain conditions. The environmental, geological, geotechnical, geochemical, hydrogeological and other conditions that GOLDER interprets to exist between sampling points may differ from those that actually exist. Furthermore, CLIENT recognizes that, passage of time, natural occurrences, direct or indirect human intervention at or near the site may substantially alter discovered conditions.

B. Subsurface sampling may result in damage or injury to underground structures or utilities and unavoidable contamination of certain subsurface areas not known to be previously contaminated such as, but not limited to, a geologic formation, the groundwater, or other hydrous body. GOLDER will adhere to the standard of care during the conduct of any subsurface investigation. When the Services include subsurface sampling, CLIENT waives any claim against GOLDER, and agrees to defend, indemnify and hold GOLDER harmless from any claim or liability for injury, loss, or expense (including but not limited to legal fees) which may arise as a result of alleged or actual cross-contamination caused by any subsurface investigation or any damage or injury to underground structure, formation, body, or utilities.

13. DISPOSAL OF SAMPLES, MATERIALS AND CONTAMINATED EQUIPMENT

A. All samples obtained pursuant to this Agreement remain the property and responsibility of CLIENT. Uncontaminated soil and rock samples or other specimens maybe disposed of thirty (30) days after submission of the work product due pursuant to the Proposal. Upon written request, GOLDER will store uncontaminated samples for longer periods of time or transmit the samples to CLIENT for a mutually acceptable charge.

B. All contaminated samples and materials (containing or potentially containing hazardous constituents), including, but not limited to soil cuttings, contaminated purge water, and/or other environmental wastes obtained pursuant to this Agreement remain the property and responsibility of CLIENT and shall be returned to CLIENT for proper disposal. All laboratory and field equipment that cannot readily and adequately be cleansed of its hazardous contaminants shall become the property and responsibility of CLIENT. All such equipment shall be charged and turned over to CLIENT for proper disposal. Alternate arrangements to assist CLIENT with proper disposal of such equipment, materials and samples may be made at CLIENT's direction and expense. In such event, CLIENT agrees to have a representative available to sign all certifications, manifests, and other documents reasonably required by GOLDER and associated with the transportation, treatment and disposal, or handling of hazardous substances, waste or materials from the project property site, and derived from GOLDER's performance of the Services, including investigation derived wastes. If such CLIENT representative is unavailable and GOLDER is required to execute any such documents on CLIENT's behalf, CLIENT acknowledges that GOLDER shall be acting only as offeror or agent on behalf of CLIENT. It is understood and agreed that GOLDER is not, and has no responsibility as, a handler, generator, operator, treater, storer, arranger, transporter, or disposer of hazardous substances, waste or materials found or identified at or around the project site property. CLIENT agrees to waive any claim against GOLDER and to defend, indemnify and hold GOLDER harmless from and against any claims, losses, damages, expenses (including, but not limited to, legal fees), and liabilities of any type arising out of the discovery and disposal of any alleged or actual hazardous substances, wastes or materials found or identified at or around the project site property.

14. CONTROL OF WORK AND JOB-SITE SAFETY

A. GOLDER shall be responsible only for its activities and that of its employees and subcontractors. GOLDER's Services under this Agreement are performed for the sole benefit of the CLIENT and no other entity shall have any claim against GOLDER because of this Agreement or the performance or nonperformance of Services hereunder. GOLDER will not direct, supervise or control the work of other consultants and contractors or their subcontractors. GOLDER does not guarantee the performance of, and shall have no responsibility for, the acts or omissions of any other contractor, subcontractor, supplier or other entities furnishing materials or performing any work on the project.

B. Insofar as job site safety is concerned, GOLDER is responsible only for the health and safety of its employees and subcontractors. Nothing herein shall be construed to relieve CLIENT or any other consultants or contractors from their responsibilities for maintaining a safe job site. GOLDER shall not advise on, issue directions regarding, or assume control over safety conditions and programs for others at the job site. Neither the professional activities of GOLDER, nor the presence of GOLDER or its employees and subcontractors, shall be construed to imply that GOLDER controls the operations of others or has any responsibility for job site safety.

15. PUBLIC RESPONSIBILITY

CLIENT has a duty to comply with applicable codes, standards, regulations and ordinances, with regard to public health and safety. While GOLDER performs the Services it will endeavor to alert CLIENT to any matter of which GOLDER becomes aware and believes requires CLIENT's immediate attention to help protect public health and safety, or which GOLDER believes requires CLIENT to issue a notice or report to certain public officials, or to otherwise comply with applicable codes, standards, regulations or ordinances. If CLIENT decides to disregard GOLDER's recommendations in these respects, (i) GOLDER shall determine in its sole judgment if it has a duty to notify public officials, and (ii) GOLDER has the right immediately to terminate this Agreement upon written notice to the CLIENT and without penalty.

16. NOTIFICATION AND DISCOVERY OF HAZARDOUS MATERIALS

A. Prior to commencing the Services and as part of Project Information defined in Article 10, Data and Information, CLIENT shall furnish to GOLDER all documents and information known to CLIENT that relate to past or existing conditions of the site and surrounding area, including the identity, location, quantity, nature or characteristics of any hazardous materials or suspected hazardous materials or subterranean utilities. GOLDER may rely on such information and documents. CLIENT hereby warrants that, if it knows or has any reason to assume or suspect that hazardous materials may exist at the project site, it has so informed GOLDER.

B. CLIENT acknowledges that if unanticipated hazardous materials or suspected hazardous materials are discovered on the project site property or on properties surrounding or adjacent to such site, it is CLIENT's responsibility, and not GOLDER's, to inform the owner of any affected property not owned by CLIENT of such discovery. CLIENT also recognizes that any such discovery may result in a significant reduction of the property's value. CLIENT waives any claim against GOLDER and agrees to defend, indemnify and hold harmless GOLDER from any claim or liability for injury or loss of any type arising from the discovery of hazardous materials or suspected hazardous materials on the project property site or on surrounding property, whether or not owned by CLIENT. CLIENT agrees that discovery of unanticipated hazardous materials shall constitute a changed condition for which GOLDER shall be fairly compensated.

17. TERMINATION

Either party may terminate this Agreement as a result of a material breach of the other party if the other party does not commence and continue to cure the breach within thirty (30) days of receipt of written notice of the breach from the non-breaching party. In the event of termination, GOLDER shall

be paid for Services performed to the termination notice date, reasonable termination expenses, and a portion of its anticipated profits not less than the percentage of the contract services performed as of the termination notice date. GOLDER may complete such analyses and records as are necessary to complete its files and may also complete a report on the Services performed to the date of notice of termination or suspension. The expenses of termination or suspension shall include all direct costs of GOLDER in completing such analyses, records and reports.

18. DISPUTES

A. All disputes, claims, and causes one party makes against the other, at law or otherwise, including third party or "pass-through" claims for indemnification and/or contribution, which amount to a claim of more than $50,000 shall be initiated, determined, and resolved by arbitration in accordance with the American Arbitration Association and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof. Notwithstanding the foregoing, any claims by GOLDER against CLIENT involving failure to make payment pursuant to Article 2, Invoices and Payment Terms, as well as an alleged misappropriation or misuse of GOLDER's Intellectual Property pursuant to article 19, or confidential information may be resolved through any legal or equitable means or any form of alternative dispute resolution.

B. In the event that one party makes a claim against the other, at law or otherwise, and then fails to prove such claim, then the prevailing party shall be entitled to all costs, including attorneys' fees incurred in defending against the claim.

19. INTELLECTUAL PROPERTY

A. If the Services require GOLDER to provide CLIENT with the right to use or access proprietary GOLDER software, programs, information management solutions, hosting services, technology, designs, information or data ("GOLDER Products"), GOLDER grants CLIENT during the term of the project a non-exclusive, non-transferable, non-assignable license to use the GOLDER Products for CLIENT's internal purposes, solely in connection with the Services. Except for this limited license, GOLDER expressly reserves all other rights in and to the GOLDER Products.

B. GOLDER's Right to Use CLIENT Materials - If the Services require CLIENT to provide GOLDER with the right to use or access proprietary CLIENT software, programs, technology, information or data ("CLIENT Products"), CLIENT grants GOLDER a perpetual, non-exclusive, non-transferable, non-assignable, royalty free world-wide license to use and access the CLIENT Product as necessary to provide CLIENT with Services.

C. Intellectual Property General - GOLDER shall own all Intellectual Property (as hereinafter defined) associated with the Services and the GOLDER Products, together with any modifications, updates or enhancements to said Intellectual Property. GOLDER grants no right or license to such Intellectual Property to CLIENT except as expressly provided in this Agreement. CLIENT conveys to GOLDER any interest in any such Intellectual Property rights that, notwithstanding the foregoing, would otherwise be deemed by law to vest in CLIENT. "Intellectual Property" includes patents, patent applications, trademarks, trademark applications, copyrights, moral rights or other rights of authorship and applications to protect or register the same, trade secrets, industrial rights, know-how, privacy rights and any other similar proprietary rights under the laws of any jurisdiction in the world. GOLDER may use and publish the CLIENT's name and give a general description of the Services rendered by GOLDER for the purpose of informing other clients and potential clients of GOLDER's experience and qualifications.

D. GOLDER shall use reasonable efforts to provide the Services without infringing on any valid patent or copyright and without the use of any confidential information that is the property of others; provided, however, reasonable efforts of GOLDER shall not include a duty to conduct or prepare a patent or copyright search and/or opinion. If GOLDER performs its Services in a manner consistent with the above, then to the fullest extent permitted by law, CLIENT shall

indemnify, defend and hold harmless GOLDER and its officers, directors, agents and employees against all liability, cost, expense, attorneys' fees, claims, loss or damage arising from any alleged or actual patent or copyright infringement resulting from the Services under this Agreement.

20. INFORMATION MANAGEMENT

A. CLIENT acknowledges that electronic media is susceptible to unauthorized modification, deterioration, and incompatibility and therefore CLIENT cannot rely upon the electronic media versions of the Documents. In the event of any discrepancy, GOLDER's hardcopy shall prevail.

B. Some GOLDER Products may be offered to CLIENT via the Internet and some GOLDER Products may utilize wireless radio communications. Atmospheric, meteorological, topographical and other conditions can affect the performance of any wireless device, software or technology (including, but not limited to information management solutions, hosting services, ftp and extranet services), just as application size, traffic, bottlenecks and other conditions can affect Internet access and upload and download speeds. CLIENT acknowledges that these types of conditions and other similar conditions are beyond the reasonable control of GOLDER and that GOLDER makes no representations or guarantees that CLIENT will be able to access any particular GOLDER Product at any given time without any error or interruption.

21. MISCELLANEOUS

A. This Agreement supersedes all other agreements, oral or written, and contains the entire agreement of the parties. No cancellation, modification, amendment, deletion, addition, waiver or other change in this Agreement shall have effect unless specifically set forth in writing signed by the party to be bound thereby. Titles in this Agreement are for convenience only.

B. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns provided that it may not be assigned by either party without consent of the other. It is expressly intended and agreed that no third party beneficiaries are created by this Agreement, and that the rights and remedies provided herein shall inure only to the benefit of the parties to this Agreement.

C. CLIENT acknowledges and agrees that GOLDER can retain subconsultants, who may be affiliated with GOLDER, to provide Services for the benefit of GOLDER. GOLDER will be responsible to CLIENT for the Services and work done by all of its subconsultants and subcontractors, collectively to the maximum amount stated in Article 7 Limitation of Liability. CLIENT agrees that it will only assert claims against and seek to recover losses, damages or other liabilities from GOLDER and not GOLDER's affiliated companies. To the maximum extent allowed by law, CLIENT acknowledges and agrees it will not have any legal recourse, and waives any expense, loss, claim, demand, or cause of action, against GOLDER's affiliated companies, and their employees, agents, officers and directors.

D. No waiver of any right or remedy in respect of any occurrence on one occasion shall be deemed a waiver of such right or remedy in respect of such occurrence on any other occasion.

E. All representations and obligations (including without limitation the obligation of CLIENT to indemnify GOLDER in Article 6 and the Limitation of Liability in Article 7) shall survive indefinitely the termination of the Agreement. CLIENT acknowledges that it may not use GOLDER's name or any reference to the Services in any press release or public document without the express, written consent of GOLDER.

F. Any provision, to the extent found to be unlawful or unenforceable, shall be stricken without affecting any other provision of the Agreement, so that the Agreement will be deemed to be a valid and binding agreement enforceable in accordance with its terms.

G. All questions concerning the validity and operation of this Agreement and the performance of the obligations imposed upon the parties hereunder shall be governed by the laws of Georgia unless the law of another jurisdiction must apply for this Agreement to be enforceable.

H. All notices required or permitted to be given hereunder, shall be deemed to be properly given if delivered in writing via facsimile machine, e-mail, regular mail, hand delivery or express courier addressed to CLIENT or GOLDER, as the case may be, at the addressee set forth in the Proposal Acceptance Form in regard to the CLIENT, and as listed on the Proposal in regard to GOLDER, with postage thereon fully prepaid if sent by mail or express courier.

I. CLIENT represents and warrants that the individual signing the Proposal Acceptance Form is an authorized representative of CLIENT and has authority to bind the CLIENT.

22. AUTHORIZATION TO PROCEED

By signing below, CLIENT hereby authorizes GOLDER to proceed with the Services outlined in the Proposal and in accordance with this Agreement, which includes terms relating to *payment, limitation of liability, insurance and indemnity*, among many other important provisions. CLIENT also represents that any "purchase order" type document which CLIENT may issue subsequent to executing this Agreement, shall be for administrative or accounting purposes only, and that this Agreement shall supersede any such terms or conditions attached thereto in governing the performance of the Services.

GOLDER ASSOCIATES INC.	**CLIENT:**
	(Name)
Signature	Signature
Steven L. Anderson, PE	
Name	Name
Associate and Senior Geotechnical Engineering Consultant	
Title	Title
I have authority to bind the corporation.	I have authority to bind the corporation.

Please address invoices to:	Please address deliverables & notices* to: Same as invoices: Yes / No, address to:
ATTN:	ATTN:

**All notices required or permitted to be given hereunder shall be in writing and shall be delivered in person, sent by facsimile machine or mailed, properly addressed and stamped with the required postage to the intended recipient.*

P1520365 - January 26, 2015

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EXECUTIVE SESSION

MEMORANDUM TO COUNCIL

To: Mayor Branson and City Councilmembers

From: Aimée Kniaziowski, City Manager

Date: February 26, 2015

Agenda Item: X. a. Discussion About Contractor Claims Related to the Reconstruction of Pier III

SUMMARY: The City Council will enter into executive session to discuss contractor claims related to the reconstruction of Pier III.

MOTION:

Move to enter into executive session pursuant to AS 44.62.310(c)(1) to discuss matters, the immediate knowledge of which would clearly have an adverse effect upon the finances of the City, specifically, contractor claims related to the reconstruction of Pier III.