REGULAR COUNCIL MEETING
AUGUST 07, 2013 @ 7:30 PM
LIBRARY MEETING ROOM

AGENDA

A. CALL TO ORDER

B. INVOCATION AND PLEDGE OF ALLEGIANCE
I pledge allegiance to the Flag of the United States of America, and to the republic for which it stands, one Nation under God, indivisible with liberty and justice for all.

C. ROLL CALL
Mayor James Kacsh, Council members Kristin Carpenter, Tim Joyce, David Allison, Bret Bradford, EJ Cheshier, David Reggiani and James Burton

D. APPROVAL OF REGULAR AGENDA……..……...… **(voice vote)**

E. DISCLOSURES OF CONFLICTS OF INTEREST

F. COMMUNICATIONS BY AND PETITIONS FROM VISITORS
1. Guest Speaker
2. Audience comments regarding agenda items……....… **(3 minutes per speaker)**
3. Chairpersons and Representatives of Boards and Commissions
(Harbor, HSB, Parks & Rec, P&Z, School Board)
4. Superintendent's Report

G. APPROVAL OF CONSENT CALENDAR…….…..…. **(roll call vote)**
5. Record excused absences of Council members ***Cheshier*** & ***Burton*** from the July 17, 2013 regular meeting.

H. APPROVAL OF MINUTES
6. Regular Meeting Minutes 07-03-13……..……..... **(page 1)**
7. Regular Meeting Minutes 07-17-13……..…….……... **(page 7)**

I. CONSIDERATION OF BIDS

J. REPORTS OF OFFICERS
8. Mayor's Report
9. Manager's Report
10. City Clerk's Report

K. CORRESPONDENCE
11. RCAC Project Planning 06-25-13…….…..…… **(page 17)**
12. Mykland email in re Cordova Center 07-18-13…….……..…….. **(page 19)**
13. Polar Tankers letter to Mayor 07-25-13…….……..…….. **(page 20)**
14. Notice of Utility Tariff Filing 07-16-13…….……..…… **(page 21)**
15. Schinella Family letter to Mayor 07-22-13…….……..…… **(page 23)**

L. ORDINANCES AND RESOLUTIONS
16. Ordinance 1111……....……. **(voice vote)(page 24)**
An ordinance of the City Council of the City of Cordova, Alaska, amending Cordova Municipal Code 4.56.070 in re annual leave carry over – 1st reading
17. Resolution 08-13-44…….. **(voice vote)(page 26)**
A resolution of the City Council of the City of Cordova, Alaska, supporting the Native Village of Eyak's Shepard Point Road and deep-water oil spill response facility project
18. Resolution 08-13-45…….. **(voice vote)(page 41)**
A resolution of the City Council of the City of Cordova, Alaska adopting the updated Local Hazards Mitigation Plan
(entire Updated Hazards Mitigation plan available in packet on City website only)

M. UNFINISHED BUSINESS

N. NEW & MISCELLANEOUS BUSINESS

19. Pending Agenda and Calendar……...……..... **(page 179)**

O. AUDIENCE PARTICIPATION

P. COUNCIL COMMENTS

20. Council Comments

Q. EXECUTIVE SESSION

21. Cordova Center Finances – Attorney advice/update

R. ADJOURNMENT

Executive Sessions: Subjects which may be discussed are: (1) Matters the immediate knowledge of which would clearly have an adverse effect upon the finances of the government; (2) Subjects that tend to prejudice the reputation and character of any person; provided that the person may request a public discussion; (3) Matters which by law, municipal charter or code are required to be confidential; (4) Matters involving consideration of governmental records that by law are not subject to public disclosure.

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CITY COUNCIL REGULAR MEETING
JULY 03, 2013 @ 7:30 PM
LIBRARY MEETING ROOM
MINUTES

A. CALL TO ORDER

Mayor James Kacsh called the Council Regular Meeting to order at 7:30 pm on July 03, 2013, in the Library Meeting Room.

B. INVOCATION AND PLEDGE OF ALLEGIANCE

Mayor James Kacsh led the audience in the Pledge of Allegiance.

C. ROLL CALL

Present for roll call were ***Mayor James Kacsh*** and Council members ***Kristin Carpenter***, ***Tim Joyce***, ***David Allison***, ***Bret Bradford*** and ***David Reggiani***. Council members ***EJ Cheshier*** and ***James Burton*** were absent. Also present were Acting City Manager ***Moe Zamarron*** and City Clerk ***Susan Bourgeois***.

D. APPROVAL OF REGULAR AGENDA

M/Reggiani S/Joyce to approve the Regular Agenda.
Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

E. DISCLOSURES OF CONFLICTS OF INTEREST - none

F. COMMUNICATIONS BY AND PETITIONS FROM VISITORS

1. Guest Speaker – none
2. Audience comments regarding agenda items – none
3. Chairpersons and Representatives of Boards and Commissions
Harbor Commission Council Representative ***Burton*** was not present.
HSB representative ***Allison*** said the Board had just met previous to this Council meeting; they credentialed two doctors, staff has interviewed three doctors and we are trying to get at least two of those to sign on, a good thing.
P&R representative ***Kristin Carpenter*** said there hadn't been a meeting since last Council meeting.
P&Z representative ***Reggiani*** said they had a meeting scheduled for next week.
School Board representative ***Bret Bradford*** said there also hadn't been a meeting.
4. Superintendent's Report - ***Theresa Keel*** was not present – school's out.

G. APPROVAL OF CONSENT CALENDAR

Mayor James Kacsh informed Council that the consent calendar was before them.
5. Record excused absence of Council member ***Joyce*** from the June 19, 2013 regular meeting.
Vote on Consent Calendar: 5 yeas, 0 nays, 2 absent. Cheshier-absent; Bradford-yes; Burton-absent; Joyce-yes; Carpenter-yes; Allison-yes and Reggiani-yes. Consent Calendar was approved.

H. APPROVAL OF MINUTES

M/Reggiani S/Joyce to approve the Minutes.
Reggiani opined that there were sections of the minutes that were incomplete. Under the manager's report when they were discussing emails, he thought there was quite a bit missing. Also, on page 6 regarding the City Clerk's employment agreement, he thinks there is some missing information there too and it bounces back and forth between first person and third person. ***Joyce*** clarified that it was specifically page 3 about the email conversation and on page 6 it was the first and third person discrepancy but that the content was right. ***Reggiani*** said exactly, but without listening to it again himself, he thought it most appropriate to refer it back to staff.

M/Reggiani S/Allison to refer the Regular Meeting Minutes 06-19-13 back to the City Clerk's office to listen to the record and see if those can be made a little more clear.
Vote on motion to refer: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.
6. Public Hearing Minutes 06-19-13
M/Reggiani S/Joyce to approve Public Hearing Minutes 06-19-13
Vote on motion to approve Public Hearing Minutes 06-19-13: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.
7. Regular Meeting Minutes 06-19-13 - referred

I. CONSIDERATION OF BIDS – none

J. REPORTS OF OFFICERS
13. Mayor's Report
Mayor Kacsh said he met with NVE last week on Shepard Point Road and they will present to us on July 17 and there will also be a resolution of support on the agenda at the July 17 meeting. Today at lunch he met with Eyak Corporation and the Chamber of Commerce concerning the washed out bridge 339 so that we can all have a unified voice in requesting that the state fix the bridge. They are proposing a subsidy for other ways to access the other side of the bridge; all just ideas now. Last night he presented Helen Grindle with a proclamation on her 100th birthday.
14. Manager's Report – ***Zamarron*** said he appreciates Council letting him sit in here for a couple of weeks and their consideration of his application for City Manager. He felt ***Robertson*** was a good choice and looking forward to work with him. ***Zamarron*** referred to his report and said Title 4 is being reviewed by staff for grammar and content. In addition to the items listed in his report, the City received a notice of noncompliance from the State of Alaska, from two agencies within the office of DNR. This notice is for not having an agreement in place with the Sheridan ski club. A deadline of July 19, 2013 was given to reach an agreement. This involves both the DNR leasing office and the division of Parks and Outdoor Recreation for grant noncompliance. ***Zamarron*** will discuss this issue in detail at the next meeting. He has been keeping ***Robertson*** up to date with daily operations and an email account has been set up for him. ***Greenwood*** has been working on cleaning up right-of-ways. A load of recyclables was hauled to Anchorage netting $3,158 for the refuse fund. ***Bradford*** questioned what was holding up the ski hill agreement. ***Zamarron*** answered it was just difficult to get everyone from the club together to sign the agreement. ***Joyce*** commented that as far as the communication lease goes if someone was injured on the ski hill communication would be necessary. ***Bradford*** stated the leases could not be for profit with a grant. ***Zamarron*** said the use permit is for outdoor recreation and any other use requires a conversion process.
15. City Clerk's Report – ***Bourgeois*** said she recently purchased business cards for the Mayor and asked if any council member that has two or three years left on their term would like cards, if so she will order them. Regarding the Clerk's contract, she asked council if something could be put on the pending agenda tying the leave component of Title 4 to her contract. She would like to do that at the July 17, 2013 meeting. Tax bills were mailed and there have been many payments already received. We are using the new property tax system which has been working well.

K. CORRESPONDENCE - None

L. ORDINANCES AND RESOLUTIONS
11. Ordinance 1110 An ordinance of the City Council of the City of Cordova, Alaska, repealing and reenacting Cordova Municipal Code Title 4 – 1st reading
M/Reggiani S/Allison to adopt Ordinance 1110 an ordinance of the City Council of the City of Cordova, Alaska, repealing and reenacting Cordova Municipal Code Title 4
Zamarron stated staff is reviewing the wording and some of the content. ***Reggiani*** read through the material but had a hard time with the format. He felt it was difficult to see what was carried forward from the existing code and what was a new suggestion from the attorney. He had so many edits that he doesn't think

a regular meeting is the place to go through it line by line. ***Reggiani*** suggested a work shop with council and the new City Manager as he felt it was important for the management section of our code and the middle or end of August would be a good time as that would let ***Robertson*** get up to speed. He also suggested the city attorney who provided the concept also be present at the workshop. ***Joyce*** agreed with ***Reggiani*** and felt it was quite extensive and would like to break it up into sections. He would like to see staff involved as it affects a lot of people and their lives. ***Mayor Kacsh*** was not necessarily in favor of a handbook as opposed to having it in code. He felt that by leaving it in code changes would be less easy. ***Bradford*** thinks a handbook is handy and supports ***Joyce*** and ***Reggiani's*** workshop proposal. He questioned the timeliness of the memo to Mayor and Council from the attorney as it was dated April 26th and this was the first time he had seen it. He's concerned that it was in the City's possession for two months and just coming to council. ***Carpenter*** is not opposed to the handbook format but it is her understanding that it would be codified so it would still have the same weight of what we currently have. She wants attorney input to make sure all the changes from the current code are covered. She feels the handbook gives the City a little bit more flexibility in terms of how personnel are managed with broader coverage. The idea of combining personal leave and medical leave is one item she wanted to look at with the attorney. ***Reggiani*** stated he is also concerned about the date of the memo. He is looking for an explanation as to why it wasn't in court comments or why it didn't come directly to the City Council and Mayor. He feels those kinds of memos would have a high priority. He stated that the only three positions that he could think of that could hold up the memo would be the Mayor, the City Manager or the Clerk. ***Joyce*** commented that historically when a complicated issue comes in the City Manager would look over it first until it was ready for a first reading. He said it is not uncommon for items to come in then take a while before it's on the agenda. He personally feels it is not ready for a first reading and that there are a lot of things that need to be fixed and he will refer it back to staff. Two months may be a long time but it's not uncommon. ***Allison*** agrees with what's been said but questions who directed the attorney what to change and what not to change. He feels we are giving the attorney way too much leeway. After reading the changes he prefers the original code and feels there are things that did not belong in a personnel policy. Some of the content should not have been prepared by the attorney considering the price at which they are producing it. Regarding the workshops he would like to discuss the leave portion before the City Manager arrives and the Clerk's contract ends. ***Allison*** suggested if a decision is not made on leave that some language be put in the Clerk's contract tying it back to whatever decision is made ultimately. He will not pass this on any reading tonight and stated there are way too many things the staff and council have found. He is in favor of referring it back to staff with council comments. He would like to have a discussion sometime between now and August 7th about the leave situation and tie it to the Clerk's contract. ***Zamarron*** noted that staff is spending an hour to an hour and a half once or twice a week to present to council some cleaned up language in this title. He understands that some of the items directly affect staff's wellbeing and that council will have a say on those issues. He feels there is a lot a work to be done and requests that staff finish their work and present to council something a little farther along. ***Carpenter*** would like to hear from the attorney sooner rather than later because she is assuming it is proposed this way because this is considered to be the new best practice. She also would like a workshop to go over it and hear why it was proposed this way. ***Reggiani*** stated he is not sure who is driving the bus but when the city attorney started this chapter it would have been handy to have a conversation early on so she could have had some direction from council. ***Greenwood*** interjected that the direction came from the prior City Manager, Mark Lynch, to create the personnel handbook. ***Reggiani*** continued that he was not pointing fingers at staff but merely felt it's better to have the conversation early on so council could weigh in; and understand if the handbook is a good idea and is something the council wants to move forward on. He would like a workshop and appreciates ***Zamarron's*** comments on the inherent conflict of interest staff has on some of these provisions. Everyone is aware of the conflict but that doesn't mean staff can't weigh in on it. ***Reggiani*** strongly agrees with ***Carpenter*** and believes at this workshop ***Amy*** (***Limeres*** – City Attorney who worked on this) should be here in person so council could drill into her thoughts and figure out what

her direction is. Council has spent a lot of time talking about this and staff has put a lot of time in to it and he is not sure if anyone really directed it. ***Mayor Kacsh*** stated that over the last three years a lot of money has been put into rewriting the entire code and this is just the section the attorney is at. He recalls an update from ***Lynch*** that the attorneys were approaching this but as far as direction and which way they were going to go on it, council didn't know or have input. ***Reggiani*** agrees that council didn't know about it until Friday when they picked up their packets. He felt if they had known in late April, red flags would have started to go off and we could have saved a lot of time. ***Joyce*** recalls a memo where the attorney was recommending that we do a handbook versus ordinances because ordinances are too bulky. A handbook is easier to change to keep compliant with changes in state law. He feel that you need to go through the handbook line by line and doesn't know if they could have been further head if they had known earlier. ***Mayor Kacsh*** stated that the Clerk's contract is on hold pending a concept from council on what they are going to do on one section that has do with paid time off. He would like to have the discussion move towards that so the intent is known for the next meeting. ***Joyce*** said that was under chapter 6, leave policies, and he would like to see that be one of the first ones council takes up in a workshop. ***Bradford*** asked where the highlights are from and what they mean. ***Bourgeois*** stated that they are directly from the attorney. ***Greenwood*** added the highlights are questions the attorney would be asking staff about our current procedures. She continued by saying that ***Amy*** sent everything for review and that is why it never came to Council. When it comes to staff, they go through it line by line to extract the meaning, clean up the version, and then bring it to council to look at. ***Amy*** took the leave policy from code and brought it across. Annual leave is one of the examples where code says maximum of 240 hours, employees accrue leave after 240 hours. Maximum does not mean accruing leave. When ***Amy*** didn't know things she would highlight them as she didn't have direct contact with staff. ***Appleton*** interjected that she did spend time with ***Amy*** on the leave section of the code and discussed current city procedure with her.

M/Reggiani S/Joyce to refer Ordinance 1110 to staff and to schedule a work session on this during the pending agenda portion of tonight's meeting.

Vote on motion to refer to staff and to schedule a work session: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

M. UNFINISHED BUSINESS - None

N. NEW & MISCELLANEOUS BUSINESS

12. Discussion with John Bitney, City Lobbyist redistricting update & out of session lobbying

Mayor Kacsh informed council that ***Bitney*** has chartered a trip with his family on the sound today and that the ***Mayor*** was not able to reach him but that he planned to call in.

M/Joyce S/Bradford to recess five minutes, with no objection they stood in recess for five minutes.

Mayor Kacsh discussed an email between ***Bitney*** and himself which states ***Bitney's*** points on sending someone to Kodiak. The ***Mayor*** felt it is our legislators' responsibility to come see us and listen to their constituents; however, we can't form a good plan if we can't get a response from them. He said it's important we be heard and build a good working relationship which might mean going to Kodiak and having face to face meetings. Our attempts to bring them to town are failing as they have not accepted the numerous invites to Cordova. ***Carpenter*** hoped that in the fall their schedule might ease up a little. ***Bradford*** is concerned that ***Bitney*** has not been available for meetings. ***Mayor Kacsh*** said that it was just a timing issue. ***Bradford*** would like to see an email from ***Bitney*** if he can't make meetings. ***Reggiani*** pointed out that ***Bitney*** did send an email to the ***Mayor*** saying he would not be able to make this meeting because of his holiday. He agrees with ***Bitney's*** read on this and especially who's responsibility it is. He's wondering if there is a way to strengthen the next invitation to Cordova by having the Mayor and Council sign. ***Carpenter*** suggested an invite to CDFU's annual fish prom. She said the Copper River Watershed project is trying to combine their annual event with the fungus festival this year and with the Seafood Association on the 6th or 7th of September.

Bradford appreciates the email the ***Mayor*** got but stated ***Bitney's*** contract is with the council and feels his correspondence should include the council. He thinks ***Bitney*** is doing a good job. ***Bradford*** would like to include the Governor on invites to legislators to let him know we are having a hard time getting a response. ***Joyce*** suggested inviting the Governor. ***Mayor Kacsh*** said a CEC board member received a no from Representative Austerman on invites to Cordova. On the redistricting issue, he would like council to formulate a letter stating Cordova needs to stay in a similar socioeconomic group within coastal Alaska.

13. Pending Agenda and Calendar

Mayor Kacsh asked about putting the Clerk's contract on July 17. ***Carpenter*** inquired about a meeting with ***Amy*** prior to discussing the Clerk's contract. ***Reggiani*** liked the idea of breaking up the sections when meeting with ***Amy*** and felt a work session before the regular meeting was a good idea. ***Carpenter*** would like to do a lunch meeting to go over the handbook sections. ***Bradford*** liked the lunch meeting and the idea of breaking it up into chapters. ***Mayor Kacsh*** recommended council start with the pressing issue of paid time off, section six. A noon meeting was tentatively scheduled for Wednesday, July 10, if ***Amy*** is available for a teleconference. ***Reggiani*** stated he would be in Anchorage and would call in from the attorney's office. ***Joyce*** suggested keeping the meeting just to section six. A work session was scheduled for 6:30 pm to go over handbook, chapter to be determined at July 10th meeting. ***Allison*** indicated a need for a meeting to discuss the Health Services Board repayment plan proposal. Coming forward in the next month or so will be a review of Providence which CCMC is working on. ***Mayor Kacsh*** is leaving an opening for ***Bitney*** for July 17.

O. AUDIENCE PARTICIPATION

Linda Crider, Eccles Lagoon thanked council for putting the Whitshed Road project on the STIP and the local match they made in December. She wasn't sure how the budgeting takes place or when but would like to see a small amount put aside each year so by the third year a large amount will not be owed. She hopes things will continue the same for the long range transportation plans with the State. She said Karen Swartzbart wanted her to bring up the speed limit on Whitshed and that DOT will be sending someone to do a speed study. She would like to see the Mayor, City Council and Chief of Police convey to DOT the section between Copper River Highway and the recreation center be 25 mph.

Cathy Sherman, 403 Davis thanked council for their discussion on title 4. She gave council some history when the City had a personnel policy committee. This was comprised of staff, people from the community and a council member. The policy was reviewed in house then brought to council. That was a good process and a lot cheaper as it was before the age of the lawyer. She appreciates council allowing staff to participate as this affects all the employees at the City.

P. COUNCIL COMMENTS

14. Council Comments

Allison stated one of the problems in staff getting changes before council is that council doesn't know what the complaints are about without seeing them. He feels we all have the same concerns and wants to make sure it works for employees. He thanked and welcomed ***Zamarron*** to his first meeting as acting City Manager.

Reggiani echoed ***Allison's*** comments and felt he did a good job explaining council's frustrations.

Bradford felt the more he dealt with attorneys the more he liked the method Cathy just explained.

Carpenter echoed what ***Reggiani*** said but added that part of the issue was the transition with the City Manager position and hopefully there will be more consistency going forward.

Joyce thanked ***Zamarron***. He reminded folks of the big 4th of July picnic on Main Street. There will be a BBQ and events going on. Festivities start at 9 am with a kelp box derby race.

Mayor Kacsh mentioned he received a letter from DCCED for the $1M that was appropriated during the legislative session.

Q. EXECUTIVE SESSION

15. Cordova Center Finances – Attorney advice/update

M/Joyce S/Bradford to go into an executive session to discuss matters the immediate knowledge of which would clearly have an adverse effect upon the finances of the government, specifically Cordova Center finances.

Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

M/Joyce S/Allison for a five minute recess before executive session begins.

Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

Council recessed for five minutes at 8:40 pm then entered executive session at 8:46 pm; Council came out of executive session at 8:55 pm. Invited to the executive session were ***Zamarron***, ***Stavig***, ***Sherman*** and ***Bourgeois***.

Mayor Kacsh said we are out of executive session.

R. ADJOURNMENT

M/Allison S/Reggiani to adjourn the regular meeting at 8:55 pm; with no objection, the meeting was adjourned.

Approved: August 7, 2013

Attest: _____

Tina Hammer, Deputy Clerk

CITY COUNCIL REGULAR MEETING
JULY 17, 2013 @ 7:30 PM
LIBRARY MEETING ROOM
MINUTES

A. CALL TO ORDER

Mayor James Kacsh called the Council Regular Meeting to order at 7:30 pm on July 17, 2013, in the Library Meeting Room.

B. INVOCATION AND PLEDGE OF ALLEGIANCE

Mayor James Kacsh led the audience in the Pledge of Allegiance.

C. ROLL CALL

Present for roll call were ***Mayor James Kacsh*** and Council members ***Kristin Carpenter***, ***Tim Joyce***, ***David Allison***, ***Bret Bradford*** and ***David Reggiani***. Council members ***EJ Cheshier*** and ***James Burton*** were absent. Also present were Acting City Manager ***Moe Zamarron*** and City Clerk ***Susan Bourgeois***.

D. APPROVAL OF REGULAR AGENDA

M/Reggiani S/Joyce to approve the Regular Agenda.
Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

E. DISCLOSURES OF CONFLICTS OF INTEREST

David Allison said he has a conflict of interest with item #30 as he is employed by Eagle Contracting. ***Bret Bradford*** said he has a conflict of interest with item #26 as he is employed by Dundas for SERVS. ***Mayor Kacsh*** agreed that they both are conflicted and asked them to refrain from discussing and voting upon the respective items when before Council.

F. COMMUNICATIONS BY AND PETITIONS FROM VISITORS

1. Guest Speaker – ***Jonah Dart-McLean*** from NVE presented an update on the Shepard Point Road project. The road would be 4.4 miles north from the Orca Cannery ending at Shepard Point. The site itself would be a 3.5 acre site with a 600 pile supported dock. They have a maintenance MOA with the State DoT for maintenance of the road. They are working on getting a Clean Water Act Permit. The design is currently at 35% complete. He highlighted the benefits and the concerns to the project listed in the packet. Most of the project information can be found at www.Shepardpoint.com . ***Bradford*** asked if the single lane road with pullouts will support year round public access. The response was that it is a publicly funded road so it will be publicly accessible, not gated. There is the possibility of avalanche closures.

2. Audience comments regarding agenda items

James Mykland, 121 W Davis, in re Shepard Point Road. He stated that currently we have three barges and tugs out in Prince William Sound loaded with oil spill response equipment. They can be anywhere in the Sound within 10-15 hours. Cordova has a great response crew with response time of 6 hours. He is concerned whether someone is going to be at this new station 24 hours a day, 7 days a week and that Cordova gets money because we store equipment and SERVS training etc. He also expressed a concern with the road in winter conditions in addition to avalanche hazards. He is fearful of losing what we already have in Cordova (i.e. readily available equipment, training and funding). He does not agree with the benefits listed. Happy Birthday Susan Bourgeois.

Michel Clutter, of Ocean Beauty Seafoods spoke in re item 27 and 28, Lot 1 Block 1 Cordova Industrial Park. He reiterated Ocean Beauty's interest in this lot as it is important to them from a competitive perspective. Keeping up with challenges of environmental compliance requires more land.

3. Chairpersons and Representatives of Boards and Commissions

Harbor Commission - The last meeting was canceled for lack of a quorum.

HSB - ***Allison*** said that the Board will have its regular quarterly meeting July 7th.
P&R - ***Carpenter*** said they have not had a meeting since the last report.
P&Z - ***Reggiani*** reported that they have two items on the agenda tonight. They reviewed chapter 19 and made recommendations to City Council. They also looked at the Local Hazards Mitigation Plan and made recommendations to the City Council. Then they started looking at vacating the right of way on Adams Ave, between 5th Street and 9th Street. It is a portion of the road that has not been developed and may never be developed. This would create more land and development opportunities.
School Board - ***Bradford*** said there was no meeting.

4. Superintendent's Report **–** No report.

Second Guest Speaker ***Buck Adams*** of UBS Financial *(via teleconference)*. Year to date it has been pretty quiet through the end of June. The bond market has been very volatile in the past few months. When existing interest rates go up then prices on bonds go down. A lot of our returns have been a combination of both interest income and price appreciation in our bonds. Since this report was printed in June we have actually moved up $132K. Our gains since September of 2009 are $1.88M in portfolio value. We are up about 1% for the year. Our stock portfolio with the US Market is where we are seeing most of our gains. Internationally nothing is happening. With a blended portfolio you have to take the good with the bad. Up 1% for the City of Cordova means $132K in gain to the portfolio year to date. We are at 60% fixed income, 65% when you put the bonds and cash together. Most of our exposure is in the fixed income market. We are watching very closely the reaction in bond prices. The Federal Reserve Chairman made a comment about beginning to back off on the quantitative easing that the Federal Reserve has been engaged in. They have been buying $85 billion a month on the open market in order to keep things stabilized. His comments caused a pretty volatile couple of weeks. A couple days ago the Federal Reserve Chairman made comments that were much more accommodating. He thinks it scared the daylights out of the Federal Reserve when they saw how volatile things got when they just mentioned beginning to taper. Their intent is to ease up the amount of stimulus in the economy as the economy improves. If they begin to taper that means that the underlying strength of the economy is beginning to improve. Corporate balance sheets are as strong as they have ever been. He thinks we are in a good position. His recommendation is to come down in the fall for a work session to go into a little more details on how things are going and should we make any adjustments.

G. APPROVAL OF CONSENT CALENDAR

Mayor James Kacsh informed Council that the consent calendar was before them.
Reggiani called out item 8. ***Mayor Kacsh*** placed it in the agenda as item 22a.
5. Resolution 07-13-40, A resolution of the City Council of the City of Cordova, Alaska, authorizing the City Manager to enter into a contract with Sheridan Alpine Association ("Contractor"), a non-profit corporation organized and existing under the laws of the State of Alaska, to manage and operate the Mount Eyak recreation area for the benefit of the City and the public.
6. Resolution 07-13-41, A resolution of the City Council of the City of Cordova, Alaska, approving the final plat of Lot 1 and Lot 2, USS 1765 (ptn) ASLS 79-80
7. Resolution 07-13-42, A resolution of the City Council of the City of Cordova, Alaska, approving the final plat of Lot 32B and Lot 325C, U.S. Survey 3601
~~**8**. Resolution 07-13-43, A resolution of the City Council of the city of Cordova, Alaska, supporting the Native Village of Eyak's Shepard Point Road and deep-water oil spill response facility project.~~
9. Record excused absences of Council members ***Cheshier*** & ***Burton*** from the July 3, 2013 regular meeting.
Vote on Consent Calendar: 5 yeas, 0 nays, 2 absent. Bradford-yes; Reggiani-yes; Allison-yes; Cheshier-absent; Carpenter-yes; Joyce-yes; and Burton-absent. Consent Calendar was approved.

H. APPROVAL OF MINUTES

M/Reggiani S/Allison to approve the Minutes.
10. Special Meeting Minutes 04-29-13
11. Special Meeting Minutes 05-07-13
12. Special Meeting Minutes 05-17-13
13. Special Meeting Minutes 05-20-13
14. Regular Meeting Minutes 06-19-13
Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

I. CONSIDERATION OF BIDS - none

J. REPORTS OF OFFICERS

15. Mayor's Report

Mayor Kacsh said he had a couple meetings early in the month. He met with NVE on the Shepard Point Road project. He also met with NVE and other community members to discuss our situation with the bridge. He suggested that the Council has a Capital priorities list but it would also be nice to have a community priorities list. He thinks it will help get the City, NVE and the community all on the same page. He asked that they consider a public work shop in the future. ***Carpenter*** stated that they will be reviewing the Comprehensive Plan in the future and maybe that would be a good time to discuss this.

16. Manager's Report - ***Zamarron*** said Dokoozian Construction will be here Friday to start on the Cordova Center windows. Compared to second quarter last year the Refuse Department has decreased their labor by 5% and decreased the amount of refuse being taken to the landfill by 12%. This is before the official recycling program began. ***Bradford*** asked for an update on the Baler Improvements Project. ***Zamarron*** responded that he has the approval from DEC stating specifically what the grants and loans can be used towards. He did not want to move forward with the project until he received that confirmation and it took a long time. He expects to have an RFP out in the next week or so. He hopes to get it started before winter then a lot of the work can be done inside during the bad months. ***Reggiani*** asked about a time frame for the project. ***Zamarron*** responded that it is a design build so we will look to the contractor for some of that. He anticipates the project taking well into next year to be completed at the end of next year's construction cycle. The money is in place to span that period of time. ***Bradford*** inquired about Dokoozian being here Friday and whether they will be monitored. ***Zamarron*** responded that he has a very specific plan for them to follow. They have to get back to us with a detailed work plan to match our plan. They are saying it will take 33 days.

Staff Second Quarter 2013 Reports

a. **Paul Trumblee**, Fire Marshal, CVFD
   Allison pointed out that we are starting to see revenue being generated by ambulance billing. He appreciates the work being done and this finally being in place.
b. **Buck Adams**, UBS Financial, City investments
c. **Jon Stavig**, Finance Director
d. **George Wintle**, Police Chief
e. **Tony Schinella**, Harbormaster
f. **Cathy Sherman**, Museum Director, Cordova Center
g. **Laura Cloward**, Info Services
h. **Miriam Dunbar**, Library Director
i. **Moe Zamarron**, Public Works Director
j. **Samantha Greenwood**, City Planner

17. City Clerk's Report – written report in packet

K. CORRESPONDENCE

18. DCCED letter in re $1M grant for Cordova Center
19. Chenega Bay IRA Council thanks for donation
20. DoT CRH Bridge #339 June 2013 update
Joyce commented that the bridge is getting bigger by the day.
21. Mayor letter to Governor in re Cordova Center 07-10-13

L. ORDINANCES AND RESOLUTIONS

22. Resolution 07-13-39 A resolution of the City Council of the City of Cordova, Alaska supporting temporary small ferry service during the replacement of bridge 339 along the Copper River highway in Cordova, Alaska

M/Allison S/Bradford to approve Resolution 07-13-39 a resolution of the City Council of the City of Cordova, Alaska supporting temporary small ferry service during the replacement of bridge 339 along the Copper River highway in Cordova, Alaska.

M/Allison S/Reggiani to amend the last whereas changing 2016 to 2017

Allison stated that the latest information from the State is that construction won't start until 2017.

Vote on amendment: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

Mayor Kacsh stated that this was the result of the meeting he had with NVE and other community members. The concern is if people quit going to the glacier the State won't continue to work to fix it. This is just one idea of a way to help us and others regain our access to the glacier. ***Bradford*** appreciates the idea and would love to have access out there again. He inquired if there are plans in the works. He doesn't want to pass a resolution on an idea. ***Mayor Kacsh*** stated that the idea is to get the State and maybe other entities like the Forest Service to fund the project. ***Joyce*** stated that he is on the Marine Transportation Advisory board (MTAB). The Alaska Marine Highway system has been losing money lately. They are in the process of looking at an Alaska Class ferry to replace some of the older vessels. It is expensive and they do not have small boats. He does not think it will pass MTAB. It would open a can of worms for them to provide small boats to specific communities. Also, there are two commercial outfits providing transportation across the bridge and to the glacier. The State won't compete with the private sector. ***Allison*** said he was not thinking this would be AMHS authority. He was thinking it would be along the lines of supporting. He does not think supporting this is a bad thing. The resolution specifies that the ferry service would be run through the demolition and construction phase. Those phases may not start for years yet and the demand for the transportation is now. ***Carpenter*** agreed that we do want to support access and show that there is need for the bridge. She is not sure this is the route she would have chosen but it will send a message to DoT.

M/Joyce S/Carpenter to amend the main motion by striking the phrase "during the demolition and construction phases and" and replace the language "small ferry" to "vehicular".

Vote on amendment: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

Reggiani stated that he is unsure as to what this resolution is going to do. Who is our audience and where is this going? ***Mayor Kacsh*** stated that when he has had conversations with DoT their response is that they haven't heard any complaints. So this is to get something out there to pass forward. ***Carpenter*** stated that he mentioned he had spoken with NVE and was wondering if this would be something someone could use to get some type of grant. If the object is to send a message then she thinks we can come up with stronger language as to why we need the bridge. ***Joyce*** stated that the current transporters have special use permits. This could carry weight and help them continue to offer their services in the future. There are a lot of ways our community is being harmed by not having that bridge and those can be outlined in a letter from the Mayor along with supporting signatures from the Chamber, NVE etc. ***Bradford*** agrees with ***Carpenter*** and ***Joyce*** and would like to see a letter drafted about the specifics.

Vote on main motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

Item 22a. or original agenda item 8. Resolution 07-13-43, A resolution of the City Council of the City of Cordova, Alaska, supporting the Native Village of Eyak's Shepard Point Road and deep-water oil spill response facility project.
M/Allison S/Reggiani to approve Resolution 07-13-43, a resolution of the City Council of the City of Cordova, Alaska, supporting the Native Village of Eyak's Shepard Point Road and deep-water oil spill response facility project.
Allison stated that ***Mykland*** brings up a lot of good points. At the very least we should come up with some sort of analysis. The answers to these concerns could all be in the proposal but he would like to take time to look into it further. He knows NVE is heading this up but would like to hear what kind of public process this has gone through. ***Joyce*** stated that this has been talked over for years. All the issues ***Mr. Mykland*** brought up have been discussed. No one is talking about moving existing equipment out of Cordova. They are talking about bringing in additional equipment to enhance our oil spill response capabilities. We have the only airport in Prince William Sound that can accommodate a jet. With a deep water dock we can accommodate a large barge that we otherwise could not accommodate. Naked Island gets the equipment pulled into the site in Valdez in the winter. This would provide another alternate spot for that barge to sit where it can be available. EVOS has already allocated $15M for an oil spill response facility. He believes that NVE has also been able to acquire funding for the project. Just having a road to humpback creek would save the community $5M. Having additional electrical and water facilities would also save this community a lot of money just by having this road built for us. There are a lot of advantages above having a road to a deep water dock. ***Bradford*** stated that before we support this he would like to see what financial advantages and disadvantages this could bring to the community. He would like a little more information from NVE on what they have funded for this project already. He would like it to be referred back to staff. ***Allison*** stated that we have supported this over the years and wonders why we need to give this support now. Is NVE using this as leverage for funding? He would also like to see who they have been in discussion with to make sure these plans do not conflict with other future plans. ***Joyce*** stated that many funders will ask for renewed statements of support to make sure everything is still in place, especially when a project has dragged out over a number of years. ***Dart-McLean*** stated that they are gearing up for the Clean Water Act Permit with the Corps of Engineers. They are cataloging stake holders' support of the project, the City is a stake holder. They also have had consultations with CEC, SERVS, CAC and Eyak Corp. ***Reggiani*** said he supports a road to Shepherd Point but would like to see a better put together packet. He feels there is a lot of guessing at the intent. A simple letter from NVE would be helpful in giving them more information and direction. ***Zamarron*** stated that the City staff has not had a look at this. If the Council would like to see the benefits to the City then staff can put some time into evaluating it and put together some information. ***Bradford*** stated that he specifically would like to see the revenue stream from SERVS for storing their equipment, property tax and things of that nature. ***Reggiani*** said he would not like our staff to spend time on a project another organization is responsible for putting together. ***Joyce*** agreed with ***Reggiani*** this is not a City project.
Vote on motion: 2 yeas, 3 nays, 2 absent (Cheshier, Burton). Motion failed.
Allison asked that NVE bring this back with more information as discussed tonight.

M. UNFINISHED BUSINESS

23. Council approval of City Clerk's Employment Agreement **(may be discussed in executive session)**
M/Allison S/Joyce to approve the restated City Clerk's Employment Agreement.
M/Allison S/Joyce to amend the employment agreement as presented in the packet tonight.
Allison stated that this motion simply puts everyone on the same page as is in the packet.
Vote on amendment: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.
M/Allison S/Bradford to amend section 2 item 1, salary, of the employment agreement to 6/1/13.

Allison stated that this would make the effective date for the salary increase the same as the union and exempt employees increases.
Vote on amendment: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.
M/Allison S/Joyce to amend section 3.a. of the employment agreement striking "A maximum of 240 hours of".
Allison stated that this amends the agreement to reflect what was discussed at the work session. ***Joyce*** stated that he supports this motion and its intent.
Vote on amendment: 2 yeas, 3 nays, 2 absent (Cheshier, Burton). Motion failed.
Vote on main motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion passes.

24. Discussion with John Bitney *(via teleconference),* City Lobbyist redistricting update & out of session lobbying.
Mayor Kacsh asked the Council if they had any questions for ***Bitney***. ***Joyce*** stated that it looks like we are right back where we started. ***Mayor Kacsh*** stated that he may make a trip to Kodiak to meet with our representatives if we can't get them to come here. ***Bradford*** stated that it sounds like they are sending a few people over here for the Copper River Wild Festival which is a step in the right direction. The other said he might come over between now and January 1st. ***Bitney*** stated that he thinks this is a good opportunity and will be time well spent. He has been coming up with some ideas on strategies. One of the main ones is getting the Governor more involved. Staff sent a nice letter off to the Governor last week. The Governor has signed all his bills so now he will be making a concerted effort to get out to all the communities around the state. ***Bitney*** is trying to get staff to set a date for his visit to Cordova. He is trying to go to Kodiak on a personal trip and will pop in on them all while he is there. He recommends continuing to press them to spend the tax dollars in Cordova as much as we can. ***Joyce*** stated that he was watching the news tonight and there is a controversy in Anchorage on $7M to build an indoor tennis court but Anchorage hadn't gone through the process of getting the public support behind it. The only ones supporting it was the tennis group in Anchorage. So with 100% support from a community versus $7M on a project only a small group supports is something that needs to be brought up that our project will not run into that problem.

25. Discussion of City Council email policy
Zamarron stated that he asked the attorney Holly for comments on this and she made the following three points. There is an Alaska Statute that requires public entities to retain correspondence, e-mails, letters etc. for a certain amount of time. The City of Cordova has adopted the State recommended policy. Some correspondence is required to be kept 3-5 years and some even longer. If the correspondence is going to a personal address there is nothing saying that the individual will retain the information. A standard search of public records reaches into all record locations. Ease of recovery, it is much less expensive for an IT department to provide e-mails from a single recognized location than it is for attorneys to determine where to look and then pull the pertinent information from a broad range of data. ***Zamarron*** further stated that he had asked the IT department for their input and they offered the following three points. It limits server space by having only 8 user accounts associated with the publicly elected officials. It would provide a single constant address for the elected seats, updates would be limited to the changing of passwords. Only official generic e-mail addresses are published. ***Bradford*** stated that they are aware of the risk of their e-mails being requested and he has no problem giving it to them. If the City adopts the State recommended Statute for e-mails than it would have to come through Council. If he had a City of Cordova e-mail address he would set it up to forward to his personal account anyway because he doesn't have the time to check two accounts every day. ***Reggiani*** thanked ***Zamarron*** for putting this information together for Council. He stated that this started with a City Manager report stating that we are out of compliance in this area. That was cleared up and we are not out of compliance. As he sees it there are two issues. One is the legal issue and he does not have a clear understanding of that so would like to talk to Holly about it sometime. The

other issue is the IT side with the ease of maintaining a list of City Council seats and e-mails. He has no issue with that topic. It looks to him like in the minutes the Council decided not to implement anything and yet in the last couple weeks these e-mails are active and being forwarded to our preferred e-mail address. If that is the case then mechanically if that works as a way to get the information to us than he supports that. The legal understanding he does not follow and would like some clarification from the attorneys. He is also stuck on the term "official business" that is being used. He is not sure what that could be since, as Council members, they have no authority to act individually. They have no power to do official business. This makes the Council members and the situation with the Governor separate topics as the Governor has the authority to make decisions solely. ***Joyce*** stated that he does not have a problem with the legal issue as ***Reggiani*** does. With the Open Meetings Act we cannot be communicating with each other or even the Clerk as individuals without having it open to the public. With it being on the City server that basically opens that up and we could show legally that we are not communicating individually only in the group. This would go through the City server to your personal e-mail. So you don't have to go to the City website or go look for it. The only difference is that it goes through the central server so that the record is being maintained on that central server. It will keep us from having to search everybody's computers for information. It will all be in the one location. He thinks this is the smartest thing to do because at some point we will find that we are out of compliance. If Council would like to sit and discuss this with Holly he has no problem with more discussion. ***Allison*** respectfully disagreed with ***Joyce*** as the letter he got said they would not allow forwarding to their home mailboxes. He thinks that is where the issue lies. He does not want to log into "Council seat C" in order to do something. As long as the staff is using the City server anything coming to me or going from me to them is already going to go to that server. If we can indeed forward then he thinks everyone on Council is fine with that but it was his understanding that we could not. ***Joyce*** stated that he sees where they were given their e-mail accounts and passwords but not where it says it can't forward. ***Mayor Kacsh*** stated that the most important thing to him is public access to their elected officials. He thinks the idea behind it was to really protect the elected officials from scrutiny. ***Reggiani*** agrees with ***Allison*** that the issue on being able to forward or not being able to forward is unclear. If we can clear that up then the topic will be much easier for Council to debate and come to at least an understanding of the issue if not a resolution. When we get to the pending calendar he would like to perhaps schedule time with Holly again. ***Joyce*** stated that he too would like Holly to help them discuss this more. As it stands now it is being forwarded and he also can access it individually. ***Allison*** stated that we have been doing it this way ever since he got on Council and he didn't think the system was broken.

N. NEW & MISCELLANEOUS BUSINESS

26. Dundas request in re Performance Deed of Trust

Zamarron stated that the terms on the Performance Deed of Trust have been set by Council. We have in front of Council a request from Dundas to extend it. ***Allison*** stated that he will summarize how he sees it and the City planner can correct him if he is off base. The City initiated these Deeds of Trust with some kind of compliance before the purchase to avoid speculation on property. This particular piece of property has already had a portion of the property taken out of the Deed of Trust requirements and sold. There were no Deed of Trust consequences for selling a part of the land so a couple years later he attempts it again. The other side didn't follow through with their end of the deal so there was no need for action by Council. Now they are asking for an additional 5-years after getting 7-years which will be the longest we have ever gave an entity to develop their property. They are asking for 5-more years so they can again sell the property to somebody else. In his mind that is speculation. They bought the property 6 years ago and they have done little with it. He does not believe the intent initially was speculation but he thinks it ended up being that way. He is not in favor of supporting extending this Deed of Trust so the property owners can make it more valuable and sell it for a higher price because they had more time to develop it. ***Joyce***

agreed with ***Allison***. This came before Council already and Council was told that they needed the 7-years because the type of ground would require additional excavation. They wanted to excavate it over time in order to sell the dirt. After discussion the Council decided to agree to the extra time in order to do that. That extra time has elapsed and there has been little development. He thinks that the City provided them over and above what we would normally do because of the situation. They have not held up their end of the bargain. At this point it is speculation on if they can sell it and make a profit which was never the intent. The property was sold for development for commercial use for revenues for the City and that did not happen. ***Mayor Kacsh*** asked staff to draft a letter letting Dundas know that we are not interested in extending the Deed of Trust. Council concurred.

27. Acceptance of Planning & Zoning Commission Resolution 13-06
A resolution of the Planning & Zoning Commission of the City of Cordova, Alaska recommending that Lot 1 Block 1 of the Cordova Industrial Park be updated to available and added to the 2013 land disposal maps to the City of Cordova's City Council.
M/Reggiani S/Allison to accept Resolution 13-06, a resolution of the Planning & Zoning Commission of the City of Cordova, Alaska recommending that Lot 1 Block 1 of the Cordova Industrial Park be updated to available and added to the 2013 land disposal maps.
Vote on motion: 4 yeas, 1 nays (Bradford), 2 absent (Cheshier, Burton). Motion was approved.

28. Request for purchase City land: Lot 1, Block 1 Cordova Industrial Park
M/Reggiani S/Allison that the City dispose of Lot 1, Block 1 Cordova Industrial Park for not less than fair market value as outlined in chapter 5.22.060 A.4.
Reggiani stated that the land has been available and just made available again. He thinks it is in the best interest of the City to put out for proposals to see what kind of interest is out there before we decide whether to dispose of it or not. ***Bradford*** asked ***Greenwood*** if the land includes the property up to high tide. ***Greenwood*** responded that it does not include tidelands. The corner is marked. ***Bradford*** stated that the community is running out of real property. He would like to see the City hold onto something. He has no problem looking at people's ideas for the property as long as it is clear that we do not have to take any of the proposals.
Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion was approved.

29. Acceptance of Planning & Zoning Commission Resolution 13-07
A resolution of the Planning & Zoning Commission of the City of Cordova, Alaska recommending the update of the Cordova Comprehensive plan and support of the process outlined in the attached proposal to the City Council of the City of Cordova, Alaska.
M/Carpenter S/Reggiani the City Council accept Resolution 13-07, a resolution of the Planning & Zoning Commission of the City of Cordova, Alaska recommending the update of the Cordova Comprehensive plan and support of the process outlined in the attached proposal to the City Council of the City of Cordova, Alaska.
Allison stated that the attached proposal has a timeline of this year however it is an unbudgeted item. Is the intent to stick to that schedule or move the schedule out to next year? ***Reggiani*** responded that their intent is to gain support for the commission to update the comprehensive plan. He feels that the City will benefit from an outside firm helping with that process. The intent was not that it would be an amendment to this year's budget but rather something forwarded to Council to be put into the budget process. ***Greenwood*** stated that the proposal only included a time line because that is how the proposal was written. They are just trying to give Council a heads up that they want support before they move forward with it. This is the process they are looking at and the cost figure they came up with to see it through. To accept the recommendation would be to approve an update and supporting the process proposed. ***Reggiani*** clarified that accepting this resolution would not lock Council into spending funds on this next year or the

following year. The approval is for the process and the intent to update. ***Greenwood*** stated that according to Alaska State Statute the City Council has to weigh in. ***Joyce*** stated that the way he reads the resolution it says that we are supporting the outlying supporting proposal to the City Council. If we are going to pass this as it is written currently it ties us into things we just discussed we don't want to do yet.
M/Joyce S/Allison to amend the resolve stating "updating the comprehensive plan" by inserting after "plan" "in fiscal year 2014".
Vote on amendment: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion was approved.
Vote on main motion: 5 yeas, 0 nays, 2 absent (Cheshier, Burton). Motion was approved.

30. Contract approval with Eagle Contracting Corp. for Eyak Water Treatment Plant roof.
M/Reggiani S/Bradford to direct the City Manager to enter into a contract with Eagle Contracting Corp. to perform structural repairs to the Eyak Lake Water Treatment Plant roof and associated work for the sum of $282,770.
Zamarron stated that there was only one bidder on the RFP and it was Eagle Contracting. We laid this out according to our grant specifications so we can pay for the project with that and matching funds from the LT2 loan. The $282,770 is 70% grant and 30% loan. The bulk of that loan has been subsidized by the State. This is just the structural part of it; the actual roofing will come along very shortly after this. ***Reggiani*** asked how does this compare to what was budgeted. ***Zamarron*** responded that it was budgeted much higher. ***Reggiani*** clarified that this would be a design-build project. ***Zamarron*** responded that it is not. They will be building with plans for the original structure created in the 80's. This will be a new roof including sheetrock inside to bring it back to its original condition. There is no engineering needing to be done for the project. ***Joyce*** asked what it would cost to replace the building as opposed to fixing the damaged one. ***Bradford*** stated that if we are looking into a new building it would be good to look at one with a peaked roof so it doesn't have to be shoveled. ***Zamarron*** stated that part of the original plan from CH2MHill was to build a part adjacent to this building. We want to rehouse the existing equipment with the equipment operating because we can't stop operations. He can look into what it would cost to replace the whole building but warns that it will be very expensive. ***Bradford*** stated that he thinks trying to demo a building around existing equipment would be expensive he would like to see if we could look into doing a truss system for the new roof. ***Zamarron*** stated that they have a quote to do that which would cost almost half a million dollars. As we stand now this project is going to cost almost $300K plus he is guessing an additional $100K to finish. ***Mayor Kacsh*** asked if they change the scope of the project would it affect the LT2 funds available. ***Zamarron*** responded that it would not as we are still within the allotted time frame. ***Joyce*** stated that he is satisfied that ***Zamarron*** is saying a total building replacement will cost a lot more money. ***Reggiani*** asked about the timeline for the project if this is accepted tonight. ***Zamarron*** stated that it will take a total of 8-weeks to complete after they receive notice to proceed. ***Bradford*** asked if there is other support on the Council to look into a truss system for an additional $150K plus engineering.
M/Bradford S/Reggiani to refer back to staff for research on a roof that sheds option.
Vote on motion: 4 yeas, 0 nays, 1 conflict of interest (Allison) 2 absent (Cheshier, Burton). Motion was approved.

31. Pending Agenda and Calendar
Buck Adams meeting in the fall (September or October) before budget
Attorney Holly meeting on the e-mail issue. Agenda item August 7th
NVE letter to put back on agenda with a support letter and more information

O. AUDIENCE PARTICIPATION

James Mykland stated that he really appreciates the new Harbor Master. He thinks what he has been doing with the North Fill is great. More and more fisherman are using those services. He appreciates the

letter to the Governor on the Cordova Center. He thinks it is imperative that we get money to complete this project. Board of Fish want to use the facility December 2014 which would be big for Cordova. ***Mykland*** furthered that he doesn't actually oppose Shepard point road because that road is going to go through. What he would like to see is assurances from Alyeska Pipeline, SERVS and NVE that we are not going to lose what we already have in Cordova. He want's assurances that it will be all new equipment. We have 200 boats in Cordova under contract with SERVS and we don't want to mess that up.

P. COUNCIL COMMENTS

32. Council Comments

Allison stated that the Council's intent was to direct staff to go forward with the leave policy. In the work shop there was no dissent that it should change yet tonight the vote went 3-2 against keeping it the way we have it. Staff should be confused on our intent now as is he. ***Allison*** commented that 8-weeks is a short timeline for the Eyak treatment plant roof building project. Keep in mind 3-weeks lead time or more for some specialized equipment. He appreciates staffs efforts and looks forward to Randy getting here.

Carpenter said to support the runners when you see them at the festival on 7/27. They do need volunteers. Copperriverwild.org

Joyce echoed what ***Allison*** said about the work shop. Council just went 180 degrees from what was discussed so he would think staff would be very confused. He also pointed out that a short timeline adds to cost. He looks forward to additional discussion with NVE on the Shepard Point Road project.

Mayor Kacsh stated that during the 4th of July festivities there were so many volunteers around town that stepped up and made that day wonderful. He is especially grateful to ***John Harvill*** for his efforts.

Q. EXECUTIVE SESSION

33. Cordova Center Finances – Attorney advice/update

M/Joyce S/Allison to go into executive session to discuss matters the immediate knowledge of would clearly have an adverse effect upon the finances of the government; specifically to discuss the Cordova Center Finances.

Vote on motion: 5 yeas, 0 nays, 2 absent (Cheshier and Burton). Motion was approved.

Council took a recess at 9:54 and reconvened the meeting at 9:56;Council entered executive session at 9:57; Council invited ***Cathy Sherman***, ***Moe Zamarron*** and ***Susan Bourgeois*** to stay for the executive session.

Council came out of executive session at 10:04 no action was taken.

R. ADJOURNMENT

M/Joyce S/Bradford to adjourn the regular meeting at 10:05 pm

Hearing no objection, the meeting was adjourned.

Approved:

Attest: _____

Robyn Kirk, Minutes Clerk

Regional Citizens' Advisory Council / *"Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers."*

In Anchorage: 3709 Spenard Road / Suite 100 / Anchorage, Alaska 99503 / (907) 277-7222 / FAX (907) 277-4523
In Valdez: P.O. Box 3089 / 130 South Meals / Suite 202 / Valdez, Alaska 99686 / (907) 834-5000 / FAX (907) 835-5926

June 25, 2013

Mayor James Kacsh
City of Cordova
PO Box 1210
Cordova, AK 99574

SUBJECT: PWSRCAC Project Planning Request – Due Date September 1, 2013

Dear Mayor Kacsh:

The Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) is seeking your ideas on projects that support our mission of promoting environmentally safe operation of the Valdez Marine Terminal and associated tankers. PWSRCAC is an independent non-profit corporation whose work is guided by the Oil Pollution Act of 1990 and our contract with Alyeska Pipeline Service Company. Our mandate includes, but is not limited to:

- monitoring the environmental impacts of the terminal facilities and the tankers that use it;
- reviewing respective oil spill prevention and response contingency plans; monitoring drills and exercises;
- studying wind, water currents and other environmental factors;
- reviewing new technological developments or changed circumstances;
- providing advice and recommendations to industry and regulators on any findings coming from the above mentioned tasks; and
- broadly representing our constituents in the region affected by the Exxon Valdez oil spill of 1989.

The PWSRCAC Board of Directors has adopted a Strategic Plan intended to provide a five-year framework to guide the development of our annual work plan and budget. This plan builds upon the extensive foundations and work that we have accomplished over the past 23 years.

There are many avenues in which we strive to achieve our mission. One is to foster partnerships among industry, government agencies and citizens. We have learned that such partnerships lead to good policies, better response capabilities, safer transportation of oil, and improved environmental protection.

Our Board of Directors is working to update the Strategic Plan to cover the years 2014 through 2019 and we invite your suggestions for projects that would support our mission. **Please submit suggestions no later than September 1, 2013.** Please include a brief statement on as many as possible of the following criteria: a) goals

and objectives of the proposed project; b) relevance to the PWSRCAC mission; c) benefit to PWSRCAC constituents; d) probability of success; and e) anticipated cost.

Our Board of Directors will evaluate current projects and proposed new projects based on the above criteria, and a five-year project schedule will be developed. We appreciate you taking the time to provide suggestions to help us achieve our goals on behalf of the citizens we represent. Joint projects help to generate a cooperative spirit of shared problem solving, leading to common ground and continuous improvements in the safety of oil transportation. Please do not hesitate to contact me if you have any questions regarding this request. Thank you, in advance, for providing your ideas and suggestions.

Sincerely,

Mark Swanson
Executive Director

From: James Mykland
To: Susan Bourgeois; City Manager
Subject: Completion of the Cordova Center
Date: Thursday, July 18, 2013 9:39:43 AM

To Cordova City Council,
I am writing today to lend my support to the completion of the Cordova Center (phase II). Funding from the State of Alaska and other entities, will not be enough to guarantee final completion of our Cordova Center. The City of Cordova must now "step up to the plate" and fund the start of phase II. I do not have any doubt in my mind, that other funding will come on line, as soon as Cordova, goes ahead and starts the completion project. I do understand and realize that the City of Cordova, has plenty of other areas and demands, to spend what funds are available, though the Cordova Center (conceived soon after EVOS) has to be a top priority at this time. We have waited far too long for a community center, that can hold conferences, theatre, community events, etc. in one central building. I implore you to do whatever you can do, with our City budget, and find the funds to do what is necessary. Time is of the essence. I do have a funding
suggestion: CRFU has a senior salmon day and fish for students donation. The local processors have helped, with these projects every year. Every commercial fisher, that works out of Cordova, benefits greatly from all the ground support, that we receive, ie: city harbor, south fill parking, trash pick up, oil disposal, north fill trailer parking, boat haul outs, boat ramps (all part of the City of Cordova). I, as a commercial fisher, could not do what I do, without the municipality and community of Cordova being here. Our local processors are also in the same boat, yes they do pay for water, sewer, garbage, electricity etc, though they benefit in many ways from our Cordova community. I would be willing to donate a portion of my salmon harvest to help complete the Cordova Center. Maybe we could have a matching grant from the local processors, for every fish I donate, my local processor would match it. These are my own views, and I have not
talked, with my local processor, though, I would think, that they would support this funding project, since the completion of our Cordova Center, will also greatly benefit them in the long run.
I attended the 7/17 regular city council mtg.(3 hour mtg.), and realized once again, of the time and energy, our elected officials put into the running of our city. Believe me, that I do appreciate your hard work and personal sacrifices, that you make on a daily basis. I also do Thank You for you personal time, effort and dedication to our city.
James Mykland
121 W. Davis
Cordova, AK 99574

Polar Tankers, Inc.

PO Box 875
Valdez, AK 99686

T. 907-835-5862
F. 907-835-5720

July 25, 2013

Mayor Jim Kacsh
City of Cordova
PO Box 1210
Cordova, AK 99574

Dear Mayor Kacsh,

Polar Tankers Inc. (a wholly owned subsidiary of ConocoPhillips) is conducting a Prince William Sound Oil Spill Exercise, Wednesday, October 9, 2013 in Anchorage, AK.

The location for this drill is different than previous drills due to the desire of Polar Tankers, the Alaska Department of Environmental Conservation and the US Coast Guard to test the abilities of all concerned parties. Another difference from past drills is the drill will be conducted in real time, with equipment deployments and continue for 48 hours. Alyeska/SERVS in Valdez will initiate and run the exercise for the first 36 hours. The Command Post will then transition to Anchorage with Polar Tankers, Inc. taking over Command for the last 12 hours. Valdez will become a forward operating base at the time of transition.

A critical concern for all of the shippers who operate in Prince William Sound is our ability to engage with the communities and stakeholders of the Sound. As such, we would like to extend the invitation to join us and participate in the exercise as a member of the Regional Stakeholder Committee. Oscar Delpino's participation in our previous exercise was greatly appreciated, and we feel the Stakeholder Committee has evolved into an outstanding process for answering the concerns for communities who may be affected by a marine incident.

We request that you appoint an individual from your community to participate if possible. All travel, meal and hotel expenses will be reimbursed by Polar Tankers Inc. However, we are not allowed to pay per diems.

Please contact me with any questions.

Thank you for your consideration of this matter, and we hope you can join us in October.

Sincerely,

Monty Morgan

Monty Morgan
Marine Superintendent
Valdez Operations
Polar Tankers, Inc.
907-831-0645
montgomery.j.morgan@cop.com

NOTICE OF UTILITY TARIFF FILING

The REGULATORY COMMISSION OF ALASKA (Commission) gives notice that CHUGACH ELECTRIC ASSOCIATION, INC. (Chugach) has filed TA376-8, to recognize revenues from the sale of Renewable Energy Certificates ("RECs") associated with energy purchases from the Fire Island Wind project in the determination of Chugach's Fuel and Purchased Power Cost Adjustment ("FPPCA"). A REC can be sold separately from the electric power associated with a renewable energy generation source. Chugach indicates that the REC adjustment will act as an offset to retail purchased power costs in the calculation of its FPPCA for rates beginning fourth quarter, 2013 and incorporated thereafter when REC sales are made. Chugach indicates this change in methodology is necessary so that proceeds from the sale of renewable energy certificates can be credited against purchased power costs in the determination of its retail FPPCA rates.

This notice does not detail all of the revisions proposed in TA376-8. The Commission may approve a rate or classification which varies from that proposed. You may obtain more information about this filing by contacting Chugach at 5601 Electron Drive, P. O. Box 196300, Anchorage, AK 99519-6300. You may also inspect the filing, including a list of each proposed charge or fees impacted by TA376-8, at the offices of the Regulatory Commission of Alaska, 701 West Eighth Avenue, Suite 300, Anchorage, AK 99501, or view the filing online via our website at http://rca.alaska.gov/.

To comment on this filing, please file your comments by August 15, 2013, at either the Commission address given above or via our website at https://rca.alaska.gov/RCAWeb/WhatsNew/PublicNoticesComments.aspx. Please reference TA376-8 in the subject line of your comments and include a statement that you have filed a copy of the comments with Chugach at its address given above or info@chugachelectric.com. Individuals or groups of people with disabilities, who require special accommodations, auxiliary aids or service, or alternative communication formats, please contact Joyce McGowan at (907) 276-6222, toll-free at 1-800-390-2782, or TTY (907) 276-4533 by August 8, 2013.

DATED at Anchorage, Alaska, this 16th day of July, 2013.

REGULATORY COMMISSION OF ALASKA

Robert K. Lindquist
Chief, Tariff Section

20 Bow Street
Concord, NH 03301

City of Cordova
P.O. Box #1210
Cordova, Alaska
99574

Dear Mayor:

My husband and I were visiting your city from June 28th to July 8th. We had the opportunity to attend the festivities during the Fourth of July Celebrations. The picnic meal that was prepared, grilled and served by members of the city was excellent! Everything was so delicious, especially the grilled salmon. My husband has to use a cane and couldn't stand in line for the food. Several people offered to get him a plate of food, while he sat at the table. They did not know who we were, but that did not matter to them, they wanted to help someone enjoy the meal. There caring was overwhelming. The citizens of Cordova could not have been more gracious, courteous, helpful, generous and caring. You should be very proud of your city and the people that are Cordova.

We were visiting your city because our son, Tony Schinella has chosen to make Cordova his home. We are proud of Tony and his lovely wife Megan they have accomplished many things and we know they will continue to make a difference.

With Gratitude,

Priscilla & William Schinella

Priscilla & William Schinella

A MEMO FROM SUSAN BOURGEOIS, CITY CLERK

DATE: July 31, 2013

TO: Mayor and City Council

SUBJECT: Ordinance 1111

The attached ordinance makes an amendment to Cordova Municipal Code 4.56.070. Council had a work session on July 10 with City Attorney Amy Limeres who had drafted the personnel policies and procedures handbook which Council and staff are still working through (i.e. in the future it will replace Title 4 entirely). While that process is ongoing, Council gave clear and concise direction to bring forward an ordinance to amend this piece of Code (4.56.070) so that it was clear and compatible with the way the City has been practicing 4.56.110 (separation leave). By changing "*accumulated*" to "*carried over*" the interpretation becomes much more clear; more than 240 hours can be accumulated between January 1 and December 31 and therefore, cashed out at separation during a year, but leave will be "*reset*" to 240 hours at December 31 of each year. Therefore, with adoption of this ordinance, a maximum "*carry over*" will exist, but not a maximum "*accumulation*".

Some of the exact language during the discussion at the work session is offered below:

> **Reggiani**…rather than focusing on narrow or broad or whatever, I don't want to get into that argument, I think what we need to decide is what do we want to do and then ask for assistance in writing it so that it is very, very clear. So, I guess I would kind of stop there and suggest that maybe we answer some specific questions so that the writers can kind of get to work and write it up and give us a draft so we can take a look at it. I think I know where everyone is kind of heading so I don't know who wants to say it or I can say it, I think what I would be in favor of is that annual accrual can accrue but gets reset at the end of the calendar year on December 31 to 240 and then January 1 you just keep going with your accrual. That's the first part of the puzzle so the cap question is a cap at the end of the year but it doesn't stop the clock – the clock never stops it just gets reset, for instance if you had 300 hours on December 31, it gets reset to 240 but you keep accruing.
>
> **Joyce**: that's how I would interpret the rule that we are currently using and I think that's kind of the current way, certainly the way that the system I am in is used. And I would agree with doing it that way.
>
> **Amy**: I think if you fix the clarification that you all want to make in the 070 that then it helps with 110 because 110 just says accrued leave. So saying that 070 essentially says that there is a reset each December if we haven't gotten to the reset point then accrued leave in 110 will mean, if I haven't gotten to the reset point, then I have whatever I had last year plus whatever I've accrued this year and that is my accrued leave under 110. So, any ambiguity in 110 is removed if you fix 070.
>
> **Mayor Kacsh**: seems to me we should probably do a code revision with what we have discussed today and then keep moving forward with working on the handbook and the code revision would fix some of these problems for the time being. Definitely 070.

Recommended Motion: Move to adopt Ordinance 1111.

Required Action: Majority voice vote.

CITY OF CORDOVA, ALASKA
ORDINANCE 1111

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA, AMENDING CORDOVA MUNICIPAL CODE 4.56.070 IN RE ANNUAL LEAVE CARRY OVER

WHEREAS, The City of Cordova, Alaska ("City") uses Title 4 of the Cordova Municipal Code to administer it's personnel policies; and

WHEREAS, Cordova Municipal Code 4.56.070 has been unclear to some as to its interpretation; and

WHEREAS, the City Council held a work session on July 10, 2013 and asked that Cordova Municipal Code section 4.56.070 be amended to read more precisely so that the interpretation coincides with the way the policy has been practiced.

NOW, THERFORE, BE IT ORDAINED by the City Council of the City of Cordova, that:

Section 1. Cordova Municipal Code Section 4.56.070 is amended to read as follows:

4.56.070 – Maximum of two hundred forty hours that can be ~~accumulated~~ **carried over**.

The maximum annual leave that may be ~~accumulated~~ **carried over to the next calendar year** is two hundred forty hours, and leave accumulated in excess of this amount at December 31st of each year will be written off unless an additional carry over is authorized by the city manager due to unusual circumstances as specified in Section 4.56.090 of this title.

Section 2. This ordinance shall be effective thirty (30) days after its passage and publication. This ordinance shall be enacted in accordance with Section 2.13 of the Charter of the City of Cordova, Alaska, and published within ten (10) days after its passage.

1st reading: August 7, 2013
2nd reading and public hearing: August 21, 2013

PASSED AND APPROVED THIS 21st DAY OF AUGUST, 2013.

_____
James Kacsh, Mayor

ATTEST:

_____
Susan Bourgeois, City Clerk

[ADDED LANGUAGE BOLD, REMOVED LANGUAGE STRICKEN OUT]

A MEMO FROM SUSAN BOURGEOIS, CITY CLERK

DATE: July 31, 2013

TO: Mayor and City Council

SUBJECT: Resolution 08-13-44

The attached resolution offers support for NVE's Shepard Point Road project. A very similar resolution (07-13-43) was before Council at the July 17, 2013 regular meeting. At that time, Council asked for more information from the sponsor of the resolution, NVE. Joel Azure, Executive Director of NVE sent the attached letter on July 19, 2013.

Recommended Motion: Move to approve Resolution 08-13-44.

Required Action: Majority voice vote.

CITY OF CORDOVA, ALASKA
RESOLUTION 08-13-44

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA, SUPPORTING THE NATIVE VILLAGE OF EYAK'S SHEPARD POINT ROAD AND DEEP-WATER OIL SPILL RESPONSE FACILITY PROJECT

WHEREAS, Resolution 07-13-43 was heard by City Council on July 17, 2013 and at that time more information was requested of NVE; and

WHEREAS, NVE provided a detailed letter dated July 19, 2013 which was a response to the request for more information by the City Council and answered such questions regarding funding, oil spill equipment and access; and

WHEREAS, the devastating effects of the Exxon Valdez oil spill still resonate in the community for their effects on the economy and environment of the City of Cordova and Prince William Sound; and

WHEREAS, the Native Village of Eyak is working toward implementing the Shepard Point Road and Deep-water Oil Spill Response Facility to provide enhanced oil spill response capabilities for Cordova and Prince William Sound; and

WHEREAS, increasing the capacity for oil spill response equipment stored in Cordova, providing dedicated staging areas and dock space, providing deep-draft capability for oil spill response vessels of opportunity, and reducing critical response time by shortening the distance of resupply to potential spill sites are all enhancements to the existing oil spill response system currently in place in Cordova; and

WHEREAS, enhanced oil spill response capabilities would serve the City of Cordova by protecting citizens' livelihoods and the ecosystems they depend on from future oil spills; and

WHEREAS, the Shepard Point Road and Deep-water Oil Spill Response Facility would provide the auxiliary benefit of dependable access to the Humpback Creek Hydroelectric Facility.

NOW, THEREFORE BE IT RESOLVED THAT the City Council of the City of Cordova, Alaska, hereby supports the Native Village of Eyak's Shepard Point Road and Deep-water Oil Spill Response Facility Project.

PASSED AND APPROVED THIS 17th DAY OF JULY, 2013

_____
James Kacsh, Mayor

ATTEST:

_____
Susan Bourgeois, City Clerk

Native Village of Eyak
110 Nicholoff Way
P.O. Box 1388
Cordova, Alaska 99574-1388
P (907) 424-7738 * F (907) 424-7739
www.eyak-nsn.gov

10,000 years in our Traditional Homeland, Prince William Sound, the Copper River Delta, and the Gulf of Alaska

7/19/2013

City Council of Cordova
PO Box 1210
Cordova, Alaska
99574

Dear City Council of Cordova,

The Native Village of Eyak appreciates your interest in the Shepard Point Road and Deep-water Port Oil Spill Response Facility Project. Per your request, this letter is intended to provide additional information supplementing the materials presented to the City July 17, 2013. This information is separated into three categories based on the questions asked at your July 17th meeting: Funding, Oil Spill Equipment, and Access.

Funding:

- The Alyeska Consent Decree of 1992: $6M (held by the State Dept. of Treasury Office). Interest has expanded this fund to $9M
- Federal Highways Administration through ADOT&PF has programed $5M for the project in the STIP
- BIA contributed $3M towards the permitting and design of the project, approximately $1M of that fund remains.
- Total = $15M in dedicated funding for the project

Oil Spill Equipment:

There has been no discussion or intent by NVE to divert any oil spill response equipment currently stored in Cordova by SERVS to Shepard Point. The overreaching goal of this project is to provide enhanced oil spill response capabilities by offering a secure, dedicated site, and to expand the current inventory of oil spill equipment rather than simply to reposition existing resources. Outreach to SERVS by NVE has made this objective clear to both parties. This does not preclude the possibility that, in the future, if SERVS wishes to expand its current inventory in SE PWS; it would do so at Shepard Point. NVE has begun preliminary discussions with other oil spill response entities in PWS to determine interest in the use of the site for equipment storage and conducting oil spill response activities.

Access:

Questions from the City indicated confusion on what public access limitations would exist on the road to Shepard Point. Our response is that the road will have the same level of public access as any other federal or state funded route, which is to say it will be open to the public. The Shepard Point Facility will have secure warehouses and containers to prevent tampering or misuse of oil spill response equipment stored there, but the site plan does include a boat ramp that will be open to the public with the caveat that oil spill response and other emergency activities will take precedence over recreation or commercial uses.

We sincerely hope that this information sheds more light on this important project and provides the City with a better grasp of the project's scope. For additional detailed project information please visit www.shepardpoint.com or, questions can be directed to Jonah Dart-Mclean, our Capital Projects Coordinator, at jonah@eyak-nsn.gov.

Thank You,

Joel Azure
Executive Director

Shepard Point Oil Spill Response Facility

Project Timeline

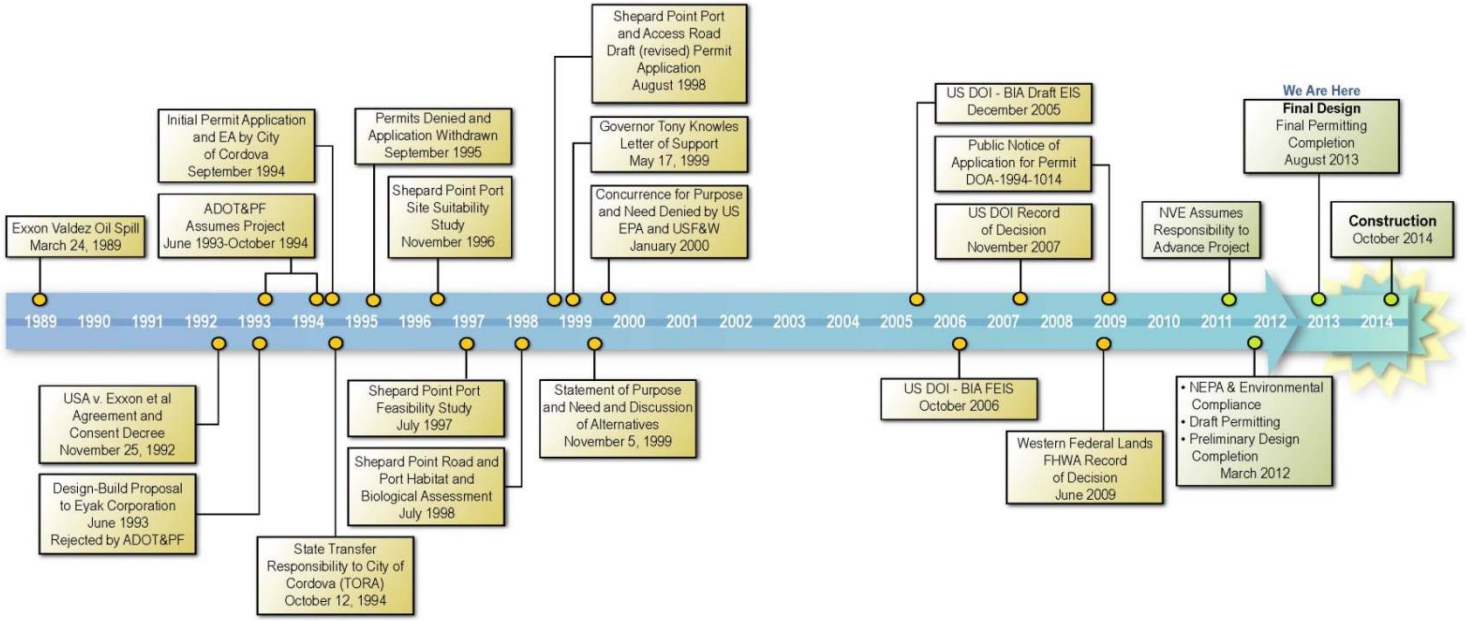


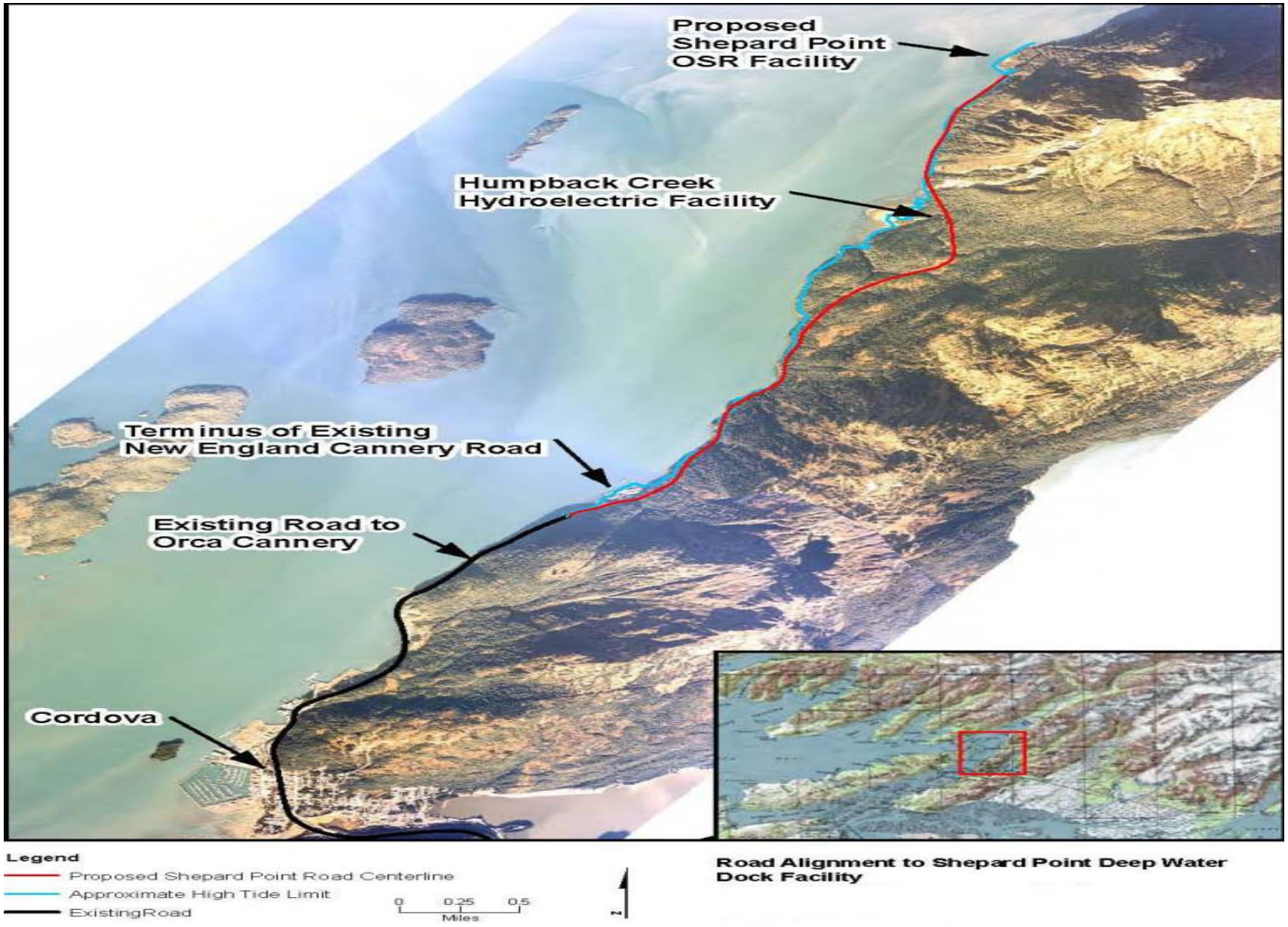
EXHIBIT 1
Project History Timeline
Shepard Point Oil Spill Response Facility

CH2MHILL

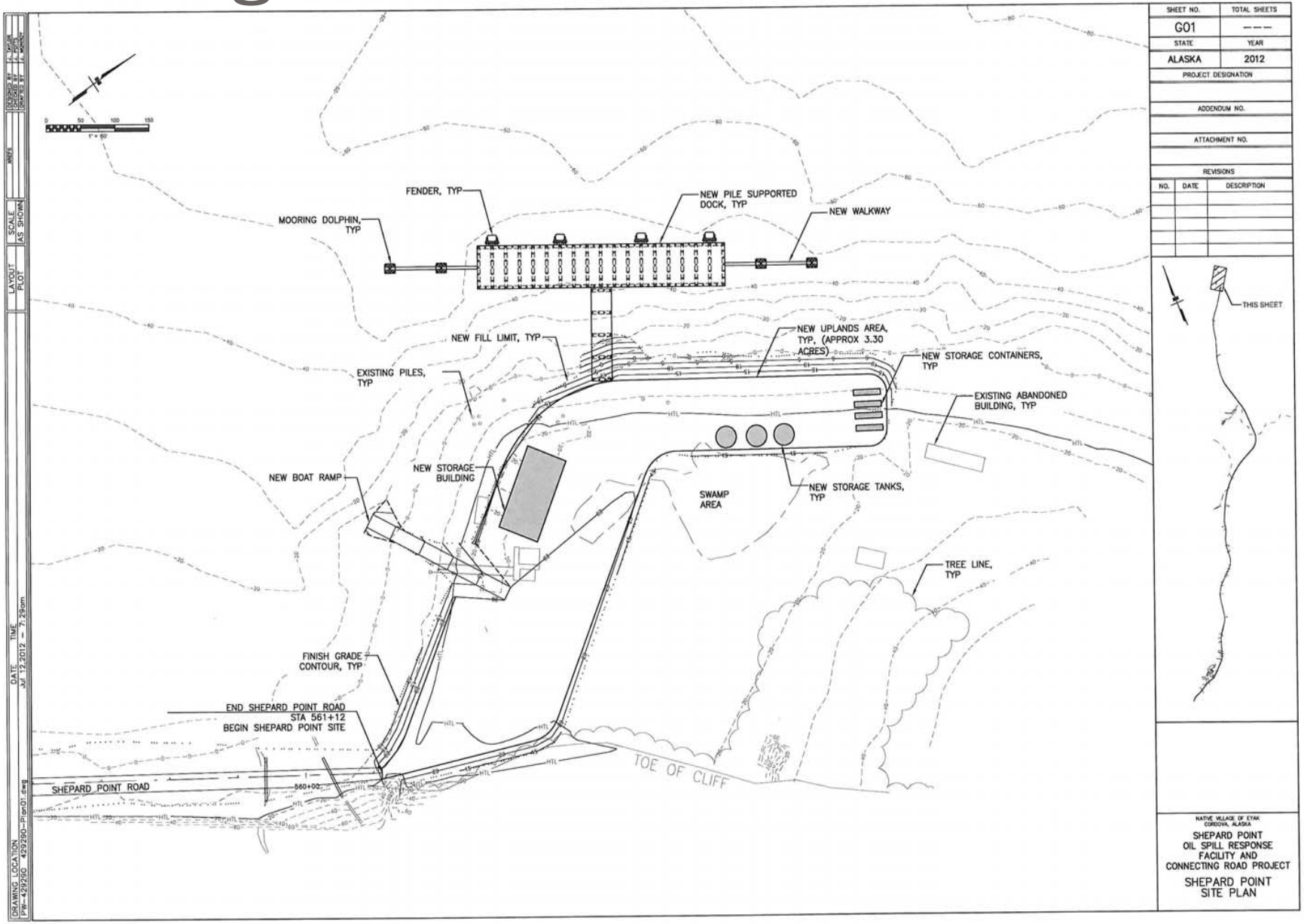
Project Details

- 4.4 mile road and ~3 acre facility site w/ 600' pile supported dock
- Alignment continues from end of Orca Cannery Road
- FEIS completed in 2006, BIA and FHWA both issued ROD's identifying SP as the preferred alternative
- ROW donated by Eyak Corp. and Chugach Alaska Corp.
- Maintenance provided by ADOT&PF
- NVE is pursuing a 404 (b) 1 Clean Water Act Permit from the Corps of Engineers

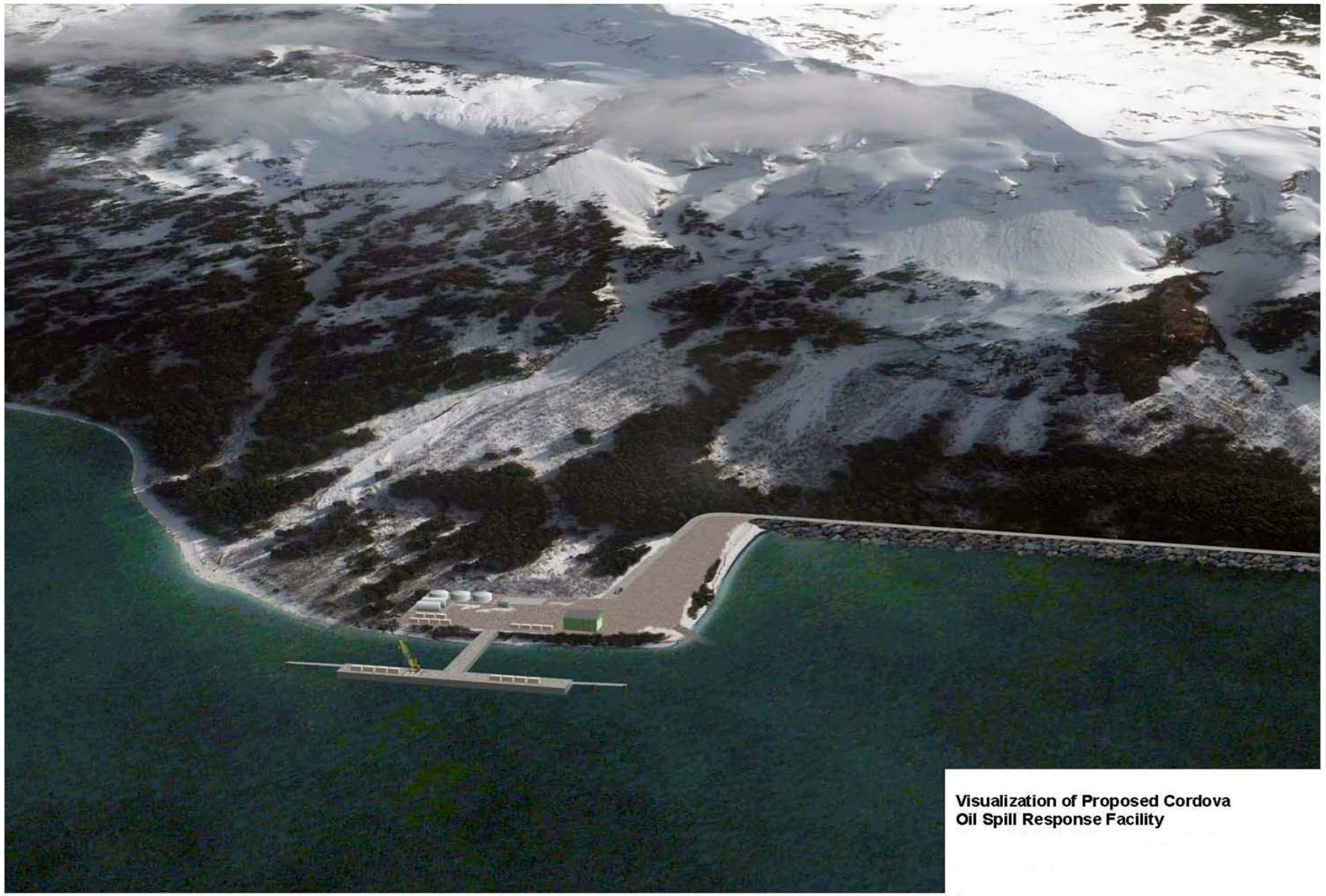
Proposed Road Alignment



Site Design


FENDER, TYP
MOORING DOLPHIN, TYP
NEW PILE SUPPORTED DOCK, TYP
NEW WALKWAY
NEW FILL LIMIT, TYP
NEW UPLANDS AREA, TYP, (APPROX 3.30 ACRES)
NEW STORAGE CONTAINERS, TYP
EXISTING PILES, TYP
EXISTING ABANDONED BUILDING, TYP
NEW BOAT RAMP
NEW STORAGE BUILDING
SWAMP AREA
NEW STORAGE TANKS, TYP
TREE LINE, TYP
FINISH GRADE CONTOUR, TYP
END SHEPARD POINT ROAD STA 561+12
BEGIN SHEPARD POINT SITE
SHEPARD POINT ROAD
560+00
TOE OF CLIFF
THIS SHEET
SHEET NO. G01
TOTAL SHEETS ---
STATE ALASKA
YEAR 2012
PROJECT DESIGNATION
ADDENDUM NO.
ATTACHMENT NO.
REVISIONS
NO. DATE DESCRIPTION
NATIVE VILLAGE OF EYAK CORDOVA, ALASKA
SHEPARD POINT OIL SPILL RESPONSE FACILITY AND CONNECTING ROAD PROJECT
SHEPARD POINT SITE PLAN
DRAWING LOCATION PW-429290 429290-Plan01.dwg
DATE TIME Jul 12,2012 - 7:29am
LAYOUT PLOT
SCALE AS SHOWN

Site Rendering

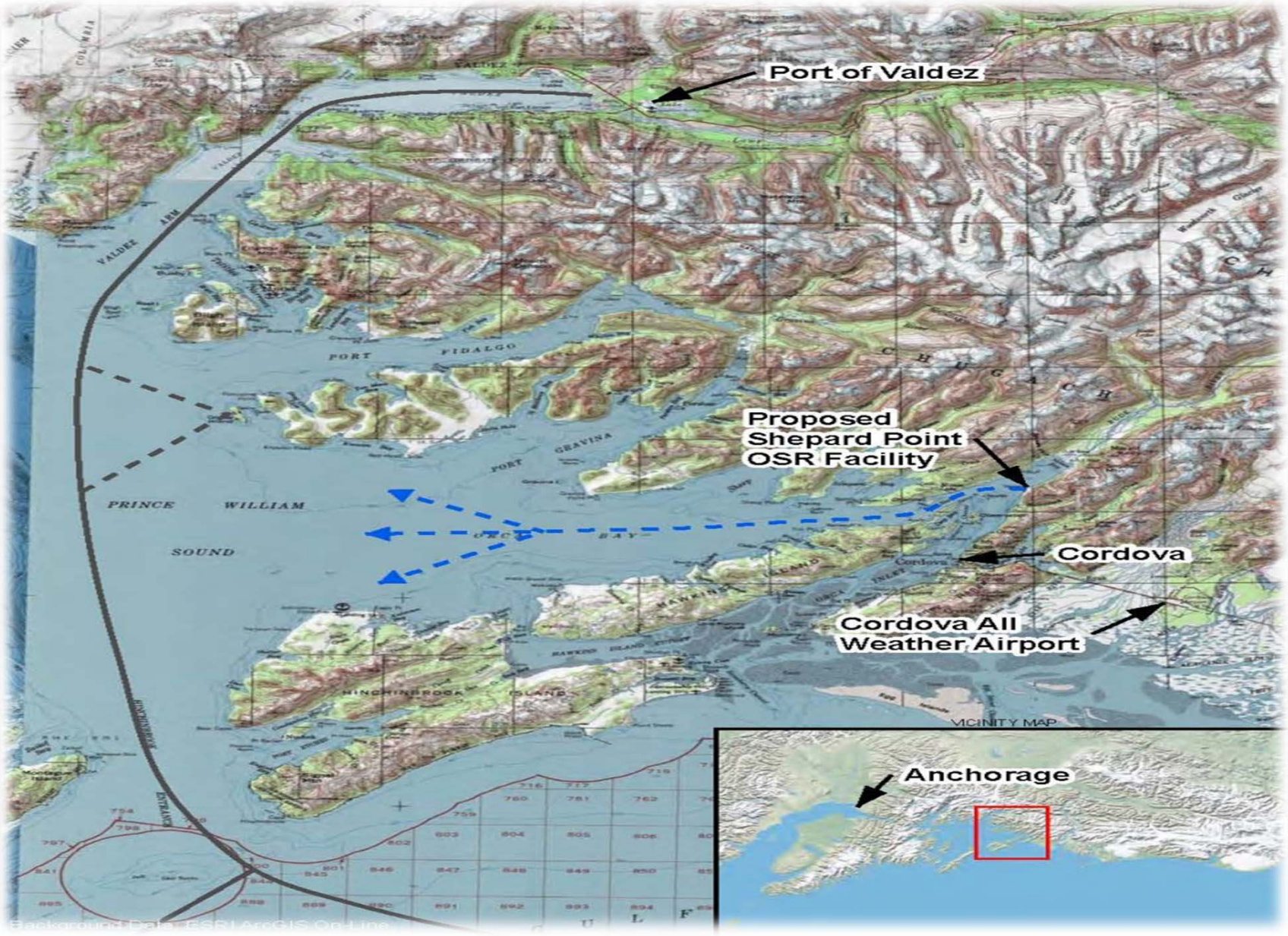


Visualization of Proposed Cordova
Oil Spill Response Facility

TBG030212023100B01 Fig4_Visualization-D_r02.ai

CH2MHILL

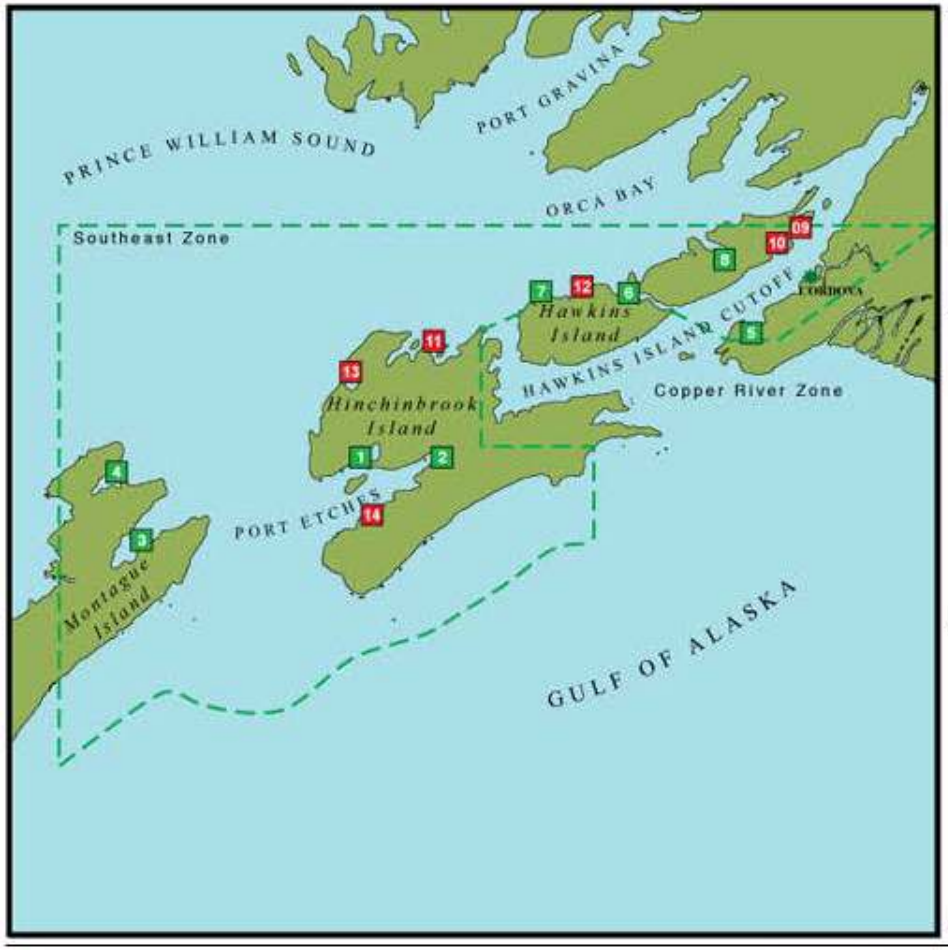
Proximity Map



Project Benefits

- Faster deployment and cost reduction when conducting a response
- Time saved for vessel resupply
- Dedicated dock and staging area to ease congestion at Cordova's harbor
- Increased space for more oil spill response equipment to be positioned in Cordova
- All tide access and increased capacity for deep draft vessels of opportunity to efficiently utilize services in Cordova during a large spill
- Connects Cordova's all-weather airport to deep draft capabilities for increased use of out-of-region supplies
- Improved capability to protect sensitive environments in SE PWS
- Improved access to Humpback Creek Hydroelectric Facility
- Potential for alternative water source for Cordova from Humpback Creek

Sensitive Near Shore and Shoreline Environments in in SE PWS



Green: Geographic Response Strategies (GRS) are final and adopted into Subarea Contingency Plan
Red: Site selected for GRS Development

Note: The index map identifies Geographic Response Strategies that have been developed. The newly developed strategies are indicated with a red box

Source:
Alaska Department of Environmental Conservation and Prince William Sound Response Planning Group

Concerns Answers

- Auxiliary uses of the facility (e.g. resource extraction, cruise ships, etc.)
- The purpose of the project is enhanced oil spill response capability for Cordova
- Avalanche danger
- The AHI (Avalanche Hazard Index) for the SP road has been determined to be 10.39 without mitigation. In contrast, the Seward Hwy at Girdwood is evaluated to have a *mitigated* AHI of 35
- Cost of Project
- Project is funded by FHWA appropriation through ADOT&PF, Alyeska Consent Decree $, and anticipated to receive support through Tribal emergency management funds. *No local funds are required and the project will not divert money from any local pool*

Questions?

Please visit **shepardpoint.com** for more information

Memorandum

To: City Council

Thru: City Manager

From: Planning Department Staff

Date: July 10, 2013

Re: Local Hazards Mitigation Plan update approval

PART I. GENERAL INFORMATION:

The current Local Hazards Mitigation Plan was written and approved in 2008. The State of Alaska requires revision every 5 years. Revision on this plan began in the fall of 2011. It was submitted to the State of Alaska Division of Homeland Security and Emergency Management (State) on March 20, 2013 for review, approval and submission to the Federal Emergency Management Agency (FEMA) Region X Mitigation Division. After numerous communications between the State, FEMA and the Planning staff, the final version of the Local Hazards Mitigation Plan update has been approved by both the State and FEMA.

The final step in this update process is a resolution from City Council approving the final version, which will be submitted to the State and FEMA.

PART II. BACKGROUND:

7/9/2013 P&Z meeting: updated Local Hazards Mitigation Plan was approved.

PART III. STAFF RECOMMENDATION:

Staff recommends that the updated Local Hazards Mitigation Plan be approved to comply with State and FEMA requirements.

PART IV. RECOMMENDED MOTION:

"I move to approve Resolution 08-13-45."

CITY OF CORDOVA, ALASKA
RESOLUTION 08-13-45

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA ADOPTING THE UPDATED LOCAL HAZARDS MITIGATION PLAN

WHEREAS, the City of Cordova recognizes the threat that local natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation projects before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted Local Hazard Mitigation Plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, the updated Cordova Local Hazards Mitigation Plan has been sent to the Alaska Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency and it has received their approval; and

WHEREAS, the City of Cordova will provide this resolution to the Alaska Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency officials.

NOW THEREFORE BE IT RESOLVED THAT the City Council of the City of Cordova, Alaska hereby adopts the updated Local Hazards Mitigation Plan.

PASSED AND APPROVED THIS 7TH DAY OF AUGUST, 2013.

_____
James Kacsh, Mayor

Attest:

_____
Susan Bourgeois, City Clerk

City of Cordova, Alaska

Local Hazards Mitigation Plan

Date of Plan March 8, 2008
Adopted August 6, 2008
Updated 2013

Originally Prepared by:
City of Cordova
WHPacific Incorporated
Bechtol Planning and Development

Updated by: City of Cordova

Acknowledgements

Cordova City Council
Jim Kallander, Mayor
David Reggiani, Vice Mayor
David Allison
Robert Beedle
Bret Bradford
E.J. Cheshier
James Kacsh
Timothy Joyce

Cordova Planning Commission
Tom Bailer, Chair
John Greenwood
Greg LoForte
Tom McGann
Scott Pegau
David Reggiani, City Council
John Baenen

City Staff
Samantha Greenwood, City Planner
P.O. Box 1210
Cordova, Alaska 99574
Phone: (907) 424-6233
Email: planning@cityofcordova.net
City Website: http://www.cityofcordova.net

Shannon Joekay, Assistant Planner
P.O. Box 1210
Cordova, Alaska 99574
Phone: (907) 424-6220
Email: planning2@cityofcordova.net
City Website: http://www.cityofcordova.net

Technical Assistance
Scott Nelsen, Alaska State DHS&EM
Taunnie Boothby, Dept. of Commerce, Community and Economic Development

Photography
All Photography provided by the City of Cordova Planning Department

The preparation of the original plan was financed by funds from a grant from the Alaska State Division of Homeland Security and the Federal Emergency Management Agency. The update was financed by City of Cordova.

Table of Contents

Acknowledgements ii
List of Tables v
List of Figures v
Appendix v
List of Maps v
Acronyms vi
Chapter 1. Success and Changes 2
Chapter 2. Planning Process and Methodology 7
Introduction 7
Plan Development Location 7
Plan Implementation 11
Continuing Review and Plan Development 11
Continued Public Involvement 12
Methodology 12
Vulnerability Assessment Methodology 13
Risk Assessment Methodology 14
Federal Requirement for Risk Assessment 14
Economic Analysis 15
Chapter 3: Community Resources 16
Community Assets 16
Community Resources 18
State Resources 20
Other Funding Sources and Resources 21
Local Resources 21
Chapter 4: Hazards 25
Alaska State Hazard Plan, 2007 Matrix 25
Location of Identified Hazards 36
Section 1. Floods and Erosion 37
Hazard Description and Characterization 37
Local Flood and Erosion Hazard Identification 37
Previous Occurrences of Flood and Erosion 41
Flood and Erosion Hazard Vulnerability 43
Flood and Erosion Mitigation Goals and Projects: 44
Section 2. Severe Weather 50
Hazard Description and Characterization 50
Local Severe Weather Hazard Identification 50
Previous Occurrences of Severe Weather 52
Severe Weather Hazard Vulnerability 52
Severe Weather Mitigation Goals and Projects 53
Section 3. Wild land Fire 56
Hazard Description and Characterization 56
Local Wild land Fire Hazard Identification 56
Wild land Fire Hazard Vulnerability 57

Previous Occurrences of Wild land Fire 57
Wild land Fire Mitigation Goals and Projects 57
Section 4. Earthquake 59
Hazard Description and Characterization 59
Local Earthquake Hazard Identification 59
Previous Occurrence of Earthquakes 63
Earthquake Hazard Vulnerability 63
Earthquake Mitigation Goals and Projects 63
Section 5. Tsunami and Seiche Hazard 66
Hazard Description and Characterization 66
Local Tsunami Hazard Identification 66
Previous Occurrences of Tsunamis/Seiches 68
Tsunami/Seiche Hazard Vulnerability 68
Tsunami/Seiche Mitigation Goals and Projects 69
Section 6. Avalanche and Landslides 72
Hazard Description and Characterization 72
Local Avalanche/Landslide Hazard Identification 74
Previous Occurrences of Avalanches and Landslides 74
Avalanche/Landslide Hazard Vulnerability 75
Avalanche/Landslides Mitigation Goals and Projects 75
Section 7. Technological, Public Health, Human-Caused, and Hazardous Materials Hazards 80
Hazard Description and Characterization 80
Local Technological, Public Health and Human-Caused Hazard Identification 82
Previous Occurrences of Technological, Public Health and Human-Caused Hazards 83
Technological, Public Health and Human-Caused Hazard Vulnerability 83
Technological, Public Health and Human-Caused Mitigation Goals and Projects 84
Chapter 5: Mitigation Strategy 86
Benefit - Cost Review 86
Glossary of Terms 88
Bibliography 96
Appendix 97
List of Maps 97
Photos 97

List of Tables

Table 1. Cordova Plans 11
Table 2. Federal Requirements 14
Table 3. Legal and Technical Capability 22
Table 4. Personnel Capability 23
Table 5. Administrative and Technical Capability 24
Table 6. Hazard Matrix 25
Table 7. City of Cordova - Asset Matrix - Structures and Infrastructure 27
Table 8. Assets and Vulnerability Matrix - Structures and Infrastructure 32
Table 9. NFIP Statistics 40
Table 10. Eyak River 2003 Study FDA Model 43
Table 11. Mitigation Projects 46, 54, 58, 64, 70, 77, 85
Table 12. High Snow Avalanche Vulnerability Analysis 72
Table 13. Cordova Weather Summary from 1995-2012 51
Table 14. Cordova Mapping Needs 41

List of Figures

Figure 1. Alaska Hazard Plan Fire Risk Map 56
Figure 2. AEIS Earthquake Active Faults 60
Figure 3. AEIS Historical Regional Seismicity 61
Figure 4. U.S.G.S. Earthquake Probability Map 62
Figure 5. Tsunami Hazard by Community 67

Appendix

List of Maps

Map 1. Cordova Regional Map 117
Map 2. Cordova Flood Insurance Map 118
Map 3. Cordova Critical Infrastructure 119
Map 4. Cordova Regional Critical Infrastructure 120
Map 5. Tsunami Hazard Zones 121

Photos

Photos 1. Orca Creek, 11/01/06 122
Photos 2. Airport and Eyak Lake, 10/31/06 123
Photos 3. Cordova Flood Pictures, 10/10/06 124
Photos 4. Cordova Flood Pictures, 10/10/06 125
Photos 5. Regional Flood Pictures, 10/10/06 126
Photos 6. Power Creek, October 2006 127
Photos 7. Damage to Hydro Plant, 10/31/06 128
Photos 8. Damage from Snow, January 2012 129
Photos 9. Avalanche, April 2012 130

Acronyms

AEIS	Alaska Earthquake Information System
AWCG	Alaska Wildfire Coordinating Group
BCA	Benefit- Cost Analysis
BCR	Benefit-Cost Review
BFE	Base Flood Elevation (100 year flood)
CDBG	Community Development Block Grant
CFR	Code of Federal Regulations
CMP	Coastal Management Plan
DCRA	(Alaska) Department of Commerce, Community and Economic Development
DHS&EM	(Alaska) Division of Homeland Security and Emergency Management
FBFM	Flood Boundary and Floodway Maps
FDIC	Federal Deposit Insurance Corporation
FEMA	Federal Emergency Management Agency
FHLBB	Federal Home Loan Bank Board
FIRM	Flood Insurance Rate Maps
FLD	Flood Projects
fps	feet per second
FLD	Flood Projects
HMP	Hazard Mitigation Plan
HMPG	Hazard Mitigation Planning Grant
LHMP	Local Hazard Mitigation Plan
NFIP	National Flood Insurance Program
NOAA	National Oceanographic and Atmospheric Administration
PDMG	Pre Disaster Mitigation Grant
SBA	Small Business Administration
STIP	Statewide Transportation Improvement Program
T/S	Tsunami/Seiche Projects
USCOE	United States Army Corps of Engineers
USGS	United States Geological Survey
UTM	Universal Transverse Mercator

CITY OF CORDOVA, ALASKA
RESOLUTION 08-08-33

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA, ADOPTING THE LOCAL HAZARDS MITIGATION PLAN

WHEREAS, the City of Cordova recognizes the threat that local natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation projects before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted Local Hazards Mitigation Plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, the Cordova Local Hazards Mitigation Plan has been sent to the Alaska Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency and it has received their approval.

NOW, THEREFORE, BE IT RESOLVED, that the Cordova City Council, hereby adopts the City of Cordova Local Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that the City of Cordova will provide this resolution to the Alaska Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency officials.

ADOPTED BY THE CITY OF CORDOVA THIS 6TH DAY OF AUGUST, 2008

CITY OF CORDOVA CORPORATE SEAL JULY 9, 1909 ALASKA

Timothy L. Joyce, Mayor

ATTEST:

Lila J. Koplin, CMC, City Clerk

Chapter 1. Success and Changes

Mitigation Plan Update Summary

Numerous mitigation projects have been accomplished or initiated since this plan was last updated. In addition, some projects were added to the plan. The primary obstacle to implementation of larger projects is lack of funding and personnel. Funding is not anticipated to improve, thus community resilience in the long term could be compromised. Still, the priority of current projects remains the same. If funding eludes the most significant projects, work will continue on those projects that require fewer monetary resources. No records indicate that the plan was reviewed annually. Efforts to review the plan in this cycle will include a City Council workshop that will focus on their opportunity to use this plan in their prioritization efforts as they commit resources.

Community education with regards to this updated plan and its benefits will commence. Sharing the goals in this plan amongst the City Council, the Emergency Management Organization and the public at large will increase the probability that the plan will actually be used, leading to a long-term community vision for increased resilience.

Mitigation Projects Successfully Accomplished

Flood and Erosion Projects

- 2008 FLD-3. Letter of Map Revision for Flood Insurance Rate Maps for North Fill (2008) and South Fill (2001). High priority. Accomplished by the City of Cordova. **Letter was drafted and distributed.**

- 1986 FLD 15. Require that all new structures in the flood zone be constructed according to NFIP requirements and set back from the river shoreline to lessen future erosion concerns and costs. High priority. Accomplished by the City of Cordova.
  This has been accomplished for Cordovan property, if it is in the mapped flood zone

Severe Weather Projects

- Winter of 2011/12 Accomplished by City of Cordova

Survived declared snow emergency, SNOWPOCALYPSE 2012. After three years of consistent disaster preparation training, the City of Cordova Incident Management Team successfully activated the EOC and managed the local disaster in a timely, efficient manner. As a result, damages and injuries were minimized.

- 2012 Implementing by the City of Cordova
  A system to identify when snow pack conditions and future weather conditions make roof clearing advisable. Developing a system to have qualified person/team determine this level and developing plan to get that word out to community to shovel roofs.

- 2012 Accomplished by the City of Cordova
  City code for Ground Snow Load was changed to 150 pounds per square foot ground snow load.

- 2012 Project SW-1 Research and consider instituting the National Weather Service program of *"Storm Ready"*. Researching and Implementing by City of Cordova. High priority.
  This is being implemented alongside and included in the "Tsunami READY" program for Cordova.

- 2012 Project SW-2. Conduct special awareness activities, such as Winter Weather Fair, Flood Awareness Week, etc. Accomplished during April 2012 and November 2012, respectively. (EMPG Grant and Sound Alternatives) High Priority.
  Flood awareness Week was timed to prepare citizens for the possible effects of the excessive record-breaking snowfall in the previous winter. Winter Weather Fair (November 2012) prepared them for the NEXT winter.

- 2009-2012 Project SW-3. Expand public awareness about NOAA Weather Radio for continuous weather broadcasts and warning tone alert capability Accomplished/ongoing by City of Cordova. (EMPG Grant). High Priority.
  This takes place almost monthly, through the Neighborhood Campaign Program.

- 2012 Accomplished by City of Cordova (EMPG Grant and Planning Department)
  The Neighborhood Campaign banded together neighborhoods for early, organized response to ANY severe weather or disaster. Neighborhood Leaders are currently being solicited/trained and a multilayered GIS map is being created to assist in disaster response.

- 2009-2012 Project SW-4. Encourage weather resistant building construction materials and practices. Accomplished by City of Cordova. Medium Priority.

Wild land Fire Projects

- Ongoing. Accomplished by the City of Cordova
  Continue to support the fire department with adequate firefighting equipment and training.

- 2004 Project WF-2. Promote Fire Wise building design, siting, and materials for construction. Accomplished by the Native Village of Eyak. High Priority.

- **200**4 Project WF-3: Enhance public awareness of potential risk to life and personal property. Encourage mitigation measures in the immediate vicinity of their property. Accomplished by the Native Village of Eyak. High Priority.
  This project was accomplished in conjunction with project WF-2.

Earthquake Projects

- 2011 Project E-2. Identify buildings and facilities that must be able to remain operable during and following an earthquake event. Accomplished by City of Cordova (EMPG staff). High priority.
  This project was accomplished during COOP Plan formulation.

Tsunami/Seiche Projects

- 2009 Being Implemented by the City of Cordova (NTHMP Grant)
  Tsunami Warning Sirens are currently being installed in the City of Cordova. Additional sirens will be installed at Whitshed road and the Six Mile subdivision.

- 2009-2012 Project T/S-1: Participation in the Tsunami Awareness Program accomplished by the City of Cordova (EMGP Grant). High Priority
  This is part of the Tsunami READY program that Cordova is currently finishing up.

- 2012 Project T/S-2. Tsunami Ready Community Designation Being Implemented by the City of Cordova. (EMPG grant) High Priority
  Tsunami Ready Community Designation Signs have arrived, routes have been determined and posting of signs has begun.

.

- 2010-2012 Project T/S-4. Update Cordova Emergency Operations Plan Accomplished by City of Cordova (EMPG Grant)

Emergency Operations Plan was completed and used in exercises regarding natural hazards, including tsunami danger. This was accomplished by participation in numerous local exercises , as well as participating in the statewide AK Shield 2010 and 2012 Alaska Shield 2010 (April 30 - May 1). More than 770 participants from 35 organizations took part in 2010.

Additionally, Mass Inoculation Exercises in 2009 and 2013 utilized the EOP.

Avalanche/Landside Projects

- 2000 Project A/L-1. Prohibit new construction in avalanche zones. Accomplished by City of Cordova. Medium Priority.
  The City of Cordova adopted avalanche zoning district ordinances following the loss of life and destruction of property during the Central Gulf Coast Storm event, December 1999 through February 2000

- 2000 Project A/L-3. Enact buyout of homes in avalanche paths. Accomplished by FEMA and City of Cordova. Low Priority.
  Funding from the Hazard Mitigation Grant Program (HMGP) was used to buy and/or relocated homes in Cordova. This project removed individuals from the high hazard avalanche zone and preserved the land as open space in perpetuity

- 2000 Accomplished by City of Cordova
  Copper River Highway Avalanche Plan was written for City *The "Avalanche Hazard Analysis and Mitigation Recommendations for 5.3 and 5.5 Mile paths, Copper River Highway, Cordova Alaska", was written by Doug Fesler and Jill Fredston for the City in the aftermath of the 2000 avalanche. All recommendations specific to those avalanches paths have already been accomplished.*

- 2000 Accomplished by City of Cordova and the State of AK
  Copper River Highway Avalanche Monitoring. The City of Cordova and the State of AK have been jointly funding a contracted position for avalanche monitoring on the Copper River Highway.

Technological, Public Health, Human-Caused, and Hazardous Materials Hazards

- 2000 Project TPHH-4: Participate in regional oil spill drills/exercises. Accomplished by City of Cordova and the State of AK. Priority High.
  Cordova fully participated in the BP Oil Spill drill in fall 2011, gathering all the stakeholders in the process.

Significant Mitigation Plan Changes

Table 2 Page 5 Continued Plan Development, deleted- discussion is adequate

Table 4 Page 15 Community Information, deleted- not required and contact info changes routinely

Table 11 Page 41 FIRM Zones, deleted because we do not have all those zones…applicable Zones can be found on the City map

Tables 15 and 16 Combined in individual tables for each hazard for easier viewing

Page 23 Page 23 Hazard DROUGHT dropped from plan. Drought is not a hazard for Cordova.

Page 41 Page 33 Project FLD-1 (from previous plan) has been removed from the mitigation projects. It is no longer considered a priority. The channels have shifted and there is not a current threat.

Page 44 Project FLD-6 Heney Creek Waterline Repair (from previous plan) has been removed from the plan. The decision has been made to replace it instead

Page 45 Project FLD- 9 and FLD-13 Wording on these projects has been revised to better reflect the City's ability to accomplish it

Chapter 2. Planning Process and Methodology

Introduction

The scope of this plan is natural hazards: flooding, erosion, severe weather, wild land fire, avalanche, tsunami and earthquake hazards, and man-made hazards such as oil spills, hazardous materials and other hazards.

The City of Cordova Local Hazards Mitigation Plan (LHMP) includes information to assist the city government and residents with planning to avoid potential future disaster losses. The plan provides information on natural hazards that affect Cordova, descriptions of past disasters, and lists projects that may help the community prevent disaster losses. The plan was developed to help the City make decisions regarding hazards that affect Cordova.

Plan Development Location

Cordova is located at the southeastern end of Prince William Sound in the Gulf of Alaska. The community was built on Orca Inlet, at the base of Eyak Mountain. It lies 52 air miles southeast of Valdez and 150 miles southeast of Anchorage.

The community lies at approximately 60.542780° North Latitude and -145.757500° (West) Longitude. (Sec. 28, T015S, R003W, Copper River Meridian.) Cordova is located in the Cordova Recording District. The area encompasses 61.4 sq. miles of land and 14.3 sq. miles of water.

Project Staff

2012 Plan Update Staff

City Planner, Samantha Greenwood
Assistant City Planner, Shannon Joekay
Emergency Management Planner, Joanie Behrends
Public Works Director, Moe Zamarron
Water/Sewer Division Supervisor, Malvin Fajardo
Cordova Planning and Zoning Commission
Hazard Mitigation Planner, Scott Nelsen of the Division of Homeland Security & Emergency Management (DHS&EM) provided technical assistance and reviewed the drafts of this plan.

Taunnie Boothby of the Dept. of Commerce, Community and Economic Development provided additional guidance during the update.

2008 Original Plan

WHPacific, Incorporated and Eileen R. Bechtol, AICP, of Bechtol Planning & Development wrote the original plan with the City input.

Plan Research

The original and updated plans were developed utilizing existing Cordova plans and studies as well as outside information and research. The following list contains the most significant of the plans, studies and websites that were used in preparing this document. Please see the bibliography for additional sources.

1. *Alaska State Hazard Plan*. Prepared by and for DHS&EM. September 2004

2. *Alaska State Hazard Plan*. Prepared by and for DHS&EM. October 2010

3. *Cordova Comprehensive Plan, Draft*. Prepared by and for City of Cordova. October 20, 2006.

4. *Cordova Comprehensive Plan,* Prepared by and for City of Cordova. 2008

5. Cordova Emergency Operation Plan. Prepared by and for City of Cordova. May 2010.

6. *Cordova Coastal Management Plan 2007 Amendment*. Prepared by Bristol Engineering for the Cordova Coastal District, 2007.

7. *Eyak River Flood Control Study.* Prepared by USCOE for the City of Cordova. July 14, 2003.

8. *Flood Mitigation Plan*. Prepared by and for the City of Cordova. 1996

9. *Flood Insurance Study.* Prepared by U.S. Department of Housing & Urban Development Federal Insurance Administration (now FEMA) for the City of Cordova. October 1978.

10. FEMA How to Guides
    a. Getting Started: Building Support For Mitigation Planning (FEMA 386-1)
    b. Understanding Your Risks: Identifying Hazards And Estimating Losses (FEMA 386-2)
    c. Developing The Mitigation Plan: Identifying Mitigation Actions And Implementing Strategies (FEMA 386-3)
    d. Bringing the Plan to Life: Implementing the Hazard Mitigation Plan (FEMA 386-4)
    e. Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)

11. *Evaluation of Recent Channel Changes on the Scott River Near Cordova, Alaska.* Prepared by USDA-Forest Service Chugach National Forest Anchorage, Alaska, Blanchet, Hydrologist. December 1983.

12. *Local Mitigation Plan Review Guide. (FEMA October 2011)*

13. *DCED Community Information*: http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

14. *FEMA Benefit-Cost Analysis Website:* http://www.fema.gov/government/grant/bca.

15. American Planning Association: http://www.planning.org

16. Association of State Floodplain Managers: http://www.floods.org

17. Association of State Floodplain Managers: http://www.floods.org

18. Developing the Implementation Strategy: www.pro.gov.uk

19. Federal Emergency Management Agency: http://www.fema.gov/plan/mitplanning/

20. Community Rating System: http://www.fema.gov/business/nfip/crs.shtm

21. Flood Mitigation Assistance Program: http://www.fema.gov/government/grant/fma/index.shtm

22. Hazard Mitigation Grant Program:
    http://www.fema.gov/government/grant/hmgp/

23. Individual Assistance Programs:
    http://www.fema.gov/assistance/process/individual_assistance.shtm

24. Interim Final Rule: http://www.fema.gov/library/viewRecord.do?id=1933

25. National Flood Insurance Program: http://www.fema.gov/nfip

26. Public Assistance Program:
    http://www.fema.gov/government/grant/pa/index.shtm

Public Involvement

Site visits by Taunnie Boothby Department of Commerce, Community and Economic Development on September 25, 2011 and February 29, 2012 assisted in the initial updating process.

The Planning and Zoning Commission reviewed the plan, provided input and held public meetings to provide for public input on August 4th, 2012, and October 9th, 2012.

All Planning and Zoning meetings are noticed via the newspaper, radio, GCI scanner, flyers and the city web page.

Cordova's Emergency Management Organization (local stakeholders who meet for monthly disaster preparation meetings) and the general public were invited to attend the LHMP kickoff meeting. None of the general public attended, however the emergency managers did and were briefed on the update. They approved the project and requested they be notified when the plan went to the Planning and Zoning Commission for review.

The below entities/communities were contacted and asked to participate in the 2012-13 plan update

Chugach Alaska Corporation, Regional Native Corporation
The Native Village of Eyak
Eyak Corporation
The Tatitlek Corporation
Copper River Watershed Project
Prince William Sound Science Center
Prince William Sound Regional Citizens' Advisory Council

A copy of the update LHMP is available for public perusal during the update process at the Planning Department, City Hall, and online at the city website under the planning department tab:

Plan Implementation

DHS&EM and FEMA will review and pre-approve the updated plan. After that pre-approval Planning and Zoning will review and make a recommendation to City Council to adopt the plan by resolution.

The City Council has the authority to promote sound public policy regarding hazards. The Hazards Mitigation Plan will be assimilated into other Cordova plans and documents as they come up for review according to each plans' review schedule.

Please see the following table for plan review schedules.

Table 1. Cordova Plans

Document	Completed	Next Review
Cordova Comprehensive Plan	Draft Plan -2006	5 years from adoption
Cordova Emergency Operations Plan	2010	Annually
Cordova COOP Plan	2011 (not yet adopted)	Annually
Comprehensive Economic Development Strategy Plan	2003	As Needed
Avalanche Hazard Plan	Date	As Needed
Tourism Plan	1999	As Needed
Parks and Recreation Plan	2000	As Needed
Waterfront Plan	2000	As Needed

Continuing Review and Plan Development

The Cordova LHMP will be reviewed on an annual basis to determine whether the plan reflects the current situation in regards to natural hazards. If funding is available, the plan will be updated every 5 years, after a Federally Declared Disaster, or as required by DHS&EM. The City Planner is the responsible City employee assigned to this task, as time and funding allow.

The Cordova LHMP will be further developed as funding and time allow. Areas to be addressed may include additional information on about hazards not currently covered in the plan or additional information on described hazards.

Continued Public Involvement

The plan will be available for public review and input will be accepted by City Planner. Below is a list of the places where the plan will be available to the public.

1. City website: http://www.cityofcordova.net/images/planning/resources/Local%20Hazards%20Mitigation%20Plan.pdf

2. A hard copy will be kept in the planning department at City Hall

3. On an annual basis the Planning Commission will review the plan at an annual meeting following all public notice procedures.

Methodology

The goal of mitigation is to reduce the future impacts of a hazard including loss of life, property damage, and disruption to local and regional economies, environmental damage and disruption, and the amount of public and private funds spent to assist with recovery.

Mitigation efforts begin with a comprehensive risk assessment. A risk assessment measures the potential loss from a disaster event caused by an existing hazard by evaluating the vulnerability of people, buildings, and infrastructure. It identifies the characteristics and potential consequences of hazards and their impact on community assets.

A risk assessment typically consists of three components:

1. Hazards Identification - The first step in conducting a risk assessment is to identify and profile hazards and their possible effects on the jurisdiction. This information can be found in Chapter 3: Hazards.

2. Vulnerability Assessment – Step two is to identify the jurisdiction's vulnerability; the people, infrastructure and property that are likely to be affected. It includes everyone who enters the jurisdiction including employees, commuters, shoppers, tourists, and others.

3. Risk analysis - Step three is the process of defining and analyzing the dangers to individuals, businesses and government agencies posed by potential natural and human-caused adverse events.

Hazards Identification Methodology

Alaska State Hazard Mitigation Plan, 2007 identified hazard and local officials verified when possible. A table from the state plan is in chapter 3.

Vulnerability Assessment Methodology

The purpose of a vulnerability assessment is to identify the assets of a community that are susceptible to damage should a hazard incident occur.

Vulnerability assessments need to include populations with special needs such as children, the elderly, and the disabled should be considered; as should facilities such as the hospital, health clinic, senior housing and schools because of their additional vulnerability to hazards.

Inventorying the jurisdiction's assets to determine the number of buildings, their value, and population in hazard areas can also help determine vulnerability. A jurisdiction with many high-value buildings in a high-hazard zone will be extremely vulnerable to financial devastation brought on by a disaster event.

Identifying hazard prone critical facilities is vital because they are necessary during response and recovery phases.

Critical facilities may include:

- Essential facilities, which are necessary for the health and welfare of an area and are essential during response to a disaster, including hospitals, fire stations, police stations, shelters, hospital alternate care sites, pet shelter, and other emergency facilities;
- Transportation systems such as highways, water ways, harbor facilities, and airways;
- Utilities, water treatment plants, communications systems, power facilities;
- High potential loss facilities such as bulk fuel storage facilities; and
- Hazardous materials sites.

Other items to identify include economic elements, areas that require special considerations, historic, cultural and natural resource areas and other jurisdiction-determined important facilities.

Critical facilities are described in the Community Profiles Section of this hazard plan. A vulnerability matrix table of critical facilities as affected by each hazard is provided in

Chapter 3 of this document. This hazard plan includes an inventory of critical facilities from the records and land use map.

Facilities were designated as critical if they are:
(1) vulnerable due to the type of occupant (children, disabled or elderly for example);
(2) critical to the community's ability to function (roads, power generation facilities, water treatment facilities, etc.);
(3) have a historic value to the community (museum, cemetery);
(4) critical to the community in the event of a hazard occurring (emergency shelters, hospital alternative care site, pet shelter, etc.).

Risk Assessment Methodology

An example of the results of a risk analysis would be several schools exposed to one hazard but one school may be exposed to four different hazards. A multi-hazard approach will identify such high-risk areas and indicate where mitigation efforts should be concentrated.

Currently there are insufficient funds and data with which to conduct an accurate risk analysis for all the hazards affecting Cordova. However, risk analysis information will be added as it is completed.

Federal Requirement for Risk Assessment

Recent federal regulations for hazard mitigation plans outlined in 44 CFR Part 201.6 (c) (2) include a requirement for a risk assessment. This risk assessment requirement is intended to provide information that will help the community identify and prioritize mitigation activities that will prevent or reduce losses from the identified hazards. The federal criteria for risk assessments and information on how the Cordova LHMP meets those criteria are outlined below:

Table 2. Federal Requirements

Section 322 Requirement	How is this addressed?
Identifying Hazards	Cordova city staff and the Cordova Disaster Management Team identified natural hazards at community meetings, which were used in developing the Plan.
Profiling Hazard Events	The hazard-specific sections of the Cordova LHMP provide documentation for all natural hazards that may affect the City. Where information was available, the Plan lists relevant historical hazard events.
	Vulnerability assessments for floods/erosion,

Assessing Vulnerability: Identifying Assets and Estimating Potential Losses of Critical Facilities	severe weather, wild land fire, earthquakes, avalanches and tsunamis have been completed and are contained within the hazard chapter. Additional vulnerability assessments may be added as they are funded and completed.
Assessing Vulnerability: Analyzing Development Trends	The Community Profile Section and Chapter 3 include a description of development in Cordova.

Economic Analysis

FEMA and DHS&EM require that the city perform a benefit/cost analysis of mitigation projects when applying for grant funds for actual project. This section briefly outlines what a cost/benefit analysis entails and provides information on where to obtain information when the city applies for project specific grants.

Only mitigation options with essentially no cost can be accurately assessed at this time. The data necessary to conduct an accurate cost-benefit analysis of mitigation actions that require significant investments, such as engineering analysis or project design is not currently available, but will be added as resources allow further study.

Chapter 4, Mitigation Strategy, outlines Cordova's overall strategy to reduce its vulnerability to the effects of the hazards studied. Originally, the planning effort was limited to the *natural* hazards determined to be of the most concern; flooding/erosion, severe weather earthquake, avalanche and tsunamis. Additions include *manmade* hazards such as technology, public health crisis and hazardous material spills.

The City of Cordova will use the following FEMA required factors to prioritize mitigation project items should funding become available.

1. Extent the project reduces risk to life.

2. Extent to which benefits are maximized when compared to the costs of the project.

3. Project protects critical facilities or critical city functionality.
   A. Hazard probability.
   B. Hazard severity.

Please see specific projects, with baseline cost estimates in Chapter 4.

Cordova will prioritize projects and prepare mitigation grant applications as mitigation funding becomes available and as applicable to grant funding guidelines and as time allows.

Benefit-cost analysis will be conducted as projects are submitted to DHS&EM for consideration.

Chapter 3: Community Resources

Community Assets

This section outlines the resources, facilities and infrastructure that, if damaged, could significantly impact public safety, economic conditions, and environmental integrity of Cordova.

Community Maps

List of Maps from this plan:
Map 1. Cordova Regional Map
Map 2. Cordova Flood Rate Insurance Map
Map 3. Cordova Critical Infrastructure, Geo-Reference Photography
Map 4. Cordova Regional Critical Infrastructure
Map 5: Cordova Tsunami Hazard Zones Map

Critical Facilities: Those facilities and infrastructure necessary for emergency response efforts.

- Oil Spill Response Facilities(SERVS)
- Roads and Bridges
- Communications
- Utilities
- Hospital/Ilanka Community Health Center/Public Health Nurse
- Mud Hole Smith Airport
- Cordova Municipal Airport
- City Hall
- Fire Department
- Police Department
- State Troopers
- Coast Guard
- Water Treatment Plant
- City Water
- Refuse
- Public Works—streets and other support
- AK Marine Highway and Ferry Terminal
- Cordova Harbor

Essential Facilities: Those facilities and infrastructure that supplement response efforts.

- Designated Shelters/Alternate Care Centers/Pet Shelters
- City Hall Buildings-Emergency Operation Center
- Bulk Fuel Storage Tank Farm
- Cordova Telephone Cooperative (CTC)
- Mt. Eccles Elementary
- Cordova Junior/Senior High School
- USFS Building– Alternate EOC (Emergency Operation Center)

Critical Infrastructure: Infrastructure that provides services to Cordova.

- Cordova Telephone lines (CTC)
- Cordova Electric Power Network (CEC)
- Air Transportation networks (Merle K Smith & city airports)
- Wastewater collection
- Water Supply Facilities including storage and delivery systems
- Power Generators including Humpback Creek, Power Creek hydro facilities
- Fuel Storage facilities (Shoreside Petroleum)
- Community Freezer facilities (canneries)
- Reservoir and water supply
- Landfill and Incinerator
- US Postal Service

Vulnerable Populations: Locations serving population that have special needs or require special consideration.

- Schools (Mt Eccles Elementary, High School)
- Hospital
- Nursing Home (IN HOSPITAL)
- Elderly residents
- Tourists
- Functional Needs Population

Cultural and Historical Assets: Those facilities that augment or help define community character, and, if lost, would represent a significant loss for the community.

- Cordova Museum/Library, & Archives
- Ilanka Cultural Center
- City Hall
- Forest Service
- Identified local historic structures/old town
- Masonic Temple
- Alaska Fishermen's Camp

- Cannery Row
- Graveyards

Community Resources

This section outlines the resources available to Cordova for mitigation and mitigation related funding and training.

The federal government requires local governments to have a hazard mitigation plan in place to be eligible for funding opportunities through FEMA, such as through the Pre-Disaster Mitigation Assistance Program and the Hazard Mitigation Grant Program. The Mitigation Technical Assistance Programs available to local governments are also a valuable resource. FEMA may also provide temporary housing assistance through rental assistance, mobile homes, furniture rental, mortgage assistance, and emergency home repairs. The Disaster Preparedness Improvement Grant also promotes educational opportunities with respect to hazard awareness and mitigation.

FEMA, through its Emergency Management Institute, offers training in many aspects of emergency management, including hazard mitigation. FEMA has also developed a large number of documents that address implementing hazard mitigation at the local level. Five key resource documents are available from the FEMA Publication Warehouse (1-800-480-2520) and are briefly described below:

- **How-to Guides.** FEMA has developed a series of how-to guides to assist states, communities, and tribes in enhancing their hazard mitigation planning capabilities. The first four guides mirror the four major phases of hazard mitigation planning used in the development of the Newtok Hazard Mitigation Plan. The last five how-to guides address special topics that arise in hazard mitigation planning such as conducting cost-benefit analysis and preparing multi-jurisdictional plans. The use of worksheets, checklists, and tables make these guides a practical source of guidance to address all stages of the hazard mitigation planning process. They also include special tips on meeting Disaster Mitigation Act (DMA) 2000 requirements (http://www.fema.gov/fima/planhowto.shtm).

- **Post-Disaster Hazard Mitigation Planning Guidance for State and Local Governments.** FEMA DAP-12, September 1990. This handbook explains the basic concepts of hazard mitigation and shows state and local governments how they can develop and achieve mitigation goals within the context of FEMA's post-disaster hazard mitigation planning requirements. The handbook focuses on approaches to mitigation, with an emphasis on multi-objective planning.

- **Mitigation Resources for Success CD.** FEMA 372, September 2001. This CD contains a wealth of information about mitigation and is useful for state and local government planners and other stakeholders in the mitigation process. It provides mitigation case studies, success stories, information about Federal mitigation

programs, suggestions for mitigation measures to homes and businesses, appropriate relevant mitigation publications, and contact information.

- **A Guide to Federal Aid in Disasters.** FEMA 262, April 1995. When disasters exceed the capabilities of state and local governments, the President's disaster assistance program (administered by FEMA) is the primary source of federal assistance. This handbook discusses the procedures and processes for obtaining this assistance, and provides a brief overview of each program.

- **The Emergency Management Guide for Business and Industry.** FEMA 141, October 1993. This guide provides a step-by-step approach to emergency management planning, response, and recovery. It also details a planning process that businesses can follow to better prepare for a wide range of hazards and emergency events. This effort can enhance a business's ability to recover from financial losses, loss of market share, damages to equipment, and product or business interruptions. This guide could be of great assistance to Newtok businesses.

- **Department of Agriculture.** Assistance provided includes: Emergency Conservation Program, Non-Insured Assistance, Emergency Watershed Protection, Rural Housing Service, Rural Utilities Service, and Rural Business and Cooperative Service.

- **Department of Energy, Office of Energy Efficiency and Renewable Energy, Weatherization Assistance Program.** This program minimizes the adverse effects of high energy costs on low-income, elderly, and handicapped citizens through client education activities and weatherization services such as an all-around safety check of major energy systems, including heating system modifications and insulation checks.

- **Department of Housing and Urban Development, Office of Homes and Communities, Section 108 Loan Guarantee Programs.** This program provides loan guarantees as security for federal loans for acquisition, rehabilitation, relocation, clearance, site preparation, special economic development activities, and construction of certain public facilities and housing.

- **Department of Housing and Urban Development, Community Development Block Grants.** Administered by the Alaska DCRA, Division of Community Advocacy. Provides grant assistance and technical assistance to aid communities in planning activities that address issues detrimental to the health and safety of local residents, such as housing rehabilitation, public services, community facilities, and infrastructure improvements that would primarily benefit low-and moderate-income persons.

- **Department of Labor, Employment and Training Administration, Disaster Unemployment Assistance.** Provides weekly unemployment subsistence grants for those who become unemployed because of a major disaster or emergency. Applicants must have exhausted all benefits for which they would normally be eligible.

- **Federal Financial Institutions.** Member banks of the Federal Deposit Insurance Corporation (FDIC) or Federal Home Loan Bank Board (FHLBB) may be permitted to waive early withdrawal penalties for Certificates of Deposit and Individual Retirement Accounts.

- **Internal Revenue Service, Tax Relief.** Provides extensions to current year's tax return, allows deductions for disaster losses, and allows amendment of previous tax returns to reflect loss back to three years.

- **United States Small Business Administration (SBA).** May provide low-interest disaster loans to individuals and businesses that have suffered a loss due to a disaster. Requests for SBA loan assistance should be submitted to the Alaska DHS&EM.

The following are websites that provide focused access to valuable planning resources for communities interested in sustainable development activities.

- **Federal Emergency Management Agency,** http://www.fema.gov – includes links to information, resources, and grants that communities can use in planning and implementation of sustainable measures.
- **American Planning Association,** http://www.planning.org – is a non-profit professional association that serves as a resource for planners, elected officials, and citizens concerned with planning and growth initiatives.

- **Institute for Business and Home Safety,** http://ibhs.org – an initiative of the insurance industry to reduce deaths, injuries, property damage, economic losses, and human suffering caused by natural disasters. Online resources provide information on natural hazards, community land use, and ways citizens can protect their property from damage.

State Resources

- **Alaska DHS&EM** is responsible for coordinating all aspects of emergency management for the State of Alaska. Public education is one of its identified main categories for mitigation efforts.

  Improving hazard mitigation technical assistance for local governments is high priority item for the State of Alaska. Providing hazard mitigation training, current hazard information, and the facilitation of communication with other agencies would

encourage local hazard mitigation efforts. DHS&EM provides resources for mitigation planning on their website at http://www.ak-prepared.com.

- **DCRA, Division of Community and Regional Affairs:** Provides training and technical assistance on all aspects of the National Flood Insurance Program (NFIP) and flood mitigation.

- **Department of Health and Human Services:** Provides special outreach services for seniors, including food, shelter, and clothing.

- **Division of Insurance:** Provides assistance in obtaining copies of policies and provides information regarding filing claims.

- **Department of Military and Veteran's Affairs:** Provides damage appraisals and settlements for Veterans Administration (VA)-insured homes, and assists with filing for survivor benefits.

Other Funding Sources and Resources

- **Real Estate Business.** Real estate disclosure is required by state law for properties within flood plains.

- **American Red Cross.** Provides for the critical needs of individuals such as food, clothing, shelter, and supplemental medical needs. Provides recovery needs such as furniture, home repair, home purchasing, essential tools, and some bill payment may be provided.

- **Crisis Counseling Program.** Provides grants to State and Borough mental health departments, which in turn provide training for screening, diagnosing and counseling techniques. Also provides funds for counseling, outreach, and consultation for those affected by disaster.

Local Resources

Cordova has a number of planning and land management tools that will allow it to implement hazard mitigation activities. The resources available in these areas have been assessed by the City, and are summarized in the following tables.

Table 3. Legal and Technical Capability

Cordova is capable of initiating all the processes below in order to implement mitigation projects:

Regulatory Tools (ordinances, codes, plans)	Do we HAVE these items…and the Local Authority to administer them? (Y/N)	Comments (Year of most recent update; problems administering it, etc.)
Building code	Yes	
Zoning ordinance	Yes	Ongoing Update, as necessary
Subdivision ordinance or regulations	Yes	Ongoing Update, as necessary
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Yes	Part of the NFIP. Local floodplain regulations and avalanche regulations.
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	No	
Site plan review requirements	Yes	
Comprehensive plan	Yes	.
A capital improvements list	Yes	
An economic development plan	Yes	Prince William Sound Economic Strategy that includes the Valdez/Cordova region
An emergency response plan	Yes	Plan that being implemented through training exercises.
A post-disaster recovery plan	Yes	COOP Plan
Real estate disclosure requirements	State	No local requirement.

Table 4. Personnel Capability:

Cordova has these employees to help of implement mitigation projects:

Staff/Personnel Resources	Does this manager have the fiscal responsibility Y/N	Department/Agency and Position
City Manager, Don Moore, Interim	Yes- city wide	City Administration Chief Administrative Officer
City Planner, Samantha Greenwood	Yes- for dept.	City Planning Department Planning Director
Fire Chief, Mike Hicks	Yes	City Fire Department
City Clerk, Susan Bourgeois	Yes	City Clerk Department Head
Public Works Director, Moe Zamarron	Yes	City Public Works Department Head
Public Safety Director, George Wintle	Yes	City Police and Dispatch
Asst. City Manager, Cathy Sherman	Yes	City Administration
Fire Department, Paul Trumblee	Yes	City Fire Department Fire Marshal, Department Head
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	No	Public Works
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Yes	Fire Department, Paul Trumblee, Mike Hicks, Dick Groff, Joanie Behrends and others Public Works Planning Department, Samantha Greenwood
Floodplain manager	Yes	Planning Director Samantha Greenwood
Surveyors	No	No certified surveyors, staff with surveying training and experience
Staff with education or expertise to assess the community's vulnerability to hazards	Yes	Fire Department, , Paul Trumblee, Dick Groff Public Works staff City Police Chief, Ron Bishop Planning Department Jim Goossens, AICP
Personnel skilled in GIS and/or HAZUS	Yes	Planning Department Samantha Greenwood, Shannon Joekay
Individuals familiar with the hazards of the community	No	Various City personnel, local agencies and organizations
Emergency manager	Yes	City Manager, Don Moore , Interim
Environmental Advisory Council	Yes	Various local non-profits and governmental agencies exist for this role

Table 5. Administrative and Technical Capability

Financial Resources	Accessible or Eligible to Use (Yes or No)
Community Development Block Grants (CDBG)	No
Capital improvements project funding	Yes, Pubic Works mostly but others as approved by Council
Authority to levy taxes for specific purposes	Yes
Fees for sewer	Yes
Impact fees for homebuyers or developers for new developments/homes	No
Incur debt through general obligation bonds	With Voter Approval
Incur debt through special tax and revenue bonds	With Voter Approval
Incur debt through private activity bonds	No
Withhold spending in hazard-prone areas	Yes

Chapter 4: Hazards

Cordova All Hazard Mitigation Plan, 2013 Matrix

The current information is based on Table 4.1 and 4.2 in the *Alaska State Hazard Mitigation Plan, 2010* (Cordova falls under Chugach (REAA*)*. The following probability analysis proceeds with the most current available data, originating from the State of Alaska DHS&EM Disaster Cost Index 2012. It is a historical record of statewide disasters since 1978. In this plan, the previous occurrences sections under each hazard are for incidents that occurred within the Cordova city limits.

Hazard Probability:
Each hazard is assigned a rating based upon the following criteria for probability (Table 6) and extent, or magnitude. The probability is determined by reviewing historic events and anecdotal information. Where such information is absent, the probability is unknown (U).

Table 6. Hazard Matrix

Cordova					
Flood	**Wild land Fire**	**Earthquake**	**Volcano**	**Avalanche**	**Tsunami & Seiche**
Y-H-T	Y –M- L	Y-H – T	U	Y-M - L	Y-M - L
Severe Weather	**Landslides**	**Erosion**	**Technological**	**Economic**	
Y-H – T	Y-M - L	Y-H – L	Y	Y	

Source: Alaska State Hazard Mitigation Plan, 2010

Y =	Hazard is present in jurisdiction but probability unknown
Y – L =	Hazard is present with a low probability of occurrence within the next ten years. Event has up to 1 in 10 years chance of occurring.
Y – M =	Hazard is present with a moderate probability of occurrence with the next three years. Event has up to 1 in 3 years chance of occurring.
Y – H =	Hazard is present with a high probability of occurrence. Event has up to 1 in 1 year chance of occurring.
N =	Hazard is not present
U =	Unknown if the hazard occurs in the jurisdiction

Extent:
Z = Zero
L = Limited
T = Total

Identification of Assets and Vulnerability

The Hazard Vulnerability Matrices below lists the City of Cordova facilities, utilities and transportation systems, including the school district and hospital. The dollar values listed below are from the City of Cordova Property Schedule for Renewing Businesses 2012-2013. The list is provided to identify city assets and provide an indication of each asset's vulnerability to natural hazards.

Table 7. City of Cordova - Asset Matrix - Structures and Infrastructure

Building Name	Occ / Description		Construction	Year Built	Sq. Ft	Building Value $
City Hall (including Fire and Police)	City Offices	602 Railroad Ave	Steel on Steel Frame	1976	11,920	3,102,000
Fire Dep't Van	2 connected Sealand Vans - for storage purposes	602 Railroad Ave				0
PWS Science Center	Office	Breakwater Ave	Frame	1964	2,900	395,000
Cordova Chamber of Commerce		404 First Street	Frame		600	164,000
Hospital		508 Chase Avenue	Reinforced Concrete	1986	43,440	17,080,979
5 Mile Fire Station		5 Mile Copper River Hwy	Steel	2001	2,400	357,000
Municipal Ocean Dock	Ocean Dock		Concrete /Steel	1968	32,060	8,410,000
North Containment Dock	Commercial Shipping		Concrete /Steel	1990	9,686	3,802,000
Harbor Bathroom		Breakwater Ave	Frame	1983	300	92,000
Old Grid Dock & Approach	PWS Science Center	Breakwater Ave	Wood Timber	1964	7,093	1,068,000
Harbormaster Building	Office	114 Nicholoff Way	Frame	1983	2,011	481,000
Coast Guard Dock	USCG	Breakwater Ave	Wood Timber	1960	13,152	2,483,000
Loading Dock with Hoist	Marine Advisory	Breakwater Ave	Wood Timber		4,940	1,036,000
Small Boat Harbor Approach		Breakwater Ave	Wood Piling		2,184	474,000
3 Stage Dock		Nicholoff Way	Wood Timber		3,843	798,000
New Grid Approach		Nicholoff Way	Steel / Timber	1982-1983	672	321,000
Approach No. 1	Small Boat Harbor		Steel / Timber		1,312	0
Approach No. 2	Small Boat Harbor		Steel / Timber		1,312	0
Approach No. 3	Small Boat Harbor		Steel / Timber		1,105	0
Approach No. 4	Small Boat Harbor		Steel / Timber		2,184	0
Inner Harbor Launch Ramp	Small Boat Harbor		Steel / Timber	2005		340,000

Building Name	Occ / Description		Construction	Year Built	Sq. Ft	Building Value $
Float A	Small Boat Harbor		Wood / Concrete	2005	A-7410	1,206,000
Float B	Small Boat Harbor				B-9715	1,206,000
Float C	Small Boat Harbor				C-10452	1,046,000
Float D	Small Boat Harbor				D-6735	672,000
Float E and Approach No. 4	Small Boat Harbor				E-5453	1,416,000
Float F	Small Boat Harbor				F-2565	445,200
Float G and Approach No. 3	Small Boat Harbor				G-11556	2,696,000
Float H	Small Boat Harbor				H-15684	3,442,000
Float I and Approach No.2	Small Boat Harbor				I-15684	3,465,000
Float J	Small Boat Harbor				J-8064	1,776,000
Float K and Approach No. 1	Small Boat Harbor				K-13242	3,187,000
Float L	Small Boat Harbor		Wood / Concrete		L-7720	1,705,000
Float M	Small Boat Harbor		Wood / Concrete		M-5535	1,212,000
Boat Haul out Facility	Vessel Maintenance/Storage- Ocean Dock Subdivision		Steel/Concrete		143,150	2,000,000
Harbor - Forest Service Building	US Forest Service Building		Frame		816	196,000
Library Centennial Building	Public Library	622 First Avenue	Steel on Steel Frame	1966	6,480	1,879,000
Odiak Camper Park	Public Restrooms	1451 Whitshed Road	Frame	1976	792	62,000
Tourist Booth/big Gazebox	at Hollis Henrichs Park	Chase & Copper River Hwy	Frame	1985	100	13,568
Skaters Cabin		Power Creek Road	Log		684	143,000
Bidarki Rec. Center		103 Council	Frame	1933/ 1988/ 1989	11,450	2,345,000
Swimming Pool Building		610 Railroad Ave	HCB & Frame	1974	7,968	2,107,000
Ball field Restroom/Concession		101 South First St	Frame			124,000
Fleming Spit Restroom Bldg.		Shelter (Hippy) Cove	Orca Road	1999	182	63,000

Building Name	Occ / Description		Construction	Year Built	Sq. Ft	Building Value $
Shelter Cove RV Park	Fleming Spit		prop in open			0
Shelter Cove Fish Cleaning Station	Fleming Spit					0
Odiak Pond	gazebo, boardwalk	CRH				84,800
Hollis Henrichs Park	restroom	CRH & Chase				147,000
Parks Maintenance Facility	(old CG bldg. by city dock)	Breakwater & Seafood				116,600
Nettie Hansen Park	playground equipment	4th St. & Browning	prop. In open	2007		42,400
Nettie Hansen Park		4th St. & Browning	prop. In open			25,000
Children's Memorial Park	playground equipment	101 S First St	prop. In open			0
Tot Park	playground equipment	101 S First St	prop. In open			30,000
Mt Eccles Estate Park Playground Equipment	Mt Eccles Estate		prop in open			10,000
Skate Park	fencing, ramps, prks&rec equip.	101 S First St	prop. In open			31,800
Nirvana Park	large covered shelter, P&R equip.	Lake Ave. & LeFevre				32,000
Public Works	Public Works Shop	.7 Whitshed Road	Wood/Steel Frame		7,260	1,511,000
Baler Building	Solid Waste Baler	Mile 1 Whitshed Road	Steel on Steel Frame	1985	6,132	861,000
17 Mile Landfill Bldg.	Storage & Shop	Sec 13, T16S, R1w	Steel	2000	2,400	320,000
ILP Building	District Office Modular	100 Fisherman's Ave	Frame		600	25,000
Cordova Jr./Sr. High School	School		100 Fisherman's Ave	HCB & Frame	1980	52,008
Mt. Eccles Elem. School	School	201 Adams	Steel on Steel Frame	1955	31,048	11,531,085
Elementary Playground	Playground equipment	201 Adams	Frame		2,736	7,835,301
Eyak Mt. Chairlift	Ski Resort	Eyak Mtn. Ski Area	Steel	1978		121,459
Eyak Mt. Chairlift Building/Bottom	Ski Resort	Eyak Mtn. Ski Area	Frame	1960	240	309,520
Eyak Mt. Chairlift	Ski Resort	Eyak Mtn. Ski Area	Steel	1978		10,000

Building Name	Occ / Description		Construction	Year Built	Sq. Ft	Building Value $
Building/Midway						
Eyak Mt. Maintenance Shop	Ski Resort	Eyak Mtn. Ski Area	Frame	1980	240	15,000
Eyak Mt. Snack Shack	Ski Resort	Eyak Mtn. Ski Area	Frame	1960	600	253,100
Eyak Mt. Clubhouse/Rental Shop	Ski Resort	Eyak Mtn. Ski Area	Frame	1992	832	120,000
Eyak Mt. Water Tank	Ski Resort	Eyak Mtn. Ski Area	Steel	1980		151,000
Eyak Mt. Chairlift Building/Top	Ski Resort	Eyak Mtn. Ski Area	Frame	1975		253,000
Public Works - Water/Sewer 1	Sewage Treatment	Orca Inlet Drive	Joisted Masonry/ Frame	1975	1,560	10,000
Public Works - Water/Sewer 2	STP generator outbuilding	Orca Inlet Drive	fiberglass			548,000
Public Works - Water/Sewer 3	WWTP Garage	Orca Inlet Drive	Frame	1982	2,904	40,000
Public Works - Water/Sewer 4	Whisky Ridge Lift Station	Whitshed Road	Frame	1978	256	430,000
Public Works - Water/Sewer 5	Whisky Ridge gen. outbldg.	Whitshed Road	fiberglass			14,000
Public Works - Water/Sewer 6	Meals WTP	Whitshed Road	Frame	1975	240	32,860
Public Works - Water/Sewer 7x	Meals Dam	Whitshed Road	Sheet Steel / Earth	1973		49,000
Public Works - Water/Sewer 8	Eyak WTP	Mile 1 Copper River Hwy	Frame	1984	4,428	0
Public Works - Water/Sewer 9	Wet Well/Dry Well Murchison Lift Station	Mile 1 Copper River Hwy			30,000	1,500,000
Public Works - Water/Sewer 10	Mews Pump Station	6th Street		Frame	1980	225
Public Works - Water/Sewer 11	Mews Water Tank	6th Street	Steel	1980		10.458
Public Works - Water/Sewer 12	1.5 mg Water Tank	5th Street	Steel	1980		240,000
Public Works - Water/Sewer 13	1.5 mg Pump house	5th Street	Frame			6,000,000
Public Works - Water/Sewer 14	Ferry Dock Lift Station	Ferry Dock Drive	Frame	1985	256	0
Public Works - Water/Sewer 15x	Eyak Lift Station	LeFevre/Chase	Fiberglass/ Steel			30,000
Public Works - Water/Sewer 16x	Odiak Lift Station	South 2nd	Frame			12,720

Building Name	Occ / Description		Construction	Year Built	Sq. Ft	Building Value $
Public Works - Water/Sewer 17	Orca WTP	Chugach Cannery	Frame	1982		636,000
Public Works - Water/Sewer 18	Morpac Lift Station	Copper River Highway	Steel	1985	256	47,000
Public Works - Water/Sewer 19	Morpac Water Tank	Copper River Highway	Steel	1980		30,000
Public Works - Water/Sewer 20	CT (Murcheson) Water Tank	1 Mile Copper River	Steel			2,800,000
Public Works - Water/Sewer 21	CT (Meals) Water Tank	.75 Mile Whitshed Road	Steel			2,800,000
Public Works - Water/Sewer 22	Solid Handling Bldg.	Orca Inlet Drive	Steel	2007	2,772	2,800,000
Building #4x			Frame		400	627,000
Public Works – Refuse	EVOS Building/Waste Oil Storage	Mile 1 Whitshed Road	Concrete	1998		14,840
New Storage Garage		Whitshed Road				120,000
New Parks Maintenance Facility		.7 Whitshed Road				299,000
17 Mile Landfill Bldg.	Storage and Shop	Sec 13,T16S, R1W	Steel	2000	2,400	129,000
Orca Inlet Rec Area and M/U Field		Whitshed Road	prop in open			320,000
Extra Expense						75,000
Increased Cost of Construction						5,000,000
Total Insured Value						1,000,000

The following table depicts each of the facilities in Table 10 in relation to whether they are vulnerable to the listed natural hazards. However, the designations under flood/erosion are taken from the FEMA Flood Insurance Rate Map that is dated 1979. Since that time areas have been filled to above the Base Flood Evaluation in some cases. Until the FIRM has an official revision or a Letter of Map Revision is approved by FEMA, the designations stand but may not be accurate but do not necessarily reflect the current situation in the field. There are no structures located in the currently delineated avalanche areas.

Table8. Assets and Vulnerability Matrix - Structures and Infrastructure

Facility	Flood/ Erosion	Severe Weather	Wild land Fire	Earthquake	Tsunami	Avalanche/ Landslide
City Hall		X		X	X	
Fire Dep't Van		X		X	X	
PWS Science Center	X	X		X	X	
Cordova Chamber of Commerce		X		X	X	
Hospital	X	X		X	X	
5 Mile Fire Station	X	X	X	X	X	
Municipal Ocean Dock	X	X		X	X	
North Containment Dock	X	X		X	X	
Harbor Bathroom	X	X		X	X	
Old Grid Dock & Approach	X	X		X	X	
Harbormaster Building	X	X		X	X	
Coast Guard Dock	X	X		X	X	
Loading Dock with Hoist	X	X		X	X	
Small Boat Harbor Approach	X	X		X	X	
3 Stage Dock	X	X		X	X	
New Grid Approach	X	X		X	X	
Approach No. 1	X	X		X	X	
Approach No. 2	X	X		X	X	
Approach No. 3	X	X		X	X	
Approach No. 4	X	X		X	X	
Inner Harbor Launch Ramp	X	X		X	X	
Float A	X	X		X	X	
Float B	X	X		X	X	
Float C	X	X		X	X	
Float D	X	X		X	X	
Float E	X	X		X	X	
Float F	X	X		X	X	

Facility	Flood/ Erosion	Severe Weather	Wild land Fire	Earthquake	Tsunami	Avalanche/ Landslide
Float G	X	X		X	X	
Float H	X	X		X	X	
Float I	X	X		X	X	
Float J	X	X		X	X	
Float K	X	X		X	X	
Float L	X	X		X	X	
Float M	X	X		X	X	
Harbor - Forest Service Building	X	X		X	X	
Library Centennial Building		X		X	X	
Odiak Camper Park	X	X		X	X	
Tourist Booth/big Gazebo		X		X	X	
Skaters Cabin	X	X		X	X	
Bidarki Rec. Center		X		X	X	
Swimming Pool Building		X		X	X	
Ball field Restroom/Concession	X	X		X	X	
Fleming Spit Restroom Bldg.	X	X		X	X	
Odiak Pond		X		X	X	
Hollis Henrichs Park		X		X	X	
Parks Maintenance Facility		X		X	X	
Nettie Hansen Park		X		X		
Children's Memorial Park		X		X	X	
Tot Park		X		X		
Skate Park		X		X	X	
Nirvana Park	X	X		X	X	
Baler Building		X	X	X		
17 Mile Landfill Bldg.		X	X	X		
Cordova Jr./Sr. High School		X		X	X	
ILP Building		X		X	X	

Facility	Flood/ Erosion	Severe Weather	Wild land Fire	Earthquake	Tsunami	Avalanche/ Landslide
Mt. Eccles Elem. School		X		X		
Elementary Playground		X		X		
Eyak Mt. Chairlift		X	X	X		
Eyak Mt. Chairlift Building		X	X	X		
Eyak Mt. Maintenance Shop		X	X	X		
Eyak Mt. Snack Shack		X	X	X		
Eyak Mt. Clubhouse/Rental Shop		X	X	X		
Eyak Mt. Water Tank		X	X	X		
Eyak Mt. Chairlift Building/Top		X	X	X		
Public Works - Water/Sewer –1	X	X	X	X	X	
Public Works - Water/Sewer –2	X	X	X	X	X	
Public Works - Water/Sewer -3	X	X	X	X	X	
Public Works - Water/Sewer –4		X		X	X	
Public Works - Water/Sewer -5		X	X	X	X	
Public Works - Water/Sewer –6	X	X	X	X		
Public Works - Water/Sewer –7	X	X	X	X		
Public Works - Water/Sewer –8	X	X		X	X	
Public Works - Water/Sewer –9	X	X	X	X	X	
Public Works - Water/Sewer –10		X	X	X		
Public Works - Water/Sewer –11		X	X	X		
Public Works - Water/Sewer –12		X	X	X		
Public Works - Water/Sewer –13		X	X	X		
Public Works - Water/Sewer –14	X	X		X	X	
Public Works - Water/Sewer –15	X	X		X	X	
Public Works - Water/Sewer –16	X	X		X	X	
Public Works - Water/Sewer –17		X	X	X		
Public Works - Water/Sewer –18	X	X	X	X	X	
Public Works - Water/Sewer –19		X	X	X		

Facility	Flood/ Erosion	Severe Weather	Wild land Fire	Earthquake	Tsunami	Avalanche/ Landslide
Public Works - Water/Sewer –20		X	X	X		
Public Works - Water/Sewer –21		X	X	X		
Public Works - Water/Sewer –22	X	X	X	X	X	
Public Works - Refuse	X	X	X	X	X	

Location of Identified Hazards

In summary, most identified hazards are area wide. The principal natural hazards of flood, erosion, severe weather, tsunami, avalanche and earthquake could potentially impact any part of Cordova. Manmade and Technological hazards are also potentially area wide.

Flooding events, even for those properties unaffected directly, will suffer due to road closures, impacts to public safety (access and response capabilities), limited availability of perishable commodities, and isolation.

A severe weather event would create an area wide impact and could damage structures and potentially isolate Cordova from the rest of the state.

Wild land Fire could occur anywhere in the Cordova region as the area is heavily forested. However, it is also a rain forest so the probability of wild land fire is listed on the Alaska State Hazard Plan matrix, Table 8, as having a moderate probability. The community listed the critical facilities located in heavily forested areas on Table 10. A serious wild land fire could impact the facilities listed in Table 10 and other areas that are undeveloped, but the overall impact, due to the rain forest environment would be limited.

Earthquake damage would be area-wide with potential damage to critical infrastructure up to and including the complete abandonment of key facilities. Priority would have to be given critical infrastructure to include: public safety facilities, health care facilities, shelters and potential shelters, and finally public utilities.

Avalanche and landslide danger is limited primarily to the identified avalanche and landslide areas depicted on Map 4. There are no critical facilities located in the avalanche and landslide areas.

Tsunami damage would impact the structures directly adjacent to the coastline and as depicted on Map 5 Tsunami Hazard Zones.

Technological or Cyber Threats could be area wide, affecting all critical infrastructures and/or the total population. The same is true for nuclear, biological, or chemical threats.

Hazardous Material Spills could be either site specific or area-wide with potential evacuation from critical infrastructure up to and including the complete abandonment of key facilities.

Oil Spill threat could be local or region-wide.

Public Health hazards could be area wide, affecting the total population.

Other human caused threats (like civil disobedience or mass transportation accidents) would be limited to the site.

Section 1. Floods and Erosion

Hazard Description and Characterization

Flood hazards in Cordova include storm surges, voluminous rainfall, snow and glacier melt and release of glacier-dammed lakes.

Storm Surge Flooding
Storm surges are relatively long-term, local increases in water level resulting from offshore storms. Maximum hazard results when such a surge coincides with a maximum tide.

Rainfall/Snowmelt/Glacier Melt Flooding
Floods occur in rivers as a result of a large input of water to the drainage basin in the form of rainfall, snowmelt, glacier melt, or a combination of these inputs. In the Cordova area, as well as most coastal areas of Southcentral and Southeast Alaska, the floods due to snowmelt are typically lower in magnitude than those due to rainstorms in late summer or fall. Glacier melt is typically largest in late summer; increasing the potential magnitude of late summer rainfall floods in glacial streams.

Local Flood and Erosion Hazard Identification

The following section regarding hazard identification was taken from the *Eyak River Flood Control Study.* Prepared by USCOE for the City of Cordova. July 14, 2003.

The principal flood problem in Cordova is caused by high water in Eyak Lake. The Eyak River, which drains Eyak Lake, does not have the capacity for peak flow and hence the lake level rises. Persistent flooding in the Cordova area has also been caused by inflows of the Scott River into the Eyak River. These inflows raise the water surface of both the Eyak River and Eyak Lake.

The Eyak River is a small, clear water river that drains Eyak Lake and has a drainage area of 42 square miles. The Eyak River lies along the extreme western edge of the Scott River delta and the eastern extent of the Heney Range. The Scott River delta is a long, broad delta with considerable topographic relief extending from the Scott Glacier to Prince William Sound. The Scott River is a glacial outwash river that is characterized by a tremendous sediment load and a multi-channeled, braided stream channel system that extends across the entire extent of its previously glaciated valley. Flow paths are highly variable within the delta as stream channels meander, are abandoned for lower grade channels, or are captured by larger flows.

The additional flow and sediment deposition from the Scott River into the Eyak River has greatly restricted the natural flow from the Eyak drainage. Under these conditions, water surface elevations of the Eyak River upstream of the intrusions of the Scott River

are held continuously high. The increased water surface elevations of the Eyak River, in turn, keep the water surface of Eyak Lake continuously high and well above normal.

Conditions have changed somewhat since the initiation of this study. Channel shifts at the foot of Scott Glacier and in the mid floodplain area north of the Copper River Highway appear to have led to decreased flows of silt, glacial water into the Eyak River. During the summer of 2001 the flow from Scott Glacier shifted more to the east, away from the Eyak River. This has reduced the amount of Scott River stream flow and sediment into the Eyak River. If these conditions persist, the Eyak River may erode and transport the sediment shoals that have been deposited in it and return the stream channel to its base level. Average channel velocities during a 2-year (50% probability) flood event are estimated to be 3 feet per second, a sufficient velocity to erode the fine sediment that the shoals are composed of. This will return water surface elevations and flooding hazards to those present before the intrusion of the Scott River. It is not known how long these conditions may persist and whether the Eyak River will return to prior conditions.

Below the terminus of the Scott Glacier, the Scott River drainage forms a wide, low elevation flood plain of approximately 30 square miles. In its upper seven miles this floodplain is bounded on both sides by steep valley walls, and averages about two miles in width. The lower section of the floodplain widens out into a broad delta, which coalesces with the delta of the Glacier River to the east.

In early July of 1983 a major shift in the water flow patterns down the Scott River drainage was noted at the Copper River Highway.

This flow shift is likely related to a change in the channels of the Scott River from underneath the Scott Glacier which occurred at about the same time. (However, the flow pattern change could have occurred through a major channel shift further down the valley, independent of the channel changes at the terminus of the Scott Glacier.)

Previous to the July 1983 channel shift at the Copper River Highway, the majority of the turbid, summer and fall glacial flows from the Scott River passed under the Mile 9 bridges on the Copper River Highway (and on the east side of the drainage.) The Mile 7 Bridge passed primarily non-glacial waters from Laydick Creek. These flows were of much less volume than those under the Mile 9 Bridge.

At flood stage, individual channels in the Scott River drainage are incapable of holding all flows. Floodwaters rise and spread across the width of the valley, and high, turbid flows pass under all the highway bridges, which span the drainage.

Since the July 1983 flow shift, the majority of stream flow from Scott River passes under the Mile 7 Bridge and are now turbid glacial waters. Significantly less than half the flows of the Scott River now pass under the Mile 9 bridges (and at low summer stage virtually no flow.)

The Scott River drainage area is 154 square miles, most of which is mountainous. Elevations range from sea level to 6,000 feet. The Scott Glacier covers 45 percent of the watershed, which receives approximately 150 inches of precipitation per year.

Outburst Floods from Scott Glacier

Along the east flank of Scott Glacier, about 1.5 miles above its terminus, the glacier blocks off a small, east-west trending valley. A lake of approximately 80 acres in surface area forms behind this glacial dam. Occasionally, outburst floods occur from this lake and the majority of its water volume drains out from under the glacier and flows down the Scott River valley. The recurrence interval of this outburst flood may be as frequent as once or twice a year (Post, Austin & Mayo Glacier dammed Lakes and Outburst Floods in AK. USGS, 1971). Apparently, these outburst floods are not of significant enough volume to have a strong downstream influence. Further up the Scott Glacier is another glacially dammed lake, which has occasional outburst floods. The lake is small enough that outburst floods would likely have a low impact on flooding downstream.

Based on the limited data concerning outburst floods from Scott Glacier, it was assumed that outburst flooding would have a minimal direct impact on the frequency or magnitude of major flood events on the Scott River. The outburst floods could redistribute substrate material sufficiently to cause changes in flow patterns within the upper Scott River floodplain. These changes in flow patterns could propagate to lower portions of the watershed and affect the amount of additional flow entering the Eyak River. In 2001 it appeared that channel shifts at the foot of the Scott Glacier led to decreased flows of Scott River water into the Eyak River. (*Eyak River Flood Control Study, 2003).*

The Scott River is a heavily braided stream that flows from the terminus of Scott Glacier. Downstream from the glacier the Scott River forms a wide, low elevation floodplain of approximately 30 square miles. The upper 7 miles of this floodplain is bounded by steep valley walls, and averages about 2 miles in width. The lower section of the floodplain widens out into a broad delta that extends to the Gulf of Alaska.

Community Participation in the NFIP

The City of Cordova participates in the National Flood Insurance Program, and has been in partnership with NFIP since 1979. The function of the National Flood Insurance Program (NFIP) is to provide flood insurance to homes and businesses located in floodplains at a reasonable cost. In trade, the City of Cordova regulates new development and substantial improvement to existing structures in the floodplain. The program is based upon mapping areas of flood risk, and requiring local implementation to reduce flood damage primarily through requiring the elevation of structures above the base (100-year) flood elevations.

Table 9. NFIP Statistics

Total by Community

Total Number of Policies:	12
Total Premiums:	$11,738
Insurance in Force:	$3,059,000
Total Number of Closed Paid Losses:	1
$ of Closed Paid Losses:	$64,529

Cordova Floodplain Coordinator	Samantha Greenwood, City Planner P.O. Box 1210 Cordova, Alaska 99574 Phone: (907) 424-6233, Email: planning@cityofcordova.net
State of AK Floodplain Coordinators	Taunnie Boothby, Floodplain Management Program Coordinator Department of Commerce, Community & Economic Development Division of Community Advocacy 550 W. 7th Avenue, Suite 1640 Anchorage, AK 99501, (907) 269-4567, Email: taunnie_boothby@commerce.state.ak.us

Cordova's Participation in RiskMAP

On March 4 2011, federal and state emergency management personnel met in Cordova to begin a RiskMAP project for the City. The vision for Risk MAP is to deliver quality data that increases public awareness and leads to action that reduces risk to life and property. Risk MAP builds on flood hazard data and maps produced during the Flood Map Modernization (Map Mod) program. Map Modernization is responding to National Flood Insurance Program (NFIP) requirements and feedback provided by Federal, State, and local Program stakeholders.

- Flood hazard conditions are dynamic, and many NFIP maps may not reflect recent development and/or natural changes in the environment.
- Updated NFIP maps can take advantage of revised data and improved technologies for identifying flood hazards.
- Up-to-date maps support a flood insurance program that is more closely aligned with actual risk, encourage wise community-based floodplain management, and improve citizens' flood hazard awareness.
- Local communities and various stakeholders desired more timely updates of flood maps and easier access to the flood hazard data used to create the maps.

Table 14 outlines the City of Cordova's RiskMAP data requirements.

Table 14: Cordova Mapping Needs

STUDY AREA	STUDY LENGTH (miles)	LOCATION DESCRIPTION	STUDY TYPE
Cannery Road Loop	0.25	Near the loop at northern end of Cannery Road	Detailed Coastal
Cannery Road/ Fleming Creek	0.5	Coastline near Fleming Creek	Detailed Coastal
Seafood Lane	0.5	Coastline along Seafood Lane	Detailed Coastal
Eyak Lake	2.7	Shoreline study along the west end of the lake	Approximate
Eyak River	1	Near the lake	Detailed
Ibek Creek	1.2	The confluence of Ibek Creek and Eyak River	Approximate

Source: State of Alaska DCCED.

Economic Considerations. The area of Cordova along the western shore of Eyak Lake is populated with single- and multi-family residential and commercial structures. All land suitable for development has been developed and no changes in land use are expected over the 25-year period of analysis.

The developed area of Eyak on the east bank of the Eyak River consists primarily of single-family residential structures. This area has yet to be mapped by FEMA.

A structure inventory was conducted to identify all structures in the floodplain. The inventory identified 196 residential and commercial structures at risk of flooding from a 0.2 percent chance event, commonly referred to as a 500-year flood. At that time the value of property, excluding utilities, within the 500-year flood plain of the Eyak River is estimated to be approximately $16 million.

Previous Occurrences of Flood and Erosion

The following information is from the DHS&EM Disaster Cost Index, 2006.

Cordova, September 16, 1983 The Governor proclaimed a Disaster Emergency after a flash flood generated by heavy rainfall destroyed portions of a pipeline system which provides the City of Cordova with, approximately 60% of its water supply. Public assistance was provided for the purpose of repairing the city's water system.
Cordova, October 31, 1985 After heavy rains, a landslide destroyed water lines between Heney Creek catchment basin and the city. Disaster public assistance supported repair by the city.

Southcentral Alaska Flood (Major Disaster), October 12, 1986 FEMA declared (DR-0782) on October 27, 1986 Record rainfall in South-central Alaska caused widespread flooding in Seward, Matanuska-Susitna Borough and Cordova. The President declared a Major disaster implementing all public and individual assistance programs, including SBA disaster loans and disaster unemployment insurance benefits.

96-180 South-central Fall Floods declared September 21, 1995 by Governor Knowles then FEMA declared (DR-1072) on October 13, 1996: On September 21, 1995, the Governor declared a disaster as a result of heavy rainfall in South-central Alaska an as a result the Kenai Peninsula Borough, Matanuska-Susitna Borough, and the Municipality of Anchorage were initially affected. On September 29, 1995, the Governor amended the original declaration to include Chugach, and the Copper River Regional Education Attendance areas, including the communities of Whittier and Cordova, and the Richardson, Copper River and Edgerton Highway areas which suffered severe damage to numerous personal residences, flooding, eroding of public roadways, destruction & significant damage to bridges, flood control dikes and levees, water and sewer facilities, power and harbor facilities. On October 13, 1995, the President declared this event as a major disaster (AK-1072-DR) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Individual Assistance totaled $699K for 190 applicants. Public Assistance totaled $7.97 million for 21 applicants with 140 DSR's. Hazard Mitigation totaled $1.2 million. The total for this disaster is $10.5 million.

06-220 2006 August Southcentral Flooding (AK-06-220) declared August 29, 2006 by Governor Murkowski then FEMA declared (DR-1663) on October 16, 2006
Beginning on August 18, 2006 and continuing through August 24, 2006, a strong weather system centered causing severe flooding resulting in severe damage and threats to life and property, in the Southcentral part of the State including the Matanuska-Susitna Borough, the City of Cordova and the Copper River Highway area in the Chugach Rural Education Attendance Area (REAA), the Richardson Highway area in the Copper River REAA and Delta/Greely REAA, the Denali Highway area, and the Alaska Railroad and Parks Highway areas in the Matanuska-Susitna Borough and the Denali Borough. Damage cost estimates are near $21 million in Public Assistance primarily for damage to roads, bridges and rail lines. Individual Assistance estimates are near $2 million.

06-221 2006 October Southern Alaska Storm (AK-06-221) declared October 14, 2006 by Governor Murkowski
Beginning on October 8, 2006 and continuing through October 13, 2006, a strong large area of low pressure that developed in the Northern Pacific and moved into the Southwest area of the state, produced hurricane force winds throughout much of the state and heavy rains in the Southcentral and Northern Gulf coast areas, which resulted in severe flooding and wind damage and threats to life in the Southern part of the state, to include the Kenai Peninsula Borough including the Cities of Seward and Seldovia, the Chugach Rural Education Area including the City of Cordova and the City of Valdez, and the Copper River Rural Education Area including the Richardson Highway to the

Glenallen and highways and drainages in the McCarthy areas. Total damages are estimated at $557,415 with a public assistance estimate of $456,855 less the US Army Corps of Engineers (USASCE) Advanced Measures Assistance of $250,000 leaving $206,855.

Flood and Erosion Hazard Vulnerability

Please see matrices at the beginning of Chapter 3.

The following table displays output from the FDA model and demonstrates the calculation of average annual flood damages, which are estimated to equal $205,000 as noted in the lower right cell of the table.

Table 10 Eyak River 2003 Study FDA Model

Return Interval – In years	Probability of Occurrence	Number of Structures Flooded	Single Event Damages	Expected Annual Damages – Cumulative
2	0,5	6	$206,999	$51,700
5	0.2	6	$223,654	$116,300
10	0.1	6	$367,023	$145,800
25	0.04	22	$571,794	$174,000
50	0.02	31	$729,668	$187,000
100	0.01	31	$989,183	$195,600
250	0.004	31	$1,231,884	$202,300
500	0.002	53	$1,708,884	$205,200

Eyak River Study, 2003

Tables 7 and 8 illustrate the dollar amount of facilities located with flood/erosion areas. Cordova is located on the water and therefore the Port and Harbor facilities and areas near the shore are always vulnerable to flooding/erosion.

Probability

Referring to the maps on pages 118-120, much of the City is located in a federally designated flood plain and tsunami inundation zone. Minor flooding within the watersheds is experienced annually. The sources of flooding are: coastal inundation, riverine, and rapid snow and ice melt. Given the proximity to these sources, the historical record, and the flood plain map, it is highly probable that Cordova will experience flooding within one year's time (Table 6).

Flood and Erosion Mitigation Goals and Projects:

Goals

Goal 1. **Support and encourage building practices that reduce damage from flooding in areas that are prone to flooding.**

Goal 2. **Develop Base flood elevations in areas that are prone to flooding.**

Goal 3: **Protect drinking water sources from flood infusion water.**

Goal 4: **Increase public knowledgeable about flood insurance, mitigation opportunities, floodplain functions, emergency service procedures, and potential hazards.**

Projects **(listed numerically as FLD = FLOOD)**

After receiving public input, it is the recommendation of this plan that the City of Cordova, along with other local, State and Federal entities look at the following projects for flood/erosion mitigation.

- **Project FLD-1:Six-Mile Subdivision Drainage System**

Flooding could be mitigated greatly by a drainage system at Six-Mile Subdivision.

- **Project FLD-2:Alternative Water Source to Six Mile Subdivision**

- **Project FLD-3:Letter of Map Revision for Flood Insurance Rate Maps (FIRM)**

The FEMA FIRMs are dated 1979. Much of the port area has been filled and therefore the maps are very outdated.

- **Project FLD-4:Design and Construct Flood proofing for Hospital**

The basement of the Cordova Hospital has flooded in recent years and would benefit by flood proofing techniques.

- **Project FLD-5:Heney Creek Waterline Replacement**

During the 2006 flood the Heney Creek water line was damaged. The water line needs studied to decide if it should be 1) abandoned, 2) an alternative route be designed for the water line or 3) replace the water line with a new line at Power Creek.

- **Project FLD-6:Power Creek Waterline Repair and/or Replacement**

- **Project FLD-7. Identify Drainage Patterns and Develop a Comprehensive Drainage System**

- **Project FLD-8:Structure Elevation and/or Relocation**

A list of homes, commercial structures and critical facilities that are in danger of flooding and in erosion danger should be identified and mitigation projects for elevating and/or relocating the structures determined.

- **Project FLD-9: Take Steps to Update FIRM Cordova Maps**

Increase public knowledgeable about mitigation opportunities, floodplain functions, emergency service procedures, and potential hazards. This would include advising property owners, potential property owners, and visitors about the hazards. In addition, dissemination of a brochure or flyer on flood hazards in Cordova could be developed and distributed to all households.

- **Project FLD-10: Public Information**
- **Project FLD-11: Install new stream flow and rainfall measuring gauges**
- **Project FLD-12: Apply for grants/funds to implement riverbank protection methods.**
- **Project FLD-13: Investigate obtaining a CRS rating to lower flood insurance rates.**
- **Project FLD-14: Continue to obtain flood insurance for all City structures, and continue compliance with NFIP.**
- **Project FLD-15: Require that all new structures in the Flood Zone be constructed according to NFIP requirements and set back from the river shoreline to lessen future erosion concerns and costs.**
- **Project FLD-16: Take steps towards Mapping the Six-Mile Subdivision as FIRM Maps**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Flood/Erosion (FLD)						
Project FLD-1. Six-Mile Subdivision Drainage System	Benefit to Six-Mile Subd. Property Damage Reduction and drinking infiltration reduced.	Engineering Needed	High	FEMA	PDMG HMGP USCOE	<1 year
Project FLD-2. Alternative Water Source to Six Mile Subdivision	PDMG** Funding Possible Benefit to entire community	Expensive >$3.5 million 5+ years to implement	Low	FEMA	PDMG HMGP USCOE	>1 year
Project FLD-3. Letter of Map Revision for Flood Insurance Rate Maps for North and South Fill	No direct cost Benefit to city and private properties within floodplain.	Staff time	High- **DONE** 2001 & 2005	City DCRA FEMA	City/State Budgets	Ongoing
Project FLD-4. Design and Construct Flood proofing for Hospital	Damage Reduction PDMG**, HMGP*** Benefit to public institution	0 – 1 years	High	To be determined	PDMG HMGP USCOE	
Project FLD-5. Heney Creek Waterline Replacement	Life/safety issue Benefit to entire community Reduction in property damage	Engineering needed. >$1.5 million >5 years	High	FEMA	PDMG HMGP USCOE	>5 years

Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Flood/Erosion (FLD) cont.						
Project FLD-6. Power Creek Hydro facility Repair and/or Replacement	Life/safety issue Benefit to entire community Reduction in property damage	Engineering needed >$1.5 million >5+ years	Low	FEMA DHS&EM	PDMG HMGP USCOE	>1 year
Project FLD-7. Identify Drainage Patterns and Develop a Comprehensive Drainage System	Benefit to entire community Property damage reduction	Engineering study needed >$50,000 1 – 5 years	Medium	FEMA	PDMG HMGP USCOE	>1 year
Project FLD-8. Structure Elevation and/or Relocation	Life/Safety project Benefit to government facilities and private properties. Potential PDMG**, HMGP***, FMA****	Dollar cost unknown, >$50k 1 – 5 year implementation	Medium	FEMA DHS&EM	PDMG HMGP USCOE	>1 year
Project FLD-9. Take Steps to Update FIRM Cordova Maps	FEMA, PDMG**, HMGP*** and State DCRA funding available. USCOE facilitated project. Can be started immediately.	Expensive, at least $100,000	High	FEMA	PDMG HMGP	<1 year

Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Flood/Erosion (FLD) cont.						
Project FLD 10. Public Education	DCRA funding may be available. Could be done yearly. Inexpensive <$1,000City	Not clear if there would be community interest or participation.	Medium	City DHS&EM	City	Ongoing
Project FLD 11. Install upgraded stream flow and rainfall measuring gauges	Life/Safety project Benefit to government facilities and private properties. Potential PDMG**, HMGP***, FMA****	Dollar cost unknown, >$50k 1 – 5 year implementation	Medium	FEMA DHS&EM	PDMG HMGP USCOE	<1 year
Project FLD 12. Apply for grants/funds to implement riverbank protection methods.	Life/Safety project Benefit to government facilities and private properties. Potential PDMG**, HMGP***, FMA****	Dollar cost unknown, >$50k 1 – 5 year implementation	Medium	City	PDMG HMGP USCOE	<1 year
Project FLD 13. Investigate obtaining a CRS rating to lower flood insurance rates.	High capability by city to do on an annual basis Will reduce NFIP insurance for entire community.	Staff time.	High	City	City	<1 year

Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Flood/Erosion (FLD) cont.						
Project FLD 14. Continue to obtain flood insurance for all City structures, and continue compliance with NFIP.	High capability by city to do on an annual basis. Public benefit to have public buildings insured through NFIP. Inexpensive, approx. $3,000/year.	Staff time	High	City	City	Ongoing
Project FLD 15. Require that all new structures in the flood zone be constructed according to NFIP requirements and set back from the river shoreline to lessen future erosion concerns and costs.	High capability by city to do on an annual basis. Public benefit to have public buildings insured through NFIP. Inexpensive, approx. $3,000/year.	Staff time	High **DONE**, if it is in the mapped flood zone	City	City Budget	Ongoing
Project FLD 16. Takes steps to Map the Six-Mile Subdivision as FIRM Maps	FEMA, PDMG**, HMGP*** and State DCRA funding available. USCOE facilitated project. Can be started immediately.	Expensive, at least $100,000	High	FEMA USCOE	PDMG HMGP USCOE	>1 year

Section 2. Severe Weather

Hazard Description and Characterization

Weather is the result of four main features: the sun, the planet's atmosphere, moisture, and the structure of the planet. Certain combinations can result in severe weather events that have the potential to become a disaster.

In Alaska, there is great potential for weather disasters, related to Winter Storms, Extreme cold, and Ice storms. High winds can combine with loose snow to produce a blinding blizzard and wind chill temperatures to 75°F below zero. Extreme cold (-40°F to -60°F) and ice fog may last a week at a time. Heavy snow can impact the interior and is common along the southern coast. A quick thaw means certain flooding.

Local Severe Weather Hazard Identification

The Cordova area has a maritime climate, which is characterized by cool summers, mild winters, and heavy year-around precipitation. This type of climate is typical of the southeastern and southern coastal areas of Alaska where the ocean exerts a modifying influence and causes relatively low seasonal and diurnal temperature variations. Proximity to the ocean and the frequent lows which develop or move out of the Gulf of Alaska result in heavy precipitation. According to the U.S. Army corps of Engineers, the design snow load factor for Cordova should be 150 pounds per square foot; the highest in the state. In practical terms, it means that people have to guard against excessive snow accumulations on roofs, boats, and airplanes.

Cordova's winters are relatively mild. The coldest month (January) has an average daily temperature of about 23 degrees F., and although temperatures as low as -33 degrees F. have been recorded, extremely cold weather is usually of short duration. On the other hand, summer temperatures in the community tend to be on the cool side, averaging between 50 and 55 degrees F., with daily maximums reaching into the low 60's in July and August. The record high temperature in Cordova is 84 degrees F., a mark set back in 1946.

Table 13. Cordova Weather Summary, from 1995 - 2012

	Daily Extremes				Monthly Extremes				Max. Temp.		Min. Temp.	
	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32 F	<= 0 F
	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Days	# Days
January	58	21/1961	-4	12/1969	38.0	2001	13.6	1969	0.0	10.7	23.8	0.4
February	59	05/1995	-2	20/1956	38.3	1998	22.7	1956	0.0	6.3	20.5	0.1
March	51	31/1957	-13	03/1956	37.5	2005	27.4	2007	0.0	3.1	22.3	0.2
April	64	28/1989	3	27/1959	42.4	1993	36.2	1956	0.0	0.1	11.3	0.0
May	73	24/1969	23	04/1956	49.6	2004	40.7	1956	0.0	0.0	1.1	0.0
June	78	11/1959	34	05/1956	56.8	1959	48.1	1956	0.0	0.0	0.0	0.0
July	80	09/1971	35	18/1964	59.5	2004	52.2	2012	0.0	0.0	0.0	0.0
August	81	08/1957	35	01/1964	61.0	2004	52.4	1955	0.0	0.0	0.0	0.0
September	71	01/1960	28	24/1970	54.7	1995	45.5	1992	0.0	0.0	0.5	0.0
October	64	06/1969	16	09/1959	47.2	2002	35.9	1968	0.0	0.1	7.2	0.0
November	55	04/1957	4	30/1990	43.7	2002	26.0	1955	0.0	4.2	17.2	0.0
December	52	17/1969	-23	14/1964	39.5	1986	19.0	1964	0.0	8.0	21.9	0.3
Annual	81	19570808	-23	19641214	44.1	1997	37.8	1956	0.0	32.5	125.8	0.9
Winter	59	19950205	-23	19641214	37.9	1987	20.7	1969	0.0	25.0	66.1	0.7
Spring	73	19690524	-13	19560303	42.1	1993	35.2	1956	0.0	3.2	34.7	0.2
Summer	81	19570808	34	19560605	59.0	2004	52.2	2008	0.0	0.0	0.0	0.0
Fall	71	19600901	4	19901130	47.4	2002	37.3	1955	0.0	4.3	24.9	0.0

Source: Western Regional Climate Center, wrcc@dri.edu

Heavy Snow

Heavy snow, generally more than 12 inches of accumulation in less than 24 hours, can immobilize the community by bringing transportation to a halt. Until the snow can be removed, the airport and the one highway out of town Copper River Highway are impacted, even closed completely, stopping the flow of supplies and disrupting emergency and medical services.

Accumulations of snow can cause roofs to collapse and knock down trees and power lines. Heavy snow can also damage light aircraft and sink small boats. A quick thaw after a heavy snow can cause substantial flooding. The cost of snow removal, repairing damages, and the loss of business can have severe economic impacts on cities and towns. Injuries and deaths related to heavy snow usually occur as a result of vehicle

accidents. Casualties also occur due to overexertion while shoveling snow, falls from roofs while shoveling snow, snow and ice falling from roofs, and hypothermia caused by overexposure to the cold weather.

High Winds

Another major weather factor in the community is high winds. The wind chill factor can bring temperatures down to -50°F, which can lead to frozen pipes and dangerous conditions for outdoor activities. While most home and business owners are prepared for the heavy winds and low temperatures, construction practices must be followed to protect against the high winds.

Previous Occurrences of Severe Weather

Wind storm that occurred on December 22, 1999 Planning Commissioners at the August 12, 2007 public meeting related their recollections of this wind storm that. The wind gusts of over 150 mph damaged roofs, structures and roads.

Hazard Mitigation Cold Weather, 1990. The Presidential Declaration of Major Disaster for the Omega Block cold spell of January and February 1989 authorized federal funds for mitigation of cold weather damage in future events. The Governor's declaration of disaster provided the State matching funds required for obtaining and using this federal money.

2012 Prince William Sound Winter Storm (AK12-238) declared February 9, 2012 by Governor Sean Parnell

Beginning in mid-December 2011 and continuing through January 2012, the City of Cordova and Prince William Sound area began receiving snowfall that put them on a pace to approach or break record seasonal precipitation accumulations. On December 12, the City of Cordova began working in emergency snow removal status. Avalanches across roadways and extreme conditions had limited or cut off access to airports and other critical infrastructure and endangered public, private, and commercial facilities throughout the communities. Total damages are still to be determined, but are currently over $900,000.

Severe Weather Hazard Vulnerability and Probability

The entire community is vulnerable to severe weather (Table 8). The citizens of Cordova are vulnerable to bitter cold weather, heavy snowfall and high winds. Alaskans living outside the City must be able to survive without public assistance throughout most winters. Referring to City records, public recollection, and the recent storm disaster history, it is highly probable that Cordova will experience a severe weather event within one year's time.

Severe Weather Mitigation Goals and Projects

Goals

Goal 1: **Mitigate the effects of extreme weather by instituting programs that provide early warning and preparation.**

Goal 2: **Educate people about the dangers of extreme weather and how to prepare.**

Goal 3: **Develop practical measures to warn in the event of a severe weather event.**

Projects **(listed numerically as SW = SEVERE WEATHER)**

- **Project SW-1 Research and consider instituting the National Weather Service program of *"Storm Ready"*.**

Storm Ready is a nationwide community preparedness program that uses a grassroots approach to help communities develop plans to handle all types of severe weather—from tornadoes to tsunamis. The program encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations.

To be officially Storm Ready, a community must:

1. Establish a 24-hour warning point and emergency operations center.
2. Have more than one way to receive severe weather forecasts and warnings and to alert the public.
3. Create a system that monitors local weather conditions.
4. Promote the importance of public readiness through community seminars.
5. Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.
6. Demonstrate a capability to disseminate warnings.

Specific Storm Ready guidelines, examples, and applications also may be found on the Internet at: www.nws.noaa.gov/stormready

- **Project SW-2: Conduct special awareness activities, such as Winter Weather Awareness Fair, Flood Awareness Week, etc.**

- **Project SW-3: Expand public awareness about NOAA Weather Radio for continuous weather broadcasts and warning tone alert capability**.

- **Project SW-4: Encourage weather resistant building construction materials and practices.**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Severe Weather (SW)						
Project SW-1. Research and consider instituting the National Weather Service program of *"Storm Ready"*.	Life/Safety issue Risk reduction Benefit to entire community Inexpensive State assistance available Could be implemented annually	EMPG grant	High **DONE** summer 2012	City	City	<1 year
Project SW-2. Conduct special awareness activities, such as Winter Weather Awareness Week, Flood Awareness Week, etc.	Life/Safety issue Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	EMPG grant	High **DONE**	City DCRA DHS&EM	City DCRA DHS&EM	<1 year

Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Severe Weather (SW) cont.						
Project SW-3. Expand public awareness about NOAA Weather Radio for continuous weather broadcasts and warning tone alert capability	Life/Safety issue Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	EMPG grant	High **DONE** through Neighborhood Campaign	City	NOAA	Ongoing
Project SW-4. Encourage weather resistant building construction materials and practices.	Risk and damage reduction. Benefit to entire community.	Would require ordinance change. Potential for increased staff time. Research into feasibility necessary. Political and public support not determined. 1 – 5 year implementation	Medium **DONE**- have building requirements for this	City	City	<1 year

Section 3. Wild land Fire

Hazard Description and Characterization

Wild land fires occur in every state in the country and Alaska is no exception. Each year, between 600 and 800 wild land fires, mostly between March and October, burn across Alaska causing extensive damage.

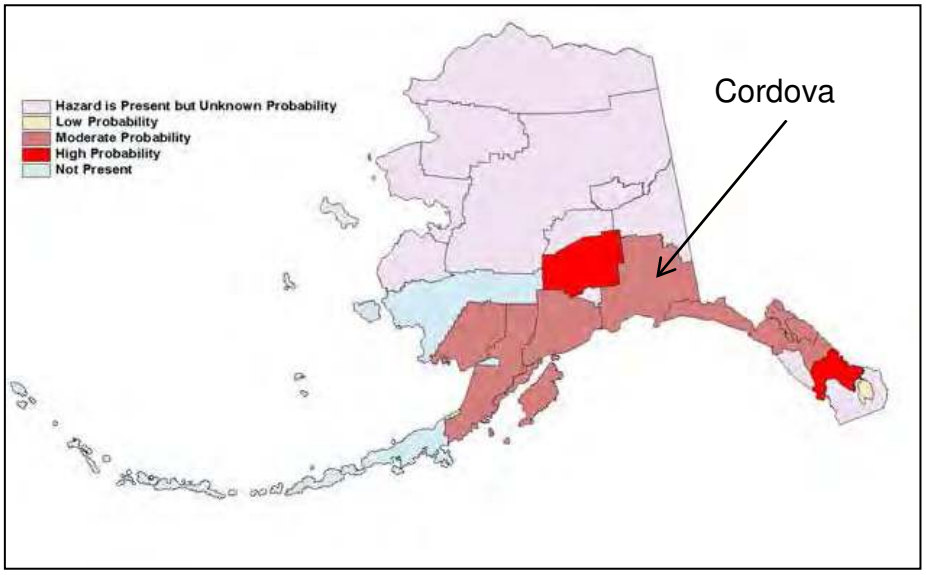
Wild land fire risk is increasing in Alaska due to the spruce bark beetle infestation. The beetles lay eggs under the bark of a tree. When the larvae emerge, they eat the tree's phloem, which is what the tree uses to transport nutrients from its roots to its needles. If enough phloem is lost, the tree will die. The dead trees dry out and become highly flammable.

Local Wild land Fire Hazard Identification

Cordova is located in the Chugach Regional Education Attendance Area (REAA), which is a full protection area of the state protection option areas. This designation appears in the Alaska Interagency Fire Management Plan (AICC) 2013. Full protection is suppression action provided on a wild land fire that threatens uninhabited private property, high-valued natural resource areas, and other high-valued areas such as identified cultural and historical sites. The suppression objective is to control the fire at the smallest acreage reasonably possible. The allocation of suppression resources to fires receiving the full protection option is second in priority only to fires threatening a critical protection area.

Figure 1 depicts the Chugach REAA as having a moderate probability of wildland fire occurrence.

Figure 1. Alaska Hazard Plan - Fire Risk Map



Source: Alaska Interagency Coordination Center (AICC) 2013.

Wild land Fire Hazard Vulnerability and Probability

Cordova is at moderate risk for wildland fire. The conclusion is based upon the lack of historical events and limited vulnerability (Tables 6 & 8) coupled with high fuel loads in the nearby woodlands.

Previous Occurrences of Wild land Fire

Even though the Alaska State Hazard Plan, 2010 lists Chugach REAA as a critical management option in AK HAZUS, there have be no recorded incidents of serious wild land fire in Cordova.

Wild land Fire Mitigation Goals and Projects

Goals

Goal 1: **Establish building regulations to mitigate against fire damage.**

Goal 2: **Conduct outreach activities to encourage the use of Fire Wise development techniques.**

Goal 3: **Encourage the evaluation of emergency plans with respect to wild land fire assessment.**

Goal 4: **Acquire information on the danger of wild land fires and how best to prepare.**

Projects (listed numerically as WF = WILD LAND FIRE)

- **Project WF-1: Continue to support the fire department with adequate firefighting equipment and training.**

- **Project WF-2: Promote Fire Wise building design, siting, and materials for construction.**

  The Alaska Fire Wise Program is designed to educate people about wild land fire risks and mitigation opportunities. It is part of a national program that is operated in the State by the Alaska Wildfire Coordinating Group (AWCG).

- **Project WF-3: Enhance public awareness of potential risk to life and personal property. Encourage mitigation measures in the immediate vicinity of their property.**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
Wild land Fire (WF)						
Project WF-1. Continue to support the local fire department with adequate firefighting equipment and training.	Life/Safety issue Risk reduction Benefit to entire community State assistance available Annual project.	Dollar cost not determined. Staff time to research grants	High	City	City Budget	Ongoing
Project WF-2. Promote Fire Wise building design, siting, and materials for construction.	Life/Safety issue Risk reduction Benefit to entire community, Annual project. State assistance available	Dollar cost not determined. Staff time to research grants	High **DONE** by Native Village of Eyak	City	City Budget	Ongoing
Project WF-3: Enhance public awareness of potential risk to life and personal property. Encourage mitigation measures in the immediate vicinity of their property.	Life/Safety issue Risk reduction Benefit to entire community Inexpensive State assistance available Could be implemented annually	Staff time	High **DONE** by Native Village of Eyak	City	City Budget	Ongoing

Section 4. Earthquake

Hazard Description and Characterization

Approximately 11% of the world's earthquakes occur in Alaska, making it one of the most seismically active regions in the world. Three of the ten largest quakes in the world since 1900 have occurred here. Earthquakes of magnitude 7 or greater occur in Alaska on average of about once a year; magnitude 8 earthquakes average about 14 years between events.

Local Earthquake Hazard Identification

Prince William Sound is backed by the Chugach Mountains in its central and eastern portions, and by the Kenai Mountains at its western edge. The highest sections of the Kenai-Chugach Range consist of extremely rugged northeast trending ridges from 7,000 to 13,000 feet high. The lower sections consist of massive mountains five to ten miles wide and between 3,000 to 6,000 feet **in** height. All higher parts of the range are buried in ice fields that feed massive valley and piedmont glaciers. The coastline is deeply indented by drowned glacial valleys and there are numerous islands, particularly in the more westerly portions of the Sound. Like the mountain ridges, the major fjords and islands also trend in a northeasterly direction.

The March 1964 earthquake wrought major changes in the physical landscape of the Cordova area. Little structural damage occurred in town and the only fatality occurred at Point Whitshed. However, the tectonic uplift which took place in the Cordova area had a much greater impact upon this community than structural damage had upon some other communities in Southcentral Alaska. Uplifts of 6.5 to 7.5 feet were recorded on the tide gauges at Cordova. Extensive coastal tracts of mud flats, beaches, and reefs throughout the area that were formerly exposed only at lowest minus tides became permanently exposed.

In the immediate Cordova area, the effects of tectonic uplift were described by the U.S. Geological Survey as follows:

"At Cordova, all dock facilities were raised so high that they could be reached by boats only at highest tides. Several nearby canneries had to extend their docks more than 100 feet to permit access. The area in the vicinity of the city dock and the small boat basin was above water at most tides; an extensive and difficult dredging project, together with new breakwaters and dock repairs, was necessary to make the facilities usable. In the course of this work, which was done by the Corps of Engineers, the boat basin was much enlarged, and about 20 acres of new land, eventually usable for industrial purposes, was made from the material dredged from the boat basin. It was also necessary for the Corps of Engineers to dredge a new channel through almost the entire length of Orca Inlet for use by fishermen."

Cordova was once referred to as the clam processing capital of the world. The earthquake effectively eliminated that very important local industry.

In practical terms, the earthquake also ended Cordova's capacity to serve as a deep-water port. This had rather significant economic implications for the community. Cordova has considered several options and has been discussing the possibility of re-establishing itself as a deep water port, however, to date; no decisions have been made on this issue. (*Draft 2006 Cordova Comprehensive Plan*)
The following tables were obtained from the University of Alaska, Fairbanks, and Alaska Earthquake Information Center website at: http://www.giseis.alaska.edu/Seis/

Figure 2. AEIS Earthquake Active Faults

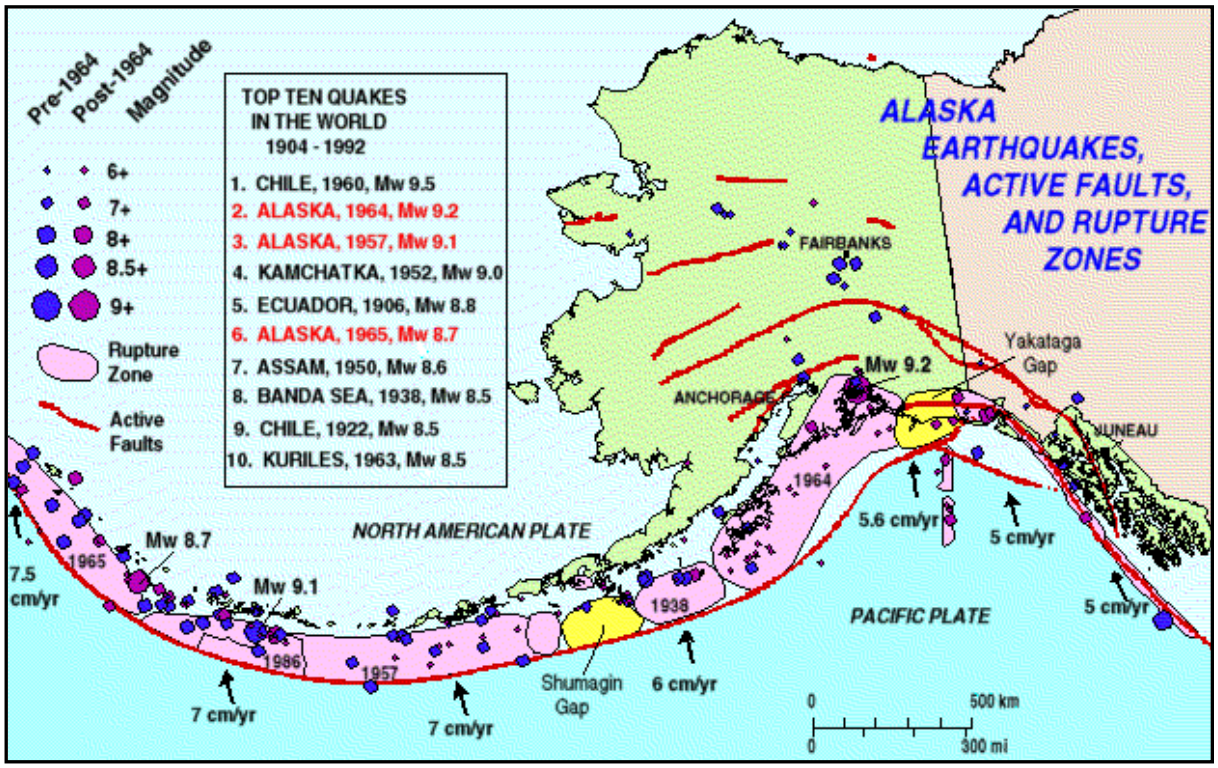
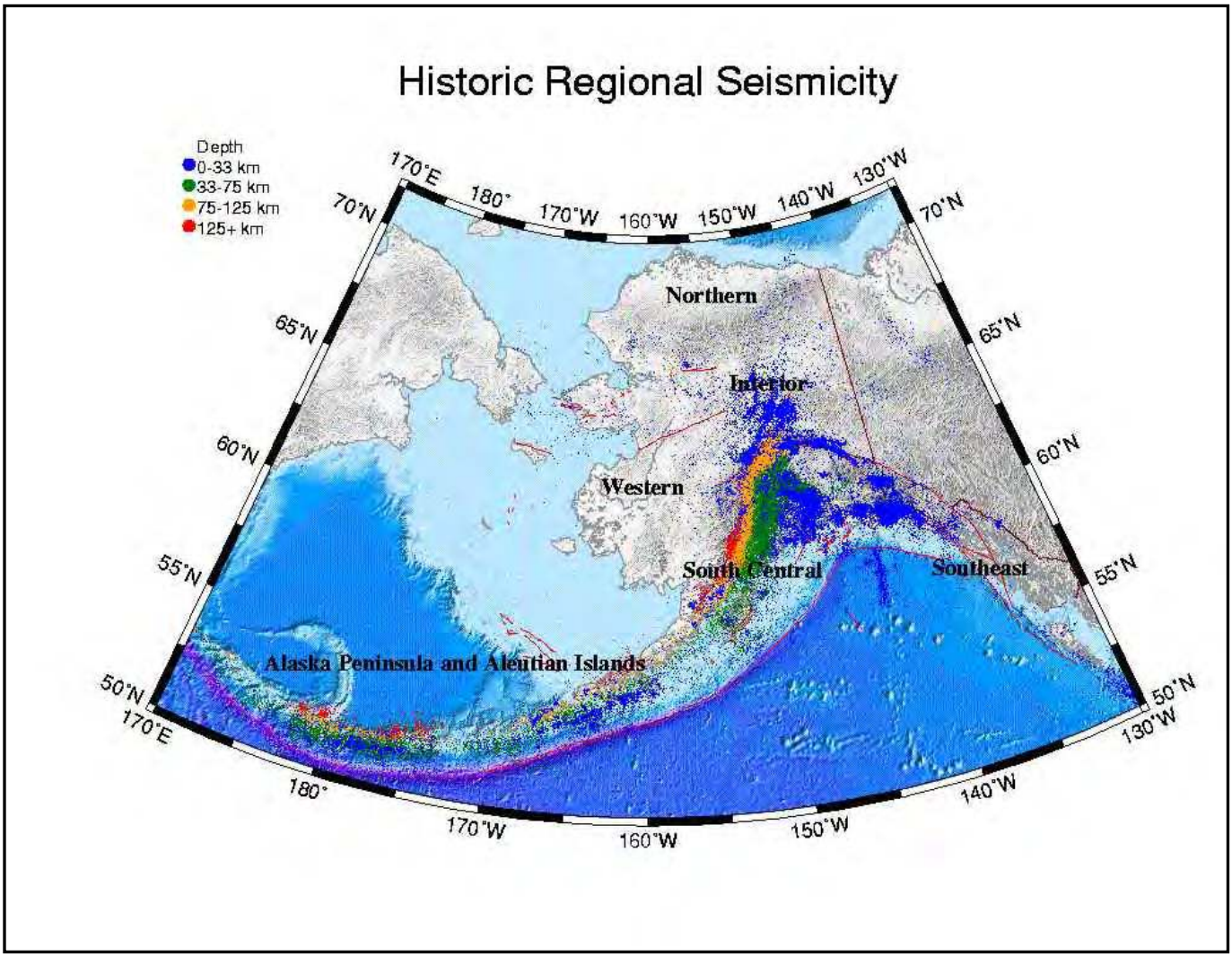


Figure 3. AEIS Historic Regional Seismicity 2012



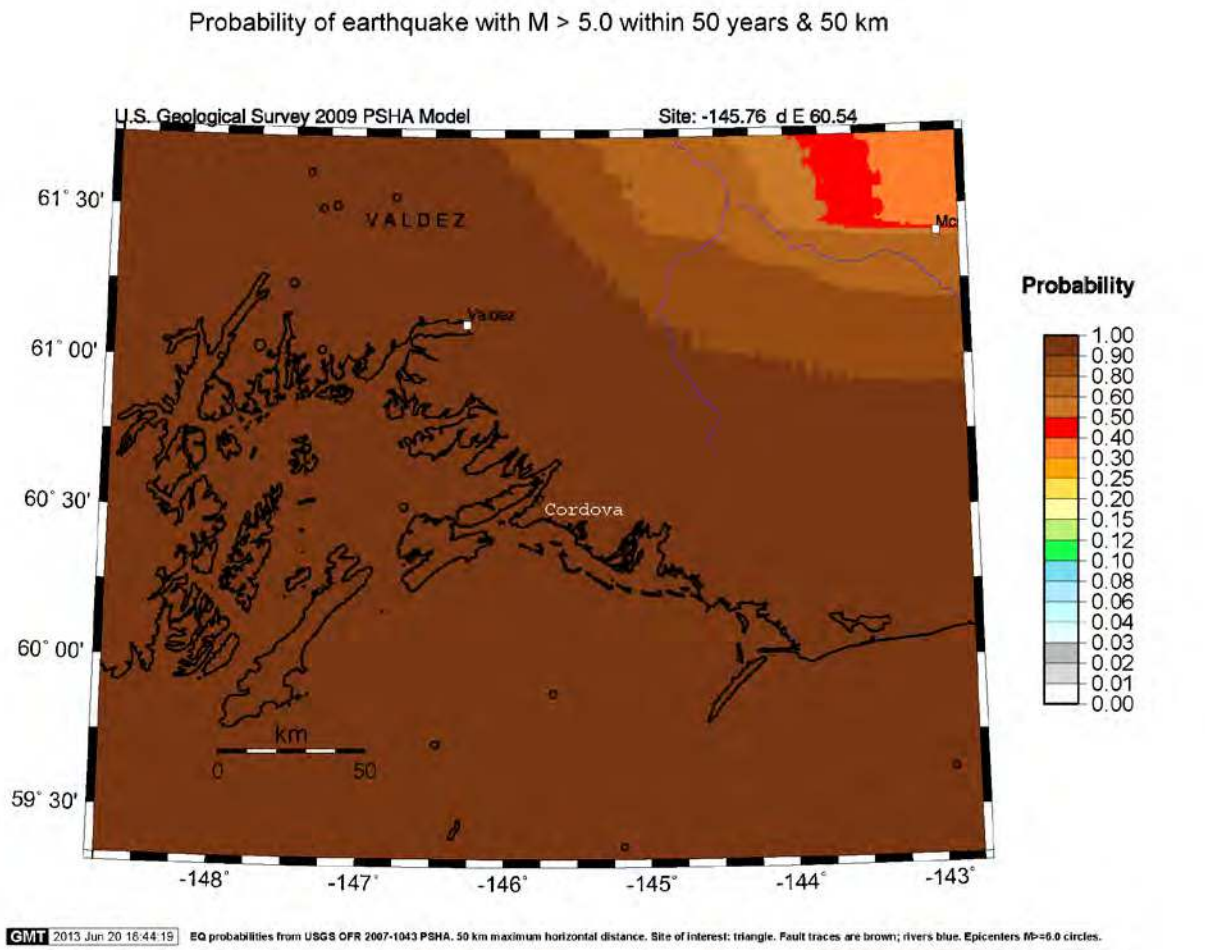


Figure 4 U. S. Geological Survey Earthquake Probability Map for Cordova and Valdez 2013
Source: USGS Earthquake Probability Study 2009

Previous Occurrence of Earthquakes

According to the U. S. Geological Survey Alaska Science Center, Alaska experiences at least one earthquake per year greater than magnitude 5. Please see the above hazard identification regarding the 1964 earthquake, the worst in Alaska's history.

Earthquake Hazard Vulnerability and Probability

Referring to Tables 7 and 8, the entire City of Cordova is vulnerable to an earthquake event. Based upon Figures 2, 3, and 4, the City of Cordova has a high probability of experiencing an earthquake of magnitude 5 or greater in the near future. The U. S. Geological Survey regards this hazard probability as 1 in 1 for Cordova (Figure 4).

Earthquake Mitigation Goals and Projects

Goals

Goal 1: **Obtain funding to protect existing critical infrastructure from earthquake damage**.

Goal 2: **Maintain the current level of commitment to earthquake preparation**

Projects (listed numerically as E = EARTHQUAKE)

- **Project E-1: If funding is available, perform an engineering assessment of the earthquake vulnerability of each identified critical infrastructure owned by the City of Cordova.**
- **Project E-2: Identify buildings and facilities that must be able to remain operable during and following an earthquake event.**
- **Project E-3 Contract a structural engineering firm to assess the identified buildings and facilities to determine their structural integrity and strategy to improve their earthquake resistance.**
- **Project E-4 Continue to educate all City employees and citizens with regards to earthquake preparedness, particularly with regards to the current EOP, Incident Command structure, Cordova COOP plan, and personal Responder READY courses.**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	High	Responsible Agency	Funding Sources	Estimated Timeframe
Earthquake (E)						
Project E-1. If funding is available, perform an engineering assessment of the earthquake vulnerability of each identified critical infrastructure owned by the City of Cordova.	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	Staff time	High	City DHS&EM	State Grants USCOE	>1 year
Project E-2. Identify buildings and facilities that must be able to remain operable during and following an earthquake event.	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	EMPG staff time	High **DONE,** through COOP Plan	City DHS&EM	City budget DHS&EM	>1 year
Project E-3. Contract a structural engineering firm to assess the identified bldgs. and facilities and bridges.	Benefit to entire community Risk reduction	Feasibility and need analysis needed. 1 – 5 years	HIGH	City DHS&EM	PDMG HMGP	>5 years

Mitigation Projects	Benefits (pros)	Costs (cons)	High	Responsible Agency	Funding Sources	Estimated Timeframe
Earthquake (E)						
Project E-4 Continue to educate all City employees and citizens, with regards to earthquake preparedness	Benefit to entire community Risk reduction	EMPG staff time	HIGH	City DHS&EM	City budget DHS&EM	Ongoing

Section 5. Tsunami and Seiche Hazard

Hazard Description and Characterization

A ***tsunami*** is a series of ocean waves generated by any rapid large-scale disturbance of the seawater. These waves can travel at speeds of up to 600 miles per hour in the open ocean. Most tsunamis are generated by earthquakes, but they may also be caused by volcanic eruptions, landslides (above or under sea in origin), undersea slumps, or meteor impacts.

Tsunami damage is a direct result of three factors:

1. *Inundation* (the extent to which the water covers the land)
2. *Wave action* that will impact structures and moving objects that become projectiles.
3. *Coastal erosion*

A ***Seiche*** is a wave that oscillates in partially or totally enclosed bodies of water. They can last from a few minutes to a few hours as a result of an earthquake, underwater landslide, atmospheric disturbance or avalanche. The resulting effect is similar to bathtub water sloshing repeatedly from side to side. The reverberating water continually causes damage until the activity subsides. The factors for effective warning are similar to a local tsunami, in that the onset of the first wave can be a few minutes, giving virtually no time for warning.

Local Tsunami Hazard Identification

The following is from Map 5 Cordova, Alaska Tsunami Hazard Zones, (in the appendix) produced by the State of Alaska, Division of Emergency Services.

Local Tsunami

These are waves that are generated from nearby waters and could reach the community before a warning is issued. Local tsunamis are normally caused by a strong earthquake whose epicenter is located a short distance away. Such an earthquake can trigger massive landslides or changes in the underwater terrain that will create large waves in the immediate area. Historically such waves have been the highest, reaching heights of 100 feet or more and up to one-mile inland. Cordova is considered to have a local tsunami hazard.

Map 5 illustrates, for the public, blue shaded areas that are below the 100-foot approximate elevation level or less than one-mile inland. Table 8 marks critical facilities that are located within the tsunami hazard zone as shown on the map.

Distant Source Tsunami
This is a tsunami that is generated so far away that the earthquake was either not felt or only slightly felt. The waves from a distant source tsunami are generally smaller than those created by a local tsunami. There will normally be sufficient time for officials to issue a warning and alter (you) to possible danger. Cordova is considered to have a moderate potential danger form a distant source tsunami. This means that a wave of 35 feet with water reaching up to ¼ mile inland is possible.

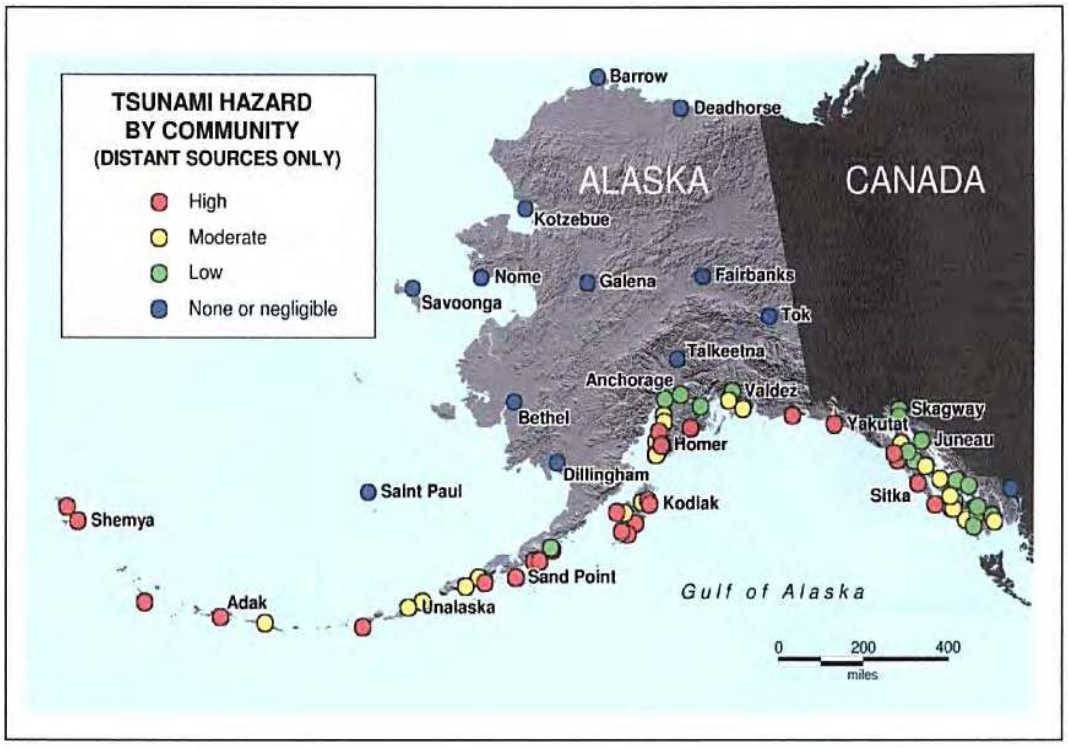
Extent or Severity of Tsunami Hazard in Cordova

The State of Alaska DHS&EM designates Cordova as having an extent or possible severity of *limited* damage from a tsunami. Table 8 at the beginning of this chapter marks critical facilities that are located within the tsunami hazard zone, or within one mile of the shoreline and below 100 feet in elevation.

Port and harbor facilities, public works facilities, structures, vehicles, equipment, and transportation facilities such as docks, float systems, and roads could all be affected.

Environment that could be affected include wetlands with inclusive flora and fauna, and coastal vegetation.

Figure 5 Tsunami Hazard by Community



Source: DHS&EM 2013

Previous Occurrences of Tsunamis/Seiches

1964 Earthquake Tsunami

The 1964 earthquake triggered several tsunamis, one major tectonic tsunami and about 20 local submarine and sub aerial landslide tsunamis. The major tsunami hit between 20 and 45 minutes after the earthquake. The locally generated tsunamis struck between two and five minutes after being created and caused most of the deaths and damage. Tsunamis caused more than 90% of the deaths – 106 Alaskans and 16 Californian and Oregonian residents were killed.

While there was tsunami damage throughout the area, the effects were most significant in Kodiak, Seward, Whittier, Chenega and Valdez. There was a small wave run up from a tsunami at Cordova, but it did not cause any damage.

There are no other reports of tsunami occurrences in Cordova.

Tsunami/Seiche Hazard Vulnerability and Probability

Please see Tables 7 and 8 at the beginning of this chapter, which outlines the structures and infrastructure vulnerable to tsunami damage. Table 6 data gathered from the Alaska State Hazard Plan 2010 designates Cordova has having a moderate probability of 1 in 3 year's time. Even though the historical record shows only one damaging tsunami impacting Cordova, there have been many small residual tsunami waves, such as the one generated from the 2012 Earthquake in Japan.

In Cordova, the most serious threat is from a locally generated tsunami/Seiche originating in the Gulf of Alaska and the near shore water bodies. These waves have reached heights of 170 feet. Because they are generated immediately offshore, they may strike the coast before a warning could be issued.

Vulnerability: Currently, all coastal areas below 100 ft. elevation and/or within one mile of the water's edge. More current tsunami inundation mapping may lead to a revision of vulnerable areas.

Property That May Be Affected: Port and harbor facilities, public works facilities, structures, vehicles, equipment, and transportation facilities such as docks, float systems, and roads. Critical facilities marked on Table 10.

Environment That May Be Affected: Wetlands with inclusive flora and fauna, coastal vegetation.

Unusual Conditions: Multiple fish processing facilities including but not limited to the following hazardous materials: Ammonia, Freon, Crude Oil, etc.

Tsunami/Seiche Mitigation Goals and Projects

Goals

Goal 1. Continue Public Education about Tsunamis and Seiches.

Goal 2. Finish Tsunami Ready Community Designation.

Goal 3. Develop accurate inundation maps for the Port of Cordova.

Goal 4. Continue Updating Cordova Emergency Operations Plan.

Projects **(listed numerically as T/S= TSUNAMI/SEICHE)**

- **Project T/S-1: Continue Participation in the Tsunami Awareness Program.**

Residents and visitors will be educated about the threat of tsunamis to the City of Cordova, as well as being informed about tsunami evacuation areas, routes and safe areas. Community members will be encouraged to develop a Family Disaster Plan and an Emergency Survival Kit for their home and vehicles.

- **Project T/S-2: Finish Tsunami Ready Community Designation**

Participate in the NWS/WC&ATWC Tsunami Ready Program. The City of Cordova could participate in the "Tsunami Ready Certification". The Tsunami Ready Community program promotes tsunami hazard preparedness as an active collaboration among Federal, State, and local emergency management agencies, the public, and the NWS tsunami warning system. This collaboration supports better and more consistent tsunami awareness and mitigation efforts among communities at risk. The main goal is improvement of public safety during tsunami emergencies.

- **Project T/S-3: Inundation Mapping**

Obtain tsunami inundation maps for Cordova. Without these maps, communities must rely on historical or estimated information for land use and evacuation route planning. Inundation maps will provide more accurate and precise information. Our goal is to ensure that emergency management has the most up to date and accurate information needed for planning and zoning.

- **Project T/S-4: Continue Using the Emergency Operations Plan in exercises regarding natural hazards including tsunami danger.**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	High	Responsible Agency	Funding Sources	Estimated Timeframe
Tsunami/Seiche (T/S)						
Project T/S-1: Participation in the Tsunami Awareness Program.	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	Staff time	High **DONE** summer 2012	City DHS&EM	PDMG HMGP	>5 years
Project T/S-2. Tsunami Ready Community Designation	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	Staff time	High **DONE** summer 2012	City DHS&EM	PDMG HMGP	>5 years
Project T/S-3. Inundation Mapping	FEMA, PDMG, HMGP and State DCRA funding available. USCOE facilitated project. 1 – 5 year project.	Expensive, at least $100,000	Medium	City DHS&EM	PDMG HMGP USCOE	>5 years

Mitigation Projects	Benefits (pros)	Costs (cons)	High	Responsible Agency	Funding Sources	Estimated Timeframe
Tsunami/Seiche (T/S)						
Project T/S-4. Update Cordova Emergency Operations Plan	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available 1 – 5 years, or as needed.	EMPG Grant	Medium **DONE** May 2010	City DHS&EM	HSGP	Ongoing

Section 6. Avalanche and Landslides

Hazard Description and Characterization

Avalanches

Alaska experiences many snow avalanches every year. The exact number is undeterminable as most occur in isolated areas and go unreported. Avalanches tend to occur repeatedly in localized areas and can sheer trees, cover communities and transportation routes, destroy buildings, and cause death. Alaska leads the nation in avalanche accidents per capita.

A snow avalanche is a swift, downhill-moving snow mass. The amount of damage is related to the type of avalanche, the composition and consistency of the material in the avalanche, the force and velocity of the flow, and the avalanche path.

The 2010 HAZUS-MH STUDY revealed the Chugach REAA to have a high avalanche threat. The following table depicts the extent of risk.

Table 12

2010 High Snow Avalanche Hazard Vulnerability Analysis - State Facilities

Borough / REAA	# of Facilities	SQ FEET	% of Risk SQ Footage	ADJUSTED REPLACEMENT VALUE
Chatham REAA	34	129,159	2.16%	$14,525,083.00
Chugach REAA	62	527,211	8.83%	$75,020,833.00
City & Borough of Juneau	190	3,721,152	62.30%	$563,752,888.00
City & Borough of Yakutat	49	130,823	2.19%	$33,208,836.00
Copper River REAA	21	25,146	0.42%	$7,862,121.00
Delta/Greely REAA	66	73,526	1.23%	$18,929,218.00
Denali Borough	12	24,428	0.41%	$7,598,694.00
Haines Borough	34	61,540	1.03%	$8,764,237.00
Kenai Peninsula Borough	53	395,099	6.62%	$155,917,636.00
Lake & Peninsula Borough	3	3,624	0.06%	$1,800,000.00
Matanuska-Susitna Borough	111	599,918	10.04%	$196,801,880.00
Municipality of Anchorage	70	234,714	3.93%	$79,776,547.00
Northwest Arctic Borough	8	7,448	0.12%	$1,764,002.00
Southeast Island REAA	1	240	0.00%	$20,000.00
Yukon-Koyukuk REAA	6	12,136	0.20%	$6,880,264.00
City & Borough of	12	26,330	0.44%	$5,522,896.00

Wrangell				
State Total	**732**	**5,972,494**	**100.00%**	**$1,178,145,135.00**

2010 High Snow Avalanche Hazard Vulnerability Analysis - AK HAZUS (utilizes 2000 Census data)

AK HAZUS Population	AK HAZUS # of Households	AK HAZUS Average Value for Households	AK HAZUS Buildings: Commercial	AK HAZUS Buildings: Industrial	AK HAZUS Buildings: Residential
61,844	21,730	$135,704	282	18	23,318

Source: 2010 Alaska State Hazard Plan

Local Avalanche/Landslide Hazard Identification

Alaska has a long history of snow avalanches. It has been estimated that there have been over 4,500 avalanche disaster events in the past 200 years. The Palm Sunday avalanche, April 3, 1898 is considered to be the deadliest event of the Klondike gold rush. The Chilkoot Trail, near Skagway, experienced multiple slides that day, including three with fatalities. The first fatal slide killed three people. The second one killed the entire Chilkoot Railroad and Transportation Company crew who were trying to evacuate an avalanche prone area further up the trail. The third slide occurred in about the same location as the second killing approximately 70 people who were following the trail left by the construction crew. The exact death toll is unknown because of the transient nature of those involved and inefficiencies in the identification process.

Late 1999 and early 2000 saw avalanches in Cordova, Valdez, Anchorage, Whittier, Cooper Landing, Moose Pass, Summit, Matanuska Susitna Valley, and Eklutna from the Central Gulf Coast Storm. As a result of more than 11 million dollars' worth of damage, a federal avalanche disaster was declared for the first time in U.S. history.

Previous Occurrences of Avalanches and Landslides

Between April of 1999 and March of 2009, four Cordovans were killed by avalanches.

April 15, 1999 a heavy-equipment operator died in an avalanche in a steep canyon north of the city, at the end of Power Creek Road. He was running a backhoe as part of the construction of a hydroelectric power plant when the slope gave way.

January 26, 2000. The most damaging avalanche in the winter of 1999-2000 (the year that AK declared and avalanche disaster) occurred in Cordova, near milepost 5.5 of the Copper River Highway, and was approximately ½ mile wide. It killed one resident (in her home) and severely injured another who was buried roughly 15 feet deep for more than six hours. Five houses and two warehouses were destroyed along with numerous outbuildings, cars, and boats. The Copper River Highway, the only road to the airport in a community accessible only by plane or boat, was blocked for more than 1000 feet and 1400 feet of transmission line was destroyed. It resulted in about one million dollars in damage. Avalanches had struck in that spot before, including one in 1971.

This event was the impetus for the urban avalanche rescue response, avalanche hazard mapping and mitigation analysis, zoning ordinance, and federal buyout assistance program. FEMA's Hazard Mitigation Grant Program helped relocate at-risk homes after the 2000 Cordova, AK avalanches. The response to this accident may set an important precedent for the inevitable future urban avalanche disasters in the United States.

On December 11, 2001 five snow machines were caught in an avalanche on Whitshed Rd. Two snowmobilers were buried; I killed, in that avalanche.

Another Cordovan died on March 8, 2008, in an avalanche on Mount Eyak. He was a snow safety expert who warned that avalanche conditions in the mountains around Cordova over the weekend were "considerable" The same avalanche injured another Cordova man, while two people skied away safely. The four were checking snow conditions.

Three separate avalanches closed the Copper River Highway during the winter of 2012. On January 6th, 2012 avalanches simultaneously closed CRH at mile 2.5 and mile 5.5. On April 17th, CRH was again closed with a significant avalanche at mile 5.2. There were no associated damages or injuries from these avalanches.

There have been no reported incidents of landslide occurrences in Cordova. The Alaska State All Hazards Mitigation Plan (Table 6) identifies the extent to damage from a landslide event as limited. As denoted on Table 10, there are no critical facilities located in known landslide areas.

Avalanche/Landslide Hazard Vulnerability and Probability

Avalanches affecting infrastructure or transportation are a hazard primarily at Mile 2.3 Miles 5.3 and Mile 5.5 Copper River Highway, Shepard Point, and Power Creek Hydro Power Plant.

Areas of high avalanche hazard along major roadways include:
Mile 2.3 Copper River Highway
Miles 5.3 and 5.5 Copper River Highway
Portions of New England Cannery Road

Considering Tables 6 and 8, the historical record, and completed mitigation projects (FEMA 2000 relocation), the probability for a damaging avalanche impacting Cordova is moderate or one in three years' time.

Avalanche/Landslides Mitigation Goals and Projects

Goals

Goal 1. **Reduce Cordova's vulnerability to avalanche and landslide hazards in terms of threat to life and property.**

Goal 2. **Have comprehensive information regarding avalanche and landslide hazards and unstable soils throughout Cordova's developed area, including areas that will be developed in the future.**

Goal 3. **Increase public awareness of avalanche and landslide dangers and hazard zones.**

Projects **(listed numerically as A/L = AVALANCHE/LANDSLIDE)**

- **Project A/L-1. Prohibit new construction in avalanche zones**.

- **Project A/L-2: Utilize appropriate methods of structural avalanche control.**

Containment structures, depending on their design, can prevent snow loads from releasing and forming an avalanche, and/or protect structures by diverting or containing avalanche debris. Such structures include snow fences, diversion/containment structures, snow nets, and reforestation.

- **Project A/L-3. Enact buyout of homes in avalanche paths**.

- **Project A/L-4: Prohibit removal of vegetation in areas prone to landslides.**

Removal of vegetation from slopes can compromise the integrity of the soil and lead to landslides. Requests to remove vegetation should be handled through a permit process that involves an assessment of the area for landslide hazard.

- **Project A/L-5: Install warning signage in mapped landslide zones**.

- **Project A/L-6: Continue to educate public, specifically back country users, about avalanche and landslide hazards. Information can be disseminated to the public through the City web site, press releases, media ads, avalanche awareness classes, and other methods.**

- **Project A/L-7: Complete the avalanche mapping and mitigation alternatives overview of other avalanche areas within the City of Cordova, including Power Creek and Shepard Point**

- **Project A/L-8: Encourage good record-keeping of past, present, and future avalanche events affecting private land in the Cordova area. Such records are invaluable for planning and mitigation**

- **Project A/L-9: Add a Geologic Layer to Cordova's mapping system**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Source	Estimated Timeframe
Avalanche/Landslide (A/L)						
Project A/L-1. Prohibit new construction in avalanche zones.	Life/Safety issue/Risk reduction Benefit to entire community No direct cost to implement State assistance available 1 – 5 years to adopt ordinance.	Political Support not determined. Private property issues. Staff time.	Medium **DONE**	City	City budget	Ongoing
Project A/L-2. Utilize appropriate methods of structural avalanche control.	Life/Safety issue/Risk reduction Benefit to entire community Federal or State assistance available	Engineering and structural design needed. Dollar cost not determined. >$25,000 Long timeframe to implement, 5+ years.	Low	FEMA	PDMG HMGP	>5 years
Project A/L-3. Enact buyout of homes in avalanche paths.	Life/Safety issue/Risk reduction Benefit to entire community PDMG or HMPG projects.	Political Support not determined. Private property issues. Staff time. Expensive, >$100k. Long timeframe 5+ years.	Low **DONE** 2000	FEMA	PDMG HMGP	>5 years

Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Source	Estimated Timeframe
Avalanche/Landslide (A/L)						
Project A/L-4. Prohibit removal of vegetation in areas prone to landslides.	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available Could be an ongoing project	Staff time	High	City	City Budget	Ongoing
Project A/L-5. Install warning signage in mapped landslide zones.	Life/Safety issue/Risk reduction Benefit to entire community Federal and State assistance available	Mapped landslide zones do not exist at this time. 5+ years to implement. <$10,000	Low	DHS&EM FEMA City	PDMG HMGP	Ongoing
Project A/L-6. Continue to educate public about avalanche and landslide hazards.	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive State assistance available Could be an annual event	Staff time /Emergency Management Coordinator	High	City	City Budget	Ongoing

Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Source	Estimated Timeframe
Avalanche/Landslide (A/L)						
Project A/L-7 Complete the avalanche mapping and mitigation alternatives overview of other avalanche areas within the City of Cordova	Life/Safety issue/Risk reduction Benefit to entire community	Specialists needed. Dollar cost not determined. >$25,000 Long timeframe to implement, 5+ years.	High	DHS&EM FEMA City	PDMG HMGP	>5 years
Project A/L-8. Encourage good record-keeping of past, present, and future avalanche events affecting private land in the Cordova area	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive	Staff time /Emergency Management Coordinator	High	City	City Budget	Ongoing
Project A/L-9. Add a Geologic Layer to Cordova's mapping system	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive	Staff time /Emergency Management Coordinator	High	City	City Budget	Ongoing

Section 7. Technological, Public Health, Human-Caused, and Hazardous Materials Hazards

Hazard Description and Characterization

The hazards discussed in this section include:

Technological and Cyber Threats
Nuclear, Biological, or Chemical Attack/Materials
Civil Disorder/Disturbance
Public Health Emergencies
Mass Transportation Accidents
Hazardous Material Threats
Oil Spills

Technological and Cyber Threats

Modern society functions through technology and cyber communications networks. Technological threats are defined as a potential loss or disruption in the City of service delivery, information, or information and telecommunication systems. The continued escalation of cyber-attacks on government, financial, and business computer systems are considered terrorist-related acts.

Nuclear, Biological, or Chemical Attack

Of all the possible disasters and hazards we can imagine, a strategic nuclear, biological, or chemical attack could be the most devastating and far-reaching in consequences. Regardless where the attack originated, domestic or foreign, the impact on life and property and preparedness, response, and recovery activities, are similar. While preventing an attack may be outside the capacity of the City and its citizens, general all-hazard mitigation actions for other hazards will often support loss reduction in an attack. For example, a building retrofitted for seismic hazard that addresses lateral force resistance also improves the structures survival in a bombing.

Civil Disorder/Disturbances

There is little information on civil disorder events in Alaska. As with the hazard of terrorism, even in the absence of a historical record of events of this hazard, it has been included in the State Hazard Mitigation Plan (SHMP) because of the potential it could occur in the State. Thus, it is also included in Cordova's plan.

Public Health Emergencies

Public health emergencies can take many forms - disease epidemics, large-scale incidents of food or water contamination, or extended periods without adequate water and sewer services. There can also be harmful exposure to chemical, radiological, or

biological agents, and large-scale infestations of disease-carrying insects or rodents. This section focuses on emerging public health concerns and potential pandemics. Public health emergencies can occur as primary events by themselves, or they may be secondary to another disaster or emergency, such as earthquake, flood, or hazardous material incident. The common characteristic of most public health emergencies is that they adversely impact, or have the potential to adversely impact, a large number of people.

Mass Transportation Accidents

For the purpose of this plan, mass transportation is defined as the means, or system, that transfers large groups of individuals from one place to another. This section simply addresses only the potential transportation accidents involving people, not materials.

Hazardous Materials Threats

Hazardous Air Quality

Some inhalable highly toxic hazardous substances can be released into the air as a gas, such as chlorine or ammonia. A flammable hazardous substance can produce toxic smoke. An airborne release would most likely occur from a stationary source or from a transportation incident. Airborne hazardous substances will generally have a limited vulnerability zone before it is dispersed into the atmosphere. The vulnerability zone is determined by changing wind speed and direction.

Contaminated Drinking Water Supply

If a liquid hazardous substance is released near a drinking water well or City reservoir, the entire City water system could be compromised. Polluted drinking water is a significant health threat that is sorely underreported and oft-ignored. There are a number of threats to drinking water: improperly disposed of chemicals; animal wastes; pesticides; human wastes; wastes injected deep underground; and naturally-occurring substances can all contaminate drinking water. Likewise, drinking water that is not properly treated or disinfected, or which travels through an improperly maintained distribution system, may also pose a health risk.

Contaminated Wastewater Disposal System

An onsite septic system, or a drain connected to city sewer, could be contaminated by the disposal of hazardous substances. If the groundwater becomes contaminated, the affected well and/or neighboring wells may also become contaminated.

Oil Spill Threats

Oil and hazardous substance handling can pose a significant threat to Alaska's economy and environment. The State's social and economic history has been

altered by oil development and expanding chemical use since the discovery and development of the Kenai and Cook Inlet oil and gas fields in the 1950's and 60's. Alaskans have long recognized the need for protecting our natural resources and prudent oil and hazardous substances management and have developed the laws to ensure it will happen. These laws prohibit the discharge of oil or hazardous substances, require prompt reporting when a spill does occur, and mandate containment, control, removal, and proper disposal of all waste materials. Under existing State and Federal law, the spiller is responsible for cleanup.

Local Technological, Public Health and Human-Caused Hazard Identification

Specific sites in Cordova that could be affected by Technological, Public Health, Human –Caused, Hazardous Materials, or Oil Spill threats are as follows:

- Technological and Cyber Threat could affect All Critical Infrastructure and Key Resources. While the importance to Alaska's urban locations is clear, even Alaska's vast rural areas with isolated populations depend on technology for commerce, medical, and other vital services. In fact in some ways, Cordova's remoteness makes the City more dependent on technology for information, the Internet, telecommunications, and networked systems. Other targets for cyber terrorism include public works facilities, utilities, oil and gas, and transportation facilities such as airports, bridges and ferries, schools, medical facilities, other State, and Federal facilities within Cordova.

- Nuclear, Biological, or Chemical Attack/Materials could have city-wide impact upon the entire population. While the use of these weapons against Cordova is unlikely, as long as such weapons exist, there is always a potential risk. Given Alaska's strategic location and assets, there is also risk for traditional war-related attacks using conventional weapons.

- Civil Disorder/Disturbances could have city-wide impact upon the entire population. It is assumed that Cordova is not likely to experience civil disorder as a hazard, barring some extraordinary and unpredictable circumstance. The communities/groups considered to be most vulnerable to this hazard are those with concentrations of populations and large gathering places, such as sports stadiums, and universities. Cordova does not fall into that category. However, a prolonged disaster, with serious shortages of food or supplies could create an environment of civil disorder anywhere.

- Public Health Emergencies could have city-wide impact upon the entire population. Public health emergencies can be statewide, regional, or localized in scope and

magnitude. Each of the potential Public Health Emergencies would be handled in much the same way. Specific guidelines (specifically for Pandemic Flu, but can be used for any Public Health Emergency) can be found in Cordova Emergency Operations Plan, Annex L.

- Mass Transportation Accidents would be site specific and could occur anywhere along near the AK Marine Highway, Mile 13 Airport, City Airport, and school bus and tour bus routes. Mass transportation accidents in Cordova would include public airlines, tour buses, school buses, and the AK Marine Highway. The peak periods are related to seasonal population or special events or time of day (school bus runs).

- Hazardous Material Threats could have site specific impact in the canneries (ammonia, for example) or businesses, as well as city-wide impact upon the entire population, possibly requiring evacuation.

- Oil Spill Threats

  Oil and hazardous substance handling poses a significant threat, both to Cordova's economy and environment. Much effort over the past 20 years has focused particularly upon oil spill mitigation and response. This plan defers entirely to that research and to those recommendations. For more information, refer to Cordova Emergency Operation Plan, Annex K.

Previous Occurrences of Technological, Public Health and Human-Caused Hazards

Historically, Cordova has been fortunate to not experience many significant episodes of these types of hazards. The exception to that is the 1989 Exxon Valdez Oil Spill, the worst human –caused disaster in Alaska's history, the impact of which was community wide and remains with Cordova to this day.

With regards to Hazardous Materials, The U.S. Environmental Protection Agency (EPA) has classified over 300 substances as Extremely Hazardous Substances (EHS). Some of these chemicals are commonly used in Cordova.

Technological, Public Health and Human-Caused Hazard Vulnerability

The Hazard Vulnerability Analysis for this section is often difficult to describe. In the absence of specific intelligence information on threats or historical hazard events, the degree of vulnerability to these hazards is difficult to assess. Vulnerability is based on general prediction and estimation, rather than on historical evidence of impact to the City's population, property, or environment. Thus, they have not been included in the

formal Hazard Vulnerability Analysis. Nevertheless, given the potential for future loss, prudence dictates that the vulnerability to these hazards at least be considered.

Technological, Public Health and Human-Caused Mitigation Goals and Projects

Goals

Goal 1: **Mitigate the effects of these hazards by understanding the extent of the risk and the extent of the City capability to respond**

Goal 2: **Educate the public about the dangers of these hazards and how to prepare for the possible effects**

Goal 3. **Continue, as a community, to support all Oil Spill trainings/exercises**

Goal 4: **Enhance Local Hazmat Response Team capabilities**

Projects **(listed numerically as TPHH = Technological, Public Health, Human-Caused, Hazardous Materials)**

- **Project TPHH-1: Identify and organize local resources**
- **Project TPHH-2: Support community-wide mitigation training/education about non- natural hazards.**
- **Project TPHH-3: Encourage improved training, education, planning and safety in the production, use and transportation of oil and hazardous substances. (Local Hazmat Response Team members)**
- **Project TPHH-4: Participate in regional oil spill drills/exercises**

Table 11 Mitigation Projects	Benefits (pros)	Costs (cons)	Priority	Responsible Agency	Funding Sources	Estimated Timeframe
(TPHH)						
Project TPHH-1: Identify and organize local resources	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive	Staff time	High	City	City budget	<5 years
Project TPHH-2. Support community-wide mitigation training/education about non-natural hazards	Life/Safety issue/Risk reduction Benefit to entire community	Staff time	Medium	City	City budget	>5 years
Project TPHH-3. Encourage improved training, education, planning, and safety in the production, use, and transportation of hazardous substances	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive	Staff time	High	City DHS&EM	DHS&EM	<5 years
Project TPHH-4: Participate in regional oil spill drills/exercises	Life/Safety issue/Risk reduction Benefit to entire community Inexpensive Could be annual event	Staff Time/ EMPG staff	High **DONE** fall 2011	City	City Budget	< 5 years

Chapter 5: Mitigation Strategy

Benefit - Cost Review

This chapter of the plan outlines Cordova's overall strategy to reduce its vulnerability to the effects of the hazards studied. Currently the planning effort is limited to the hazards determined to be of the most concern; flooding, erosion, severe weather and earthquake; however the mitigation strategy will be regularly updated as additional hazard information is added and new information becomes available.

The projects listed on Table 9, Benefit and Costs Listing, were prioritized using a listing of benefits and costs review method as described in the FEMA *How-To-Guide Benefit-Cost Review in Mitigation Planning* (FEMA 386-5).

Due to monetary as well as other limitations, it is often impossible to implement all mitigation actions. Therefore, the most cost-effective actions will receive the highest funding and implementation priority, as depicted in Table 11 throughout Chapter 4, not only to use resources efficiently, but also to make a realistic start toward mitigating risks.

The City of Cordova considered the following factors in prioritizing the mitigation projects. Due to the dollar value associated with life-safety and critical facilities, the prioritization strategy represents a special emphasis on benefit-cost review because the factors of life-safety and critical facilities steered the prioritization towards projects with likely good benefit-cost ratios.

1. Extent to which benefits are maximized when compared to the costs of the projects, the Benefit Cost Ratio must be 1.0 or greater.

2. Extent the project reduces risk to life-safety.

3. Project protects critical facilities or critical city functionality.

    A. Hazard probability.

    B. Hazard severity.

Other criteria used to developing the benefits – costs listing depicted in Table 11:

1. Vulnerability before and after Mitigation

Number of people affected by the hazard, area wide or specific properties.
Areas affected (acreage) by the hazard
Number of properties affected by the hazard
Loss of use
Loss of life (number of people)

Injury (number of people)

1. List of Benefits

Risk reduction (immediate or medium time frame)
Other community goals or objectives achieved
Easy to implement
Funding available
Politically or socially acceptable

2. Costs

Construction cost
Programming cost
Long time frame to implement
Public or political opposition
Adverse environmental effects

This method supports the principle of benefit-cost review by using a process that demonstrates a special emphasis on maximization of benefits over costs. Projects that demonstrate benefits over costs and that can start immediately were given the highest priority. Projects that the costs somewhat exceed immediate benefit and that can start within five years (or before the next update) were given a description of medium priority, with a timeframe of one to five years. Projects that are very costly without known benefits, probably cannot be pursued during this plan cycle, but are important to keep as an action were given the lowest priority and designated as long term.

The Cordova Planning Commission will hold another round of public meetings on the LHMP Update. The plan is subject to final Cordova City Council approval after pre-approval is obtained by DHS&EM.

After the LHMP Update has been approved, the projects must be evaluated using a Benefit-Cost Analysis (BCA) during the funding cycle for disaster mitigation funds from DHS&EM and FEMA.

Glossary of Terms

A-Zones

Type of zone found on all Flood Hazard Boundary Maps (FHBMs), Flood Insurance Rate Maps (FIRMs), and Flood Boundary and Floodway Maps (FBFMs).

Acquisition

Local governments can acquire lands in high hazard areas through conservation easements, purchase of development rights, or outright purchase of property.

Asset

Any manmade or natural feature that has value, including, but not limited to people; buildings; infrastructure like bridges, roads, and sewer and water systems; lifelines like electricity and communication resources; or environmental, cultural, or recreational features like parks, dunes, wetlands, or landmarks.

Base Flood

A term used in the National Flood Insurance Program to indicate the minimum size of a flood. This information is used by a community as a basis for its floodplain management regulations. It is the level of a flood, which has a one-percent chance of occurring in any given year. Also known as a 100-year flood elevation or one-percent chance flood.

Base Flood Elevation (BFE)

The elevation for which there is a one-percent chance in any given year that flood water levels will equal or exceed it. The BFE is determined by statistical analysis for each local area and designated on the Flood Insurance Rate Maps. It is also known as 100-year flood elevation.

Base Floodplain

The area that has a one percent chance of flooding (being inundated by flood waters) in any given year.

Building

A structure that is walled and roofed, principally above ground and permanently affixed to a site. The term includes a manufactured home on a permanent foundation on which the wheels and axles carry no weight.

Building Code

The regulations adopted by a local governing body setting forth standards for the construction, addition, modification, and repair of buildings and

other structures for the purpose of protecting the health, safety, and general welfare of the public.

Community

Any state, area or political subdivision thereof, or any Indian tribe or tribal entity that has the authority to adopt and enforce statutes for areas within its jurisdiction.

Community Rating System (CRS)

The Community Rating System is a voluntary program that each municipality or county government can choose to participate in. The activities that are undertaken through CRS are awarded points. A community's points can earn people in their community a discount on their flood insurance premiums.

Critical Facility

Facilities that are critical to the health and welfare of the population and that are especially important during and after a hazard event. Critical facilities include, but are not limited to, shelters, hospitals, and fire stations.

Designated Floodway

The channel of a stream and that portion of the adjoining floodplain designated by a regulatory agency to be kept free of further development to provide for unobstructed passage of flood flows.

Development

Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or of equipment or materials.

Digitize

To convert electronically points, lines, and area boundaries shown on maps into x, y coordinates (e.g., latitude and longitude, universal transverse Mercator (UTM), or table coordinates) for use in computer

Disaster Mitigation Act (DMA)

DMA 2000 (public Law 106-390) is the latest legislation of 2000 (DMA 2000) to improve the planning process. It was signed into law on October 10, 2000. This new legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur.

Earthquake

A sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the earth's tectonic plates.

Elevation

The raising of a structure to place it above flood waters on an extended support structure.

Emergency Operations Plan

A document that: describes how people and property will be protected in disaster and disaster threat situations; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available for use in the disaster; and outlines how all actions will be coordinated.

Erosion

The wearing away of the land surface by running water, wind, ice, or other geological agents.

Federal Disaster Declaration

The formal action by the President to make a State eligible for major disaster or emergency assistance under the Robert T. Stafford Relief and Emergency Assistance Act, Public Law 93-288, as amended. Same meaning as a Presidential Disaster Declaration

Federal Emergency Management Agency (FEMA)

A federal agency created in 1979 to provide a single point of accountability for all federal activities related to hazard mitigation, preparedness, response, and recovery.

Flood

A general and temporary condition of partial or complete inundation of water over normally dry land areas from (1) the overflow of inland or tidal waters, (2) the unusual and rapid accumulation or runoff of surface waters from any source, or (3) mudflows or the sudden collapse of shoreline land.

Flood Disaster Assistance

Flood disaster assistance includes development of comprehensive preparedness and recovery plans, program capabilities, and organization of Federal agencies and of State and local governments to mitigate the adverse effects of disastrous floods. It may include maximum hazard reduction, avoidance, and mitigation measures, as well policies, procedures, and eligibility criteria for Federal grant or loan assistance to State and local governments, private organizations, or individuals as the result of the major disaster.

Flood Elevation

Elevation of the water surface above an establish datum (reference mark), e.g. National Geodetic Vertical Datum of 1929, North American Datum of 1988, or Mean Sea Level.

Flood Hazard

Flood Hazard is the potential for inundation and involves the risk of life, health, property, and natural value. Two reference base are commonly used: (1) For most situations, the Base Flood is that flood which has a one-percent chance of being exceeded in any given year (also known as the 100-year flood); (2) for critical actions, an activity for which a one-percent chance of flooding would be too great, at a minimum the base flood is that flood which has a 0.2 percent chance of being exceeded in any given year (also known as the 500-year flood).

Flood Insurance Rate Map

Flood Insurance Rate Map (FIRM) means an official map of a community, on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

Flood Insurance Study

Flood Insurance Study or Flood Elevation Study means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluations and determination of mudslide (i.e., mudflow) and/or flood-related' erosion hazards.

Floodplain

A "floodplain" is the lowland adjacent to a river, lake, or ocean. Floodplains are designated by the frequency of the flood that is large enough to cover them. For example, the 10-year floodplain will be covered by the 10-year flood. The 100-year floodplain by the 100-year flood.

Floodplain Management

The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain Management Regulations

Floodplain Management Regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof,

which provide standards for the purpose of flood damage prevention and reduction.

Flood Zones

Zones on the Flood Insurance Rate Map (FIRM) in which a Flood Insurance Study has established the risk premium insurance rates.

Flood Zone Symbols

A - Area of special flood hazard without water surface elevations determined.
A1-30 - AE Area of special flood hazard with water surface elevations determined.
AO - Area of special flood hazard having shallow water depths and/or unpredictable flow paths between one and three feet.
A-99 - Area of special flood hazard where enough progress has been made on a protective system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes.
AH - Area of special flood hazard having shallow water depths and/or unpredictable flow paths between one and three feet and with water surface elevations determined.
B - X Area of moderate flood hazard.
C - X Area of minimal hazard.
D - Area of undetermined but possible flood hazard.

Geographic Information System

A computer software application that relates physical features of the earth to a database that can be used for mapping and analysis.

Governing Body

The legislative body of a municipality that is the assembly of a borough or the council of a city.

Hazard

A source of potential danger or adverse condition. Hazards in the context of this plan will include naturally occurring events such as floods, earthquakes, tsunami, coastal storms, landslides, and wildfires that strike populated areas. A natural event is a hazard when it has the potential to harm people or property.

Hazard Event

A specific occurrence of a particular type of hazard.

Hazard Identification

The process of identifying hazards that threaten an area.

Hazard Mitigation

Any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards. (44 CFR Subpart M 206.401)

Hazard Mitigation Grant Program

The program authorized under section 404 of the Stafford Act, which may provide funding for mitigation measures identified through the evaluation of natural hazards conducted under §322 of the Disaster Mitigation Act 2000.

Hazard Profile

A description of the physical characteristics of hazards and a determination of various descriptors including magnitude, duration, frequency, probability, and extent. In most cases, a community can most easily use these descriptors when they are recorded and displayed as maps.

Hazard and Vulnerability Analysis

The identification and evaluation of all the hazards that potentially threaten a jurisdiction and analyzing them in the context of the jurisdiction to determine the degree of threat that is posed by each.

Mitigate

To cause something to become less harsh or hostile, to make less severe or painful.

Mitigation Plan

A systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards typically present in the State and includes a description of actions to minimize future vulnerability to hazards.

National Flood Insurance

The Federal program, created by an act of Congress in Program (NFIP) 1968 that makes flood insurance available in communities that enact satisfactory floodplain management regulations.

One Hundred (100)-Year

The flood elevation that has a one-percent chance of occurring in any given year. It is also known as the Base Flood.

Planning

The act or process of making or carrying out plans; the establishment of goals, policies, and procedures for a social or economic unit.

Repetitive Loss Property

A property that is currently insured for which two or more National Flood Insurance Program losses (occurring more than ten days apart) of at least $1000 each have been paid within any 10-year period since 1978.

Risk

The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to a specific type of hazard event. It can also be expressed in terms of potential monetary losses associated with the intensity of the hazard.

Riverine

Relating to, formed by, or resembling rivers (including tributaries), streams, creeks, brooks, etc.

Riverine Flooding

Flooding related to or caused by a river, stream, or tributary overflowing its banks due to excessive rainfall, snowmelt or ice.

Runoff

That portion of precipitation that is not intercepted by vegetation, absorbed by land surface, or evaporated, and thus flows overland into a depression, stream, lake, or ocean (runoff, called immediate subsurface runoff, also takes place in the upper layers of soil).

Seiche

An oscillating wave (also referred to as a seismic sea wave) in a partially or fully enclosed body of water. May be initiated by landslides, undersea landslides, long period seismic waves, wind and water waves, or a tsunami.

Seismicity

Describes the likelihood of an area being subject to earthquakes.

State Disaster Declaration

A disaster emergency shall be declared by executive order or proclamation of the Governor upon finding that a disaster has occurred or that the occurrence or the threat of a disaster is imminent. The state of disaster emergency shall continue until the governor finds that the threat or danger has passed or that the disaster has been dealt with to the extent that emergency conditions no longer exist and terminates the state of disaster emergency by executive order or proclamation.

Along with other provisions, this declaration allows the governor to utilize all available resources of the State as reasonably necessary, direct and compel the evacuation of all or part of the population from any stricken or threatened area if necessary, prescribe routes, modes of transportation and destinations in connection with evacuation and control ingress and egress to and from disaster areas. It is required before a Presidential Disaster Declaration can be requested.

Topography

The contour of the land surface. The technique of graphically representing the exact physical features of a place or region on a map.

Tribal Government

A Federally recognized governing body of an Indian or Alaska native Tribe, band, nation, pueblo, village or community that the Secretary of the Interior acknowledges to exist as an Indian tribe under the Federally Recognized Tribe List Act of 1994, 25 U.S.C. 479a. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.

Tsunami

A sea wave produced by submarine earth movement or volcanic eruption with a sudden rise or fall of a section of the earth's crust under or near the ocean. A seismic disturbance or landslide can displace the water column, creating a rise or fall in the level of the ocean above. This rise or fall in sea level is the initial formation of a tsunami wave.

Vulnerability

Describes how exposed or susceptible to damage an asset it. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. The vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power – if an electrical substation is flooded, it will affect not only the substation itself, but a number of businesses as well. Other, indirect effects can be much more widespread and damaging than direct ones.

Vulnerability Assessment

The extent of injury and damage that may result from hazard event of a given intensity in a given area. The vulnerability assessment should address impacts of hazard events on the existing and future built environment.

Watercourse

A natural or artificial channel in which a flow of water occurs either continually or intermittently.

Watershed

An area that drains to a single point. In a natural basin, this is the area contributing flow to a given place or stream.

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9. FEMA How to Guides

   Getting Started: Building Support For Mitigation Planning (FEMA 386-1)

   Understanding Your Risks: Identifying Hazards And Estimating Losses (FEMA 386-2)

   Developing The Mitigation Plan: Identifying Mitigation Actions And Implementing Strategies (FEMA 386-3)

   Bringing the Plan to Life: Implementing the Hazard Mitigation Plan (FEMA 386-4)

   Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)

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12. *Evaluation of Recent Channel Changes on the Scott River Near Cordova, Alaska.* Prepared by USDA-Forest Service Chugach National Forest Anchorage, Alaska, Blanchet, Hydrologist. December 1983.
13. Eyak Lake AMSA Plan (part of Cordova Coastal Management Plan)

14. Cordova Emergency Operation Plan May 2010

Web Sites

American Planning Association:	http://www.planning.org
Association of State Floodplain Managers:	http://www.floods.org
Developing the Implementation Strategy:	www.pro.gov.uk
Federal Emergency Management Agency:	http://www.fema.gov/fima/planning.shtm
Community Rating System:	http://www.fema.gov/nfip/crs.htm
Flood Mitigation Assistance Program:	http://www.fema.gov/fima/planfma.shtm
Hazard Mitigation Grant Program:	http://www.fema.gov/fima/hmgp
Individual Assistance Programs:	http://www.fema.gov/rrr/inassist.shtm
Interim Final Rule:	http://www.access.gpo.govl
National Flood Insurance Program:	http://www.fema.gov/nfip
Public Assistance Program:	http://www.fema.gov/rrr/pa

Appendix

A. Community Outreach
B. City Meeting Agendas & Minutes
C. RiskMAP Discovery Meeting and Report

List of Maps

Map 1. Cordova Regional Map
Map 2. Cordova Flood Rate Insurance Map
Map 3. Cordova Critical Infrastructure
Map 4. Cordova Regional Critical Infrastructure
Map 5. Tsunami Hazard Zones

Photos

Photos 1. Orca Creek, 11/01/06
Photos 2. Airport and Eyak Lake, 10/31/06
Photos 3. Cordova Flood Pictures, 10/10/06
Photos 4. Cordova Flood Pictures, 10/10/06
Photos 5. Cordova Flood Pictures, 10/10/06
Photos 6. Power Creek, October 2006
Photos 7. Damage to Hydro Plant, 10/31/06
Photos 8. Damage from Snow, January 2012
Photos 9. Avalanche April 2012

March 13, 2013 **Appendix A**

To Whom It May Concern:

This letter is to ask for your input on the City of Cordova Local Hazard Mitigation Plan. The plan was originally written in 2007 and accepted by the State of Alaska, FEMA and the Cordova City Council in 2008. The State of Alaska and FEMA requires an update of the plan every 5 years, and encourages the input of local stakeholders in the process. Thus this letter; we are asking for your consideration in the matter and, if you are inclined, your suggestions for updating the Local Hazard Mitigation Plan

The scope of this plan is to describe the natural hazards that could potentially occur in Cordova and to provide mitigation projects to prevent or minimize the damage from those hazards. The approved plan allows the City of Cordova to be eligible to apply for grants after State and/or Federal declared disasters.

The plan is available for review on the city web page (found under the Government Section, Planning, local Hazard Mitigation Plan); the link is below. Input can be given to the city planning department either by email or mail. Both addresses are below.

Also the plan and draft update will be discussed at future Planning and Zoning meetings, where input could also be given by public. Planning and Zoning meetings are on the second Tuesday of the month and agendas are on the web page the Thursday prior to the meeting.

The Hazard Mitigation can be found here:
www.cityofcordova.net

Comments can be sent to
City of Cordova, Planning Department
PO Box 1210
Cordova, AK 99574

Or

planning@cityofcordova.net

Thank you for your time and consideration in this matter.

Sincerely

Samantha Greenwood
Samantha Greenwood, City Planner

Joanie Behrends
Joanie Behrends, Emergency Management Planner

Planning Commission
REGULAR MEETING
CITY HALL CONFERENCE ROOM
TUESDAY, JULY 10, 2012
MINUTES

In those matters coming before the Cordova Planning Commission at 6:30 p.m.; Tuesday, July 10, 2012, in the City Hall Conference Room, 602 Railroad Road Cordova, Alaska, are as follows:

A. Call to order –

B. Roll Call Present for roll call were Chairman Tom Bailer, David Reggiani, John Greenwood, Roy Srb, Greg LoForte and Tom McGann.
Also present were City Planner Samantha Greenwood and Assistant Planner Faith Wheeler-Jeppson.
There were 11 people in the audience.

C. Approval of Agenda

M/Reggiani S/Srb
Upon voice vote, motion passed, 6-0

D. Approval of Consent Calendar
Minutes from the June 12, 2012 Regular Meeting

M/Reggiani S/Greenwood
Upon voice vote, motion passed, 6-0

E. Record Absences
Greg LoForte was excused from the June 12, 2012 Regular Planning Commission meeting.
David Reggiani was unexcused from the June 12, 2012 Regular Planning Commission meeting.
Roy Srb was unexcused from the June 12, 2012 Regular Planning Commission meeting.

F. Disclosure of Conflict of Interest
Tom McGann disclosed that he may have a conflict of interest because he works for the Kelly's. Chairman Bailer stated that we would deal with that when we get there.

G. Correspondence
None

H. Communication by and Petitions from Visitors
1. Guest Speakers
None

2. Audience comments regarding items in the agenda
Carol Hoover ~ We have a letter in here for Lot 2, Block 3 on Seafood Lane. I know we were all talking about it for putting snow on it and everything, but we have been interesting in that piece of property for quite some time as we were associated with the Cordova Kitchen. We would like to revive that concept for Cordova, we have a planning grant to do so, we have a model and interest in a planning group and we'd like to see if we could revive the offer that the City had with that lot. I think it was a dollar a year for three years and then they had to buy it, I'm not sure of all of the details of that particular situation that you had with the Cordova Kitchen. We would like to express our interest in that piece of land again for a Cordova Community Cold Storage, a nonprofit community run facility.
CamTu Ho ~ We are beside Harborside Pizza and we try to be friendly with him, we try to be good neighbors with him and he still keeps giving us hard times. We want to put the snow stops on the roof and he won't let us come in and do it. The last time we tried he said just talk with the lawyer, so I don't know what we do now. Sorry to bother you with this. We're really trying to make him happy, but it's not working.
Mary Anne Bishop ~ I am representing the Prince William Sound Audubon Society, a local organization of which I am President. On behalf of Audubon, I am here tonight to once again urge Planning and Zoning to begin a public process that will lead to a comprehensive waterfront plan. Why? Because there seems to be many ideas by our City Council and the public about where this city should go on future waterfront planning, including the waterfront property Lot 6, Block 2, South Fill DP, which is

Appendix B

Memorandum

To: Planning and Zoning
From: Planning Department Staff
Date: 8/8/2012
Re: Hazard Mitigation Plan

PART I. GENERAL INFORMATION:

The Cordova Hazard Mitigation Plan was completed in 2008 by a contractor. The State of Alaska and FEMA require an update every 5 years. Having an approved plan allows the City to apply for state and federal grants.

PART II. BACKGROUND:

Currently Joanie Behrends and I are working on updating the Hazard Mitigation plan. The State has provided criteria that need to be followed for the update to be accepted by the State and FEMA. One of these requirements is public meeting where input can be provided. The Hazard Mitigation Plan is over 100 pages with that said, we will print a copy for any person of the public or commissioner who would like one upon request but for the packet the plan will be placed on the Planning and Zoning page on the city web page. Follow this link to read the document. Any input would be appreciated.

http://www.cityofcordova.net/boards-commissions/planning-zoning/

Planning Commission Agenda
REGULAR MEETING
CITY HALL CONFERENCE ROOM
TUESDAY, AUGUST 14, 2012

Chairman
Tom Bailer

Commissioners
David Reggiani
John Greenwood
Roy Srb
Greg LoForte
Thomas McGann
Scott Pegau

City Planner
Samantha Greenwood

Assistant Planner
Faith Wheeler-Jeppson

In those matters coming before the Cordova Planning Commission at 6:30 p.m.; Tuesday, August 14, 2012 in the City Hall Conference Room, 602 Railroad Ave, Cordova, Alaska, are as follows:

A. CALL TO ORDER

B. ROLL CALL
Chairman Tom Bailer, Commissioner David Reggiani, John Greenwood, Roy Srb, Greg LoForte, Tom McGann and Scott Pegau.

C. APPROVAL OF AGENDA

D. APPROVAL OF CONSENT CALENDAR (Pages 1-6)
Minutes from the July 10, 2012 Regular Meeting

E. RECORD ABSENCES
Unexcused absence for Scott Pegau for the July 10, 2012 Regular Meeting

F. DISCLOSURE OF CONFLICT OF INTEREST

G. CORRESPONDENCE

H. COMMUNICATIONS BY AND PETITIONS FROM VISITORS
1. Guest Speakers (10-15 minutes per item)
2. Audience comments regarding items on the agenda (3 minutes per speaker)
3. Chairpersons and Representatives of Boards and Commissions

I. PLANNERS REPORT (Page 7)

J. New Business
1. Utility Easement vacation for Lot 7, Knute Johnson Subdivision (Pages 8-9)
2. Replat of Utility Easement for Lot 7, Knute Johnson Subdivision (Pages 10-11)
3. Lease request by the Prince William Sound Community College (Pages 12-15)
4. Hazard Mitigation Plan (Printed copy can be made available upon request) (Page 16)

K. Old Business

L. Miscellaneous Business
None

M. Pending Calendar
August 2012 Calendar (Pages 17)
September 2012 Calendar (Pages 18)

N. Audience Participation

O. Commission Comments

P. Adjournment

If you have a disability which makes it difficult for you to participate in City-sponsored functions, Please contact 424-6200 for assistance.

Planning Commission Agenda
REGULAR MEETING
CITY HALL CONFERENCE ROOM
TUESDAY, OCTOBER 09, 2012

Chairman
Tom Bailer

Commissioners
David Reggiani
John Greenwood
Roy Srb
Greg LoForte
Thomas McGann
Scott Pegau

City Planner
Samantha Greenwood

Assistant Planner
Faith Wheeler-Jeppson

In those matters coming before the Cordova Planning Commission at 6:30 p.m.; Tuesday, October 9, 2012 in the City Hall Conference Room, 602 Railroad Ave, Cordova, Alaska, are as follows:

A. CALL TO ORDER

B. ROLL CALL
Chairman Tom Bailer, Commissioner David Reggiani, John Greenwood, Roy Srb, Greg LoForte, Tom McGann and Scott Pegau.

C. APPROVAL OF AGENDA

D. APPROVAL OF CONSENT CALENDAR

Minutes from the September 11, 2012 Public Hearing	(Pages 1-3)
Minutes from the September 11, 2012 Regular Meeting	(Pages 4-13)
Minutes from the September 17, 2012 Special Meeting	(Pages 14-15)

E. RECORD ABSENCES
Unexcused absence for John Greenwood for the September 11, 2012 Regular Meeting

F. DISCLOSURE OF CONFLICT OF INTEREST

G. CORRESPONDENCE

H. COMMUNICATIONS BY AND PETITIONS FROM VISITORS

1.	Guest Speakers	(10-15 minutes per item)
2.	Audience comments regarding items on the agenda	(3 minutes per speaker)
3.	Chairpersons and Representatives of Boards and Commissions	

I. PLANNERS REPORT (Page 16)

J. NEW BUSINESS

1.	Review of proposals for Lot 6, Block 2, South Fill Development Park	(Pages 17-41)
2.	Review of proposals for Lot 2, Block 3, Cordova Industrial Park	(Pages 42-66)
3.	Review of Lot 3A, Block 8, North Fill Industrial Park	(Pages 67-68)

K. OLD BUSINESS
1. Hazard Mitigation Plan (Page 69)

L. MISCELLANEOUS BUSINESS
None

M. PENDING CALENDAR

October 2012 Calendar	(Page 70)
November 2012 Calendar	(Page 71)

N. AUDIENCE PARTICIPATION

O. COMMISSION COMMENTS

P. ADJOURNMENT

FEMA

Project Name:	*FEMA Region X Discovery*
Meeting:	*City of Cordova Discovery Meeting*
Date and Time:	*Friday, March 4, 2011, 9 am – 12 pm AKST*
Place:	*USFS Courtroom, 612 2nd Street, Cordova, AK 99574*
Facilitator:	*David Ratte, FEMA*

Discovery Meeting Notes

Attendees
Samantha Greenwood, City of Cordova Floodplain Administrator and City Planner
Ken Hodges, U.S. Forest Service, Cordova Ranger District, Fisheries Biologist
Dale Murna, City of Cordova, Harbormaster/Port Director
Wendy Shaw, U.S. Army Corps of Engineers, Alaska District Lead(via telephone)
Taunnie Boothby, Alaska NFIP Coordinator (via telephone)
David King, Alaska DHS&EM, Program Manager
David Ratte, FEMA RX Discovery Engineer
Tom Tufts, STARR Project Manager
James Huffines, STARR GIS Analyst

Introductions
David Ratte opened the meeting and all attendees introduced themselves. A pre-populated sign-in sheet was distributed for attendees to initial their attendance and check and correct contact information. Mr. Ratte described the RiskMAP program and objectives.

Coastal Risk MAP and Discovery Products
Mr. Ratte mentioned that the primary focus of all new studies was coastal as set forth by FEMA Headquarters and Congress. He also stated that we would still look at areas of riverine and lacustrine flooding and determine if they could be included in future studies.

City of Cordova Flooding Areas of Concern Conversations
James Huffines displayed the GIS data for the areas of need discussion. Tom Tufts and Samantha Greenwood discussed the coastal areas of need. The community reported that waves from the north are entering into the mouth of the harbor and causing damage to boat slips. It was also determined from these discussions that the surge events and wind events were decoupled. Surge events are seen mainly in the fall with large low pressure systems in the Gulf of Alaska, while the large wind events are seen in the winter when the winds are strong out the of the north passes into the bay. Three coastal study areas were identified as *needing a detailed study – at the northern end of Cannery Road near the loop, along Cannery Road where Fleming Creek reaches the coast, and along Seafood Lane.*

Dale Murna explained issues with the wave action into the harbor. He stated the harbor was expanded by the U.S Army Corps of Engineers (USACE) in 1984 to the current layout. Swells propagate into the harbor from the north during winter months. Docks are damaged by up to 3-foot swell action. The USACE has performed studies of the problem. A design consisting of a 45 degree dogleg extension to the north side of the harbor near the T-dock has been completed and

construction is awaiting a feasibility analysis by the USACE. The community explained that funding to complete the *Harbor Breakwater Extension mitigation project* was needed. No major concerns were noted for the Odiak Slough area. A wastewater treatment plant is located south of the slough along Whitshed Road, but should be at an adequately safe elevation. The community indicated no concerns with coastal erosion. *One potential risk assessment product could potentially include a comparison of the effects of the breakwater improvement project on the wave action through the marina.*

The group also discussed riverine and lacustrine flooding areas of concern. The community explained that there is wave action during the autumn months on Eyak Lake, with winds peaking at 90-100 mph. The most recent severe event for flooding in the lake was in 2006. The City reported flooding and wave action near the city landing strip on the northwest corner of the lake along Power Creek Road. The community identified a reach along the most western edge of *Eyak Lake as needing an approximate study.*

The City discussed past mitigation efforts to remove homes from an avalanche zone on the southeast side of Eyak Lake, and discussed a desire to *replace the weir/dam structure between Eyak Lake and Eyak River.*

The community identified the Eyak River near the 6-Mile Subdivision as a high priority study area, discussing flooding issues in the area between the airport and city accompanied by glacial outwash. Ms. Greenwood pointed out there were hydroelectric dams/weirs located within the watershed that have seen flood damage. The Eyak River may be subject to some channel migration. The community identified the need for *a detailed study along the Eyak River* near the subdivision, and an approximate study on *Ibek Creek.*

East of the airport beyond city limits, the highway has been washed out; however, no inhabitants are located beyond the airport.

Upstream on Powell Creek on the north side of Eyak Lake, a dam provides hydroelectric power. Presumably an EAP exists for the facility; however, inundation mapping may not be a significant concern.

Summary of Desired Mitigation Projects

- Harbor Breakwater Extension – the city desires funding for the extension of the northern harbor breakwater to mitigate wind swell propagation into harbor.
- Eyak Lake Weir – the city desires funding to improve or replace the weir/dam structure between Eyak Lake and Eyak River.

Summary of Mapping Needs

Some areas were identified as needing a detailed coastal, detailed riverine, or approximate study. These locations are generally described and are shown on the Final Discovery Map.

- Cannery Road Loop - New VE study for 1/4 mile near loop at northern end of Cannery Road
- Cannery Road/Fleming Creek - New VE study for 1/2 mile of coastline near Fleming Creek
- Seafood Lane – New VE study for reach along Seafood Road for 1/2 mile of coastline
- Eyak Lake – New approximate study for 2.7 miles of shoreline on the west end
- Eyak River – New detailed study for 1 mile near the lake
- Ibek Creek – New approximate study for 1.2 miles at the confluence with Eyak River

Next Steps

Mr. Ratte explained that meeting notes will be prepared, along with a draft Discovery Map showing the identified mapping needs, contact information, and outreach materials, and shared for review. Current plans include to collect LiDAR in 2011 and fund production in 2012 and are subject to funding. Mr. Ratte inquired about possible LiDAR partnerships. Sam indicated that the following parties could be interested: Ducks Unlimited, USFS – Contacts Mike Riley and Tim Joyce, Ecotrust, and the city of Cordova. Sam offered to be the local POC on helping coordinate discussion on potential partnerships.

Discovery Report

FEMA Region X

Cordova Coastal, Alaska

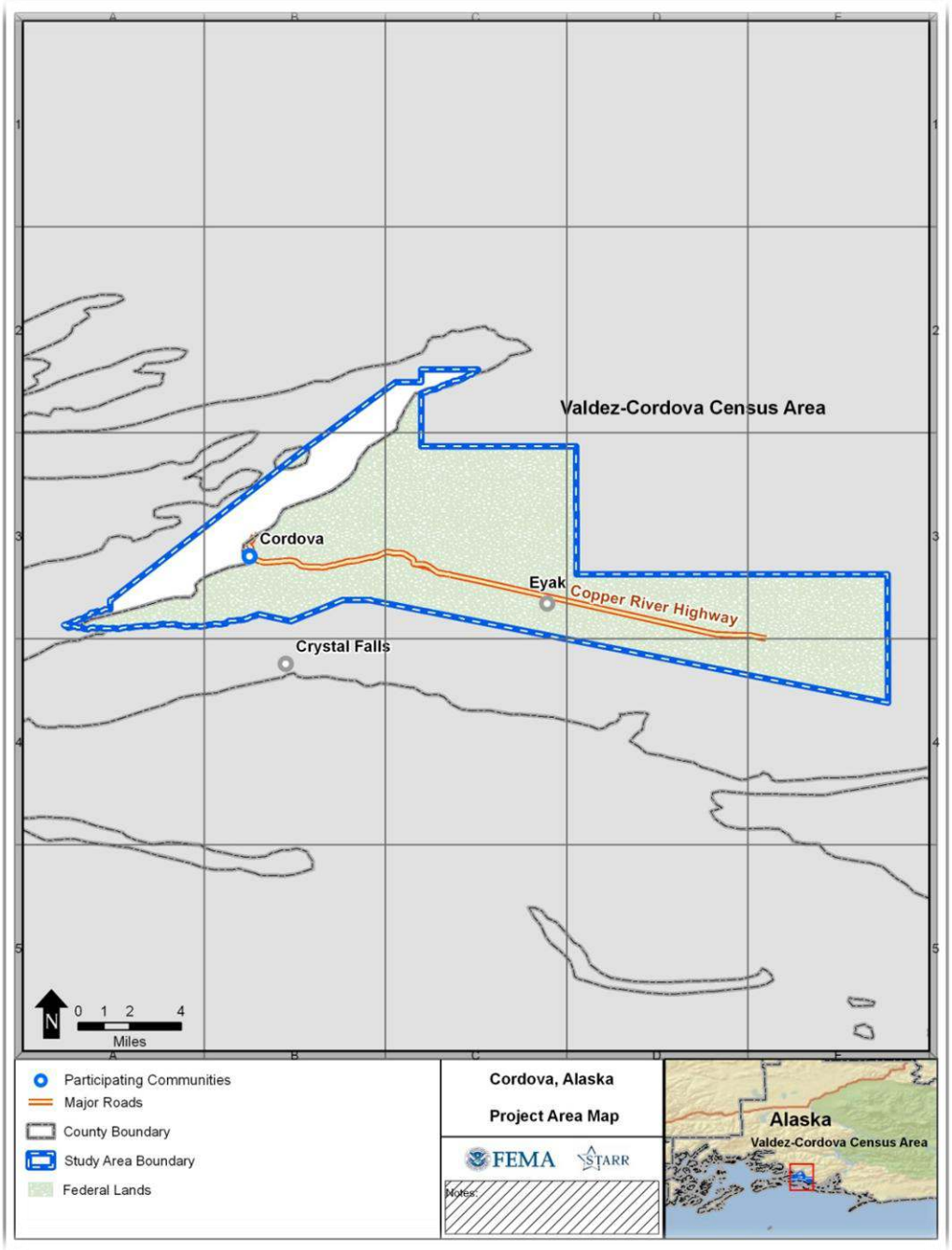
FEMA

Prepared by STARR

I. Watershed Description

Cordova is a small National Flood Insurance Program participating community located near the mouth of the Copper River in the Valdez-Cordova Census Area, Alaska. The city is at the head of Orca Inlet on the east side of Prince William Sound. Cordova is located within the Chugach National Forest. The city has a total area of 75.6 square miles, of which, 61.4 square miles of it is land and 14.3 square miles of it is water.

Map 1: Image of Cordova Coastal Project Area Map *(full size maps in appendix)*



II. Project Description and Methodology

Discovery is the process of data collection, including information exchange between all governmental levels of stakeholders, spatial data presentation, and cooperative discussion with stakeholders to better understand the area, decide whether a flood risk project is appropriate, and if so, to collaborate on the project planning in detail. At this time, Discovery processes and requirements are still being defined; however, draft guidance is available from the draft *Appendix I – Discovery (fall 2010)*, and the draft *Meetings Guidance for FEMA Personnel (October 2010)*. In addition, there are several draft tools and templates at various stages of completion that were used to support the effort.

Region X initiated an extensive Discovery project in October 2010, with the Discovery of 24 watersheds/project areas in Idaho, Oregon, Washington, and Alaska, involving almost 200 communities. Essentially a pilot project for the Discovery process itself, RX Discovery involved data collection, community interviews, a meeting with stakeholders in the watershed, and development of recommendations based on an analysis of data and information gathered throughout the process.

Figure 1. Data Sources for Region X Discovery *(project-specific data sources in Appendix)*

Alaska State Geospatial Data Clearinghouse	FEMA Regional Office	National Oceanic and Atmospheric Administration (NOAA)
Oregon Department of Transportation	FEMA Map Service Center	NOAA Fisheries Service
Idaho Department of Transportation	FEMA Publications	NOAA National Geophysical Data Center
Idaho State Geospatial Data Clearinghouse	FEMA Community Information System	U.S. Army Corps of Engineers National Levee Database
Washington State Department of Transportation	FEMA Coordinated Needs Management System (CNMS)	U.S. Census Bureau
Community data, where available	FEMA HAZUS	U. S. Census - TIGER
Local, Regional, State website search	FEMA RX Inventory	U.S. Department of Agriculture
Developed based on community interview/meeting	FEMA Legacy Data	U.S. Fish and Wildlife Service
STARR	Data.gov	U.S. Geologic Survey
ESRI	National Atlas of the United States	

The Region X Discovery data collection entailed a massive collection of tabular and spatial data for all communities from Federal and State sources, as well as information collected through interviews with each community. The tabular data file in the Appendix provides detailed information about the data and its use in Discovery for this specific watershed. Data was used primarily in two ways – tabular data was documented on a Community Fact Sheet,

and spatial data was included in the Discovery Geodatabase, and is displayed on the Discovery maps, where appropriate. Full-sized Discovery maps are included in the appendix.

The second phase of the Region X Discovery effort involved a review of the collected data with community officials through a phone interview, and a request for additional information. Prior to the interview, community officials received information about the Discovery process, and a Fact Sheet and Interview Reference Map for their community. Communities were asked to identify "Areas and Points of Concern" based on their local knowledge and analysis of the data shown on the map. The Areas and Points of Concern (mapping needs, desired mitigation projects, etc.) were documented in the Discovery Geodatabase and discussed during the Discovery Meeting.

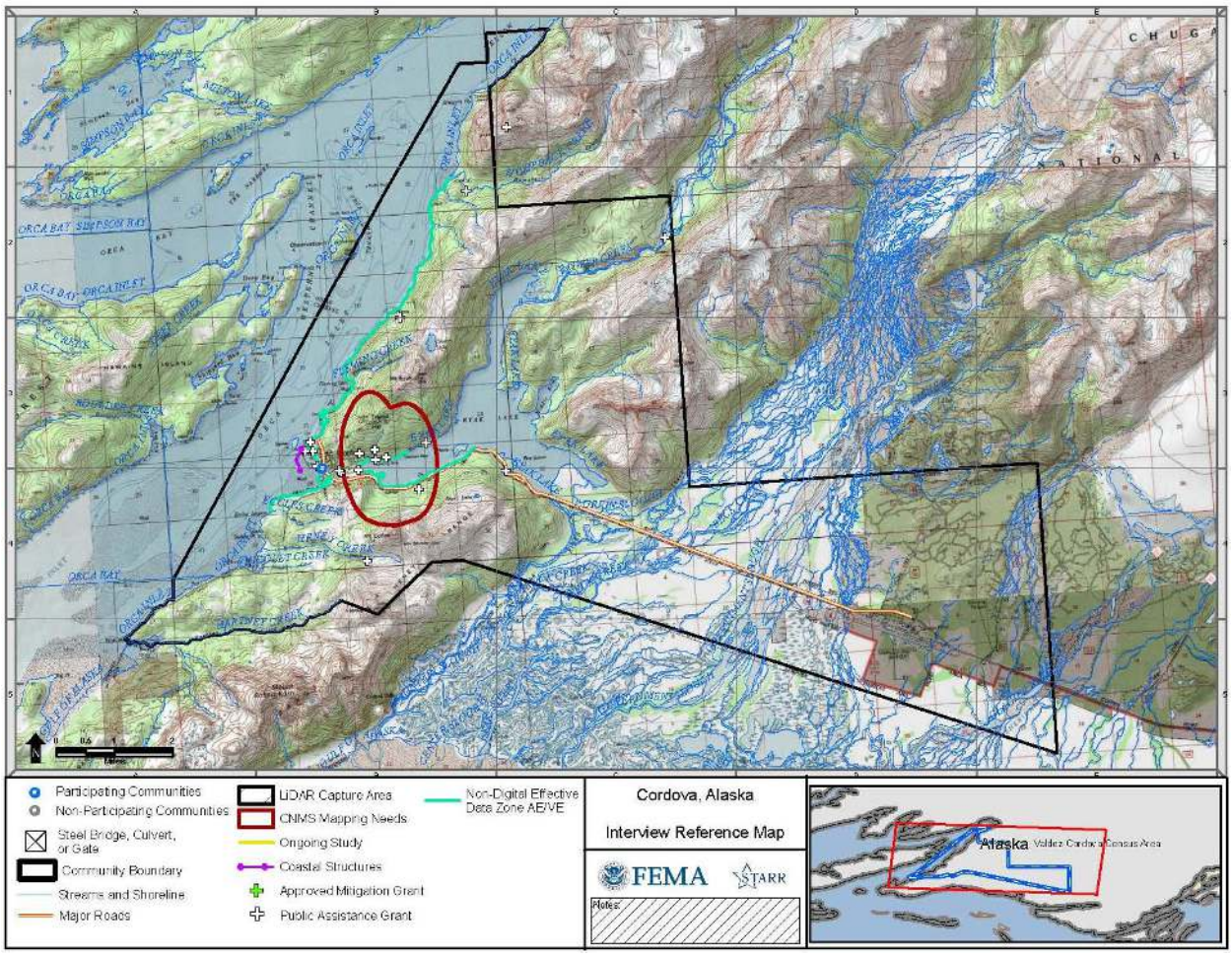
Figure 2. Fact Sheet, page 1, for Cordova. *(tabular data in appendix)*

RX Discovery 2010: Cordova Costal
Fact Sheet: Cordova, Alaska

Page 1

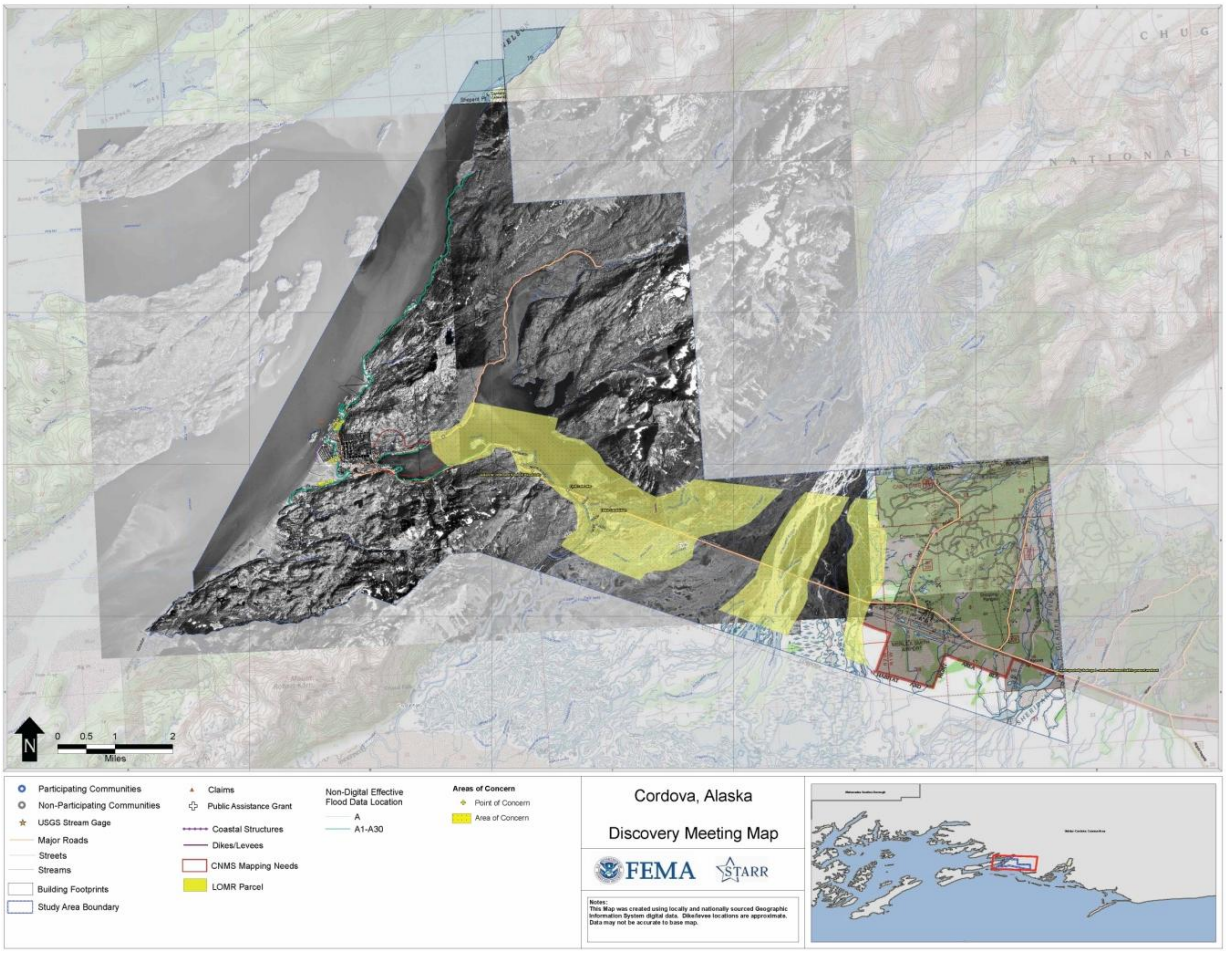
CID:	020037	**FIS/FIRM:**	Effective Date: Level of Study: Last Community Meeting:	10/1/1978 Detailed Study, A4/A8 Zones unknown	
LOMCs:	5		**Last CAV/CAC Date:**	04/10/2003	
CRS Status					
Class:	n/a		SFHA Discount:	n/a	
Effective:	n/a		Non-SFHA Discount:	n/a	
Demographics					
Population:	2,454		**Social Characteristics**		
Median Age:	37		Non-English Speakers:	8%	
Elderly (65+):	7%		High School+ Education:	89%	
Native:	10%		Bachelors+ Education:	21%	
Industrial					
Population in labor force:	62.6%				
Median income:	$50,114				
Top 5 Industries:					
	16%	Educational, health and social services			
	14%	Agriculture, forestry, fishing and hunting, and mining			
	10%	Transportation and warehousing, and utilities			
	10%	Retail trade			
	9%	Manufacturing			
Presidentially-Declared Disasters					
Flood-related total:	19	(August 1967 - October 2009)			
Recent flood related:	10	(April 2002 - October 2009)			
Other hazards:	Earthquake, Fire, Severe Storms, Landslides, Mudslides, Tidal Surges, Severe Winter Storms, Coastal Erosion, High Winds, Severe freezing, Heavy rains and landslide, Avalanches				
Insurance					
Total Premiums:	$ 8,961		Variances:	0	
Total Coverage:	$ 2,703,500		Rep Losses:	0	
Total Policies:	10		BCX Zone Claims:	1	
A Zone Policies:	3		A Zone Claims:	0	
V Zone Policies:	0		AE/A# Zone Claims:	0	
Retention:	2 policies, $64,529 coverage		V Zone Claims:	0	
			D Zone Claims :	0	
Mitigation Projects and Other Grants					
Mitigation Project:	Severe winter storm and avalanches produced a declared disaster in 2000. Acquisition/relocation of private structures - riverine ~ $738,920. 25% local cost share. (Disaster # 1316)				
Mitigation Project:	Earthquake in 2002: 205.4: Non Structural Retrofitting/Rehabilitating Public Structures - Seismic; Anchor lights in district buildings ~ $17,350, 25% local cost share. (Disaster # 1440)				
Mitigation Plans:	City of Cordova, Local Hazard Mitigation Plan Effective: September 2008 Expires: September 2013				
Other Plans:	Alaska State Hazard Mitigation Plan, October 2010.				
Levees and Other Flood Control Structures					
Identifier:	None known to be 65.10 compliant				
Accreditation Status:					
Environmentally Sensitive Areas:					
Critical Species:					
Environmentally Sensitive Index:					
Wetlands:					
CoBRAs:	n/a				
OPAs:	n/a				

Map 2. Image of Interview Reference Map for Cordova



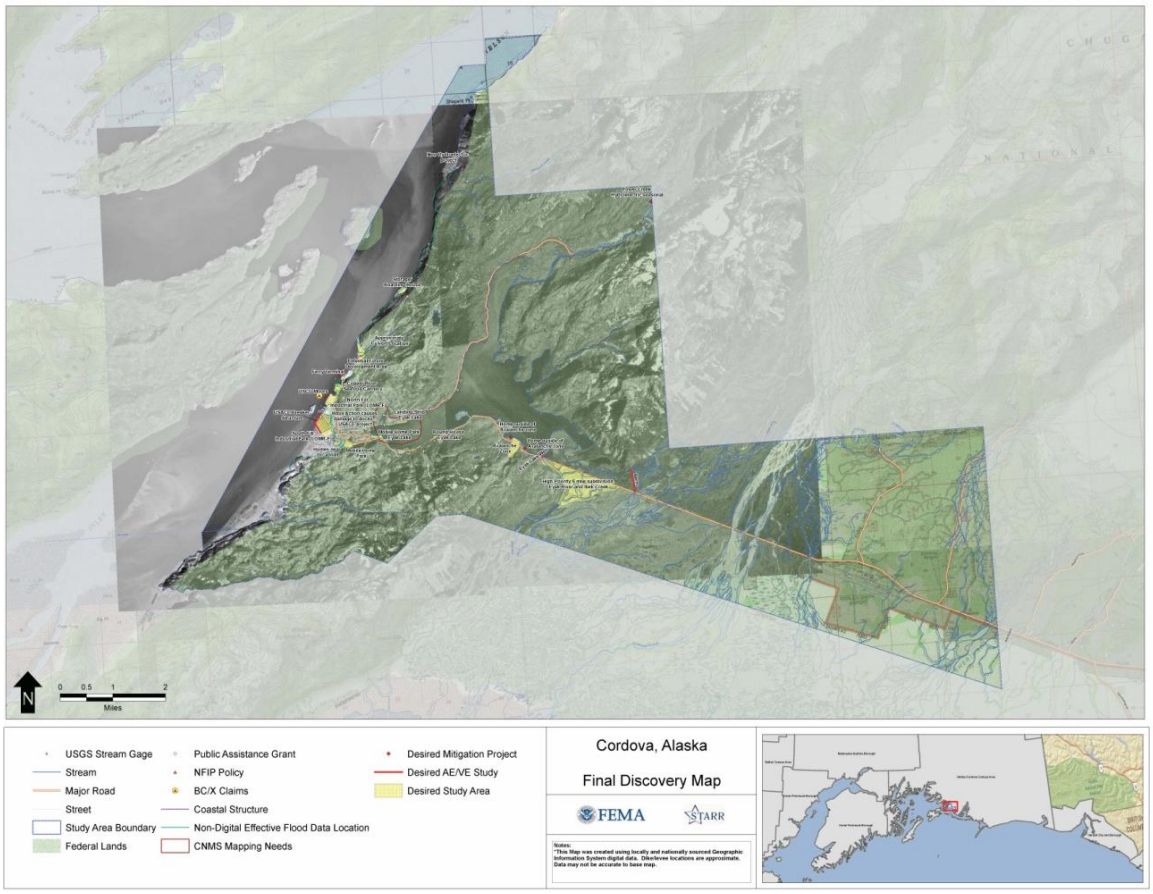
The third step was to hold a watershed-wide Discovery Meeting and facilitate discussion and data analysis of study needs, mitigation project needs, desired compliance support, and local flood risk awareness efforts. The discussion was stimulated using the Discovery Geodatabase display of relevant data. Attendees, including all affected communities and selected other stakeholders, cooperatively identified possible solutions for the Areas and Points of Concern shown on the Discovery Meeting Map. Solutions included recommendations of floodplain studies, mitigation projects, compliance issues, and ideas on how to improve the local flood risk communication programs.

Map 3. Image of the Cordova Coastal Discovery Meeting Map



The fourth phase of the Discovery effort involved an analysis of the data and information collected and discussed at the meeting, and recommendations as to the future relationship and activities between FEMA and the watershed communities. The Final Discovery Map indicates desired study areas and mitigation project locations, and the Discovery Report documents the results of data collection and conversation. If a Risk MAP project is to be initiated in this watershed, Discovery will be concluded with the finalization of a project scope and signed Project Charters, which indicate that all affected stakeholders agree to the terms of a funded project, including communication and data responsibilities.

Map 4. Image of Cordova Coastal Community Final Discovery Map



III. Risk MAP Needs

The results of the data collection and interviews were thoroughly discussed at the Discovery Meeting. The following sections include issues and situations that exist in Cordova that can be considered Risk MAP Needs, to be addressed with Risk MAP projects. Details and background on all issues can be found in the interview notes, meeting notes, and other files included in the appendix.

i. Floodplain Studies

Cordova's Flood Insurance Study and Flood Insurance Rate Map (FIRM) were last updated in 1978. Cordova has both detailed and approximate coastal and riverine analysis. The date of last community meeting is unknown.

The Final Discovery Map should be referenced to view spatial data that may be indicative of study needs. The CNMS data suggested that a portion of one flooding source should be updated, though the community identified other, different areas for update. One claim has been identified in the B, C, or X zones and five LOMAs have been issued.

No LiDAR has been collected for the area but the City indicated that they have a high level of interest in obtaining topographic data, so there may be potential for a cost share.

In 1984, Cordova's harbor was expanded by the U.S. Army Corps of Engineers. This expansion encourages swell propagation into the mouth of the harbor. A breakwater structure was then constructed along the south, west, and northwest portion of the harbor to alleviate swell influences that resulted from that harbor widening. No levees were identified in the community.

Some areas were identified by community officials as needing a detailed coastal study or approximate study. The desired study areas are shown on the Final Discovery Map and listed below.

Table 2: Cordova Mapping Needs

STUDY AREA	STUDY LENGTH (miles)	LOCATION DESCRIPTION	STUDY TYPE
Cannery Road Loop	0.25	Near the loop at northern end of Cannery Road	Detailed Coastal
Cannery Road/ Fleming Creek	0.5	Coastline near Fleming Creek	Detailed Coastal
Seafood Lane	0.5	Coastline along Seafood Lane	Detailed Coastal
Eyak Lake	2.7	Shoreline study along the west end of the lake	Approximate
Eyak River	1	Near the lake	Detailed
Ibek Creek	1.2	The confluence of Ibek Creek and Eyak River	Approximate

ii. Mitigation Projects

The Cordova Mitigation Plan, prepared by the City of Cordova, became effective in September 2008 and will expire in September 2013. In addition to the mitigation projects identified in the plan, two other potential mitigation projects were discussed during Discovery:

Harbor Breakwater Extension – the city desires funding for the extension of the northern harbor breakwater to mitigate wind swell propagation into harbor.

Eyak Lake Weir – the city desires funding to improve or replace the weir/dam structure between Eyak Lake and Eyak River.

iii. Compliance

Data collected from CIS indicated that Cordova has not issued any variances to their floodplain management ordinances, so it may be assumed that the community is regulating to at least the minimum criteria required by FEMA. The most recent Community Assistance Visit was in April 2003.

iv. Communications

During the interview, the community indicated that they were interested in learning more about Risk MAP's communications support, and were open to a future meeting with FEMA to learn about how they can improve their flood risk communication programs. Currently, the community does not participate in the Community Rating System program.

Cordova is comprised of approximately 2,454 residents (U.S. Census, 2000). The median age in Cordova is 37 years, with approximately 7% of the population over 65 years, an average of 8% non-English speakers, and 10% Native Americans. An average of 62.6% of the population holds a high school diploma, and around 21% have a college degree. As of 2000, approximately 63% of residents over age 16 that desired employment were working, with a median annual income of approximately $42,000. Residents work in educational, health, and social services; agriculture, forestry, fishing and hunting, and mining; and transportation, warehousing, and utilities.

Given the high population of non-English speakers and Native Americans, there may be a need for special outreach strategies for the City of Cordova. The local officials were interested in learning more about how to provide flood risk information to residents.

IV. Close

Local officials in the communities were interested in the Discovery process and Risk MAP, and are open to learning more about how they can begin to develop resiliency to flood events. They identified several areas for map updates and areas in which they could use additional FEMA support. It is recommended that the guidance document outlining the types of Mitigation Planning Technical Support that can be included in Risk MAP projects be evaluated with communities, once finalized. The local officials in Cordova would benefit from the implementation of Risk MAP projects.

V. Appendix – Discovery Files

Communications

- Contacts
  - Stakeholders: Names, Titles, Phone, Email, Website
  - Notification Dates
- Notifications/Invitations
  - A National Notification
  - B Regional Notification
  - C State Legislator Notification
  - C Congressional Notification
  - D Community Notification
  - E Floodplain Administrator Interview Request
  - Meeting Notes Distribution

Community Interviews

- Fact Sheet
- ***Interview Reference Maps***
- Interview Notes
- Locally-Provided Documents

Discovery Meeting

- Agenda
- Presentation
- Sign-In Sheet
- ***Discovery Meeting Map***
- Meeting Notes
- Draft Project Charter

Report

- Report
- ***Project Area Map***
- ***Final Discovery Map***
- Tabular Data, including Data Sources and Mapping Needs
- Geodatabase
- Database Updates

Memorandum

To: Planning and Zoning
From: Planning Department Staff
Date: 10/4/2012
Re: Hazard Mitigation Plan

PART I. GENERAL INFORMATION:

The Cordova Hazard Mitigation Plan was completed in 2008 by a contractor. The State of Alaska and FEMA require an update every 5 years. Having an approved plan allows the City to apply for state and federal grants.

PART II. BACKGROUND:

The State has provided criteria that need to be followed for the update to be accepted by the State and FEMA. One of these requirements is public meeting where input can be provided. We have a draft of the updated Hazard Mitigation Plan and would request that you review and provide and any comments that you might have.

The project portion of the document is important part of the document, these projects since they are included in the plan, could be potentially funded by state and federal grants. Any thoughts on projects that will help eliminate or lessen the effects of hazards that occur in Cordova can be included. Additional projects can be added or projects edited during the update, please feel free to provide new projects or edit existing projects.

The Hazard Mitigation Plan and the draft update is over 100 pages with that said, we will print a copies for any person of the public or commissioner who would like one upon request but for the packet the plan will be placed on the Planning and Zoning page on the city web page.

Follow this link to read the update.

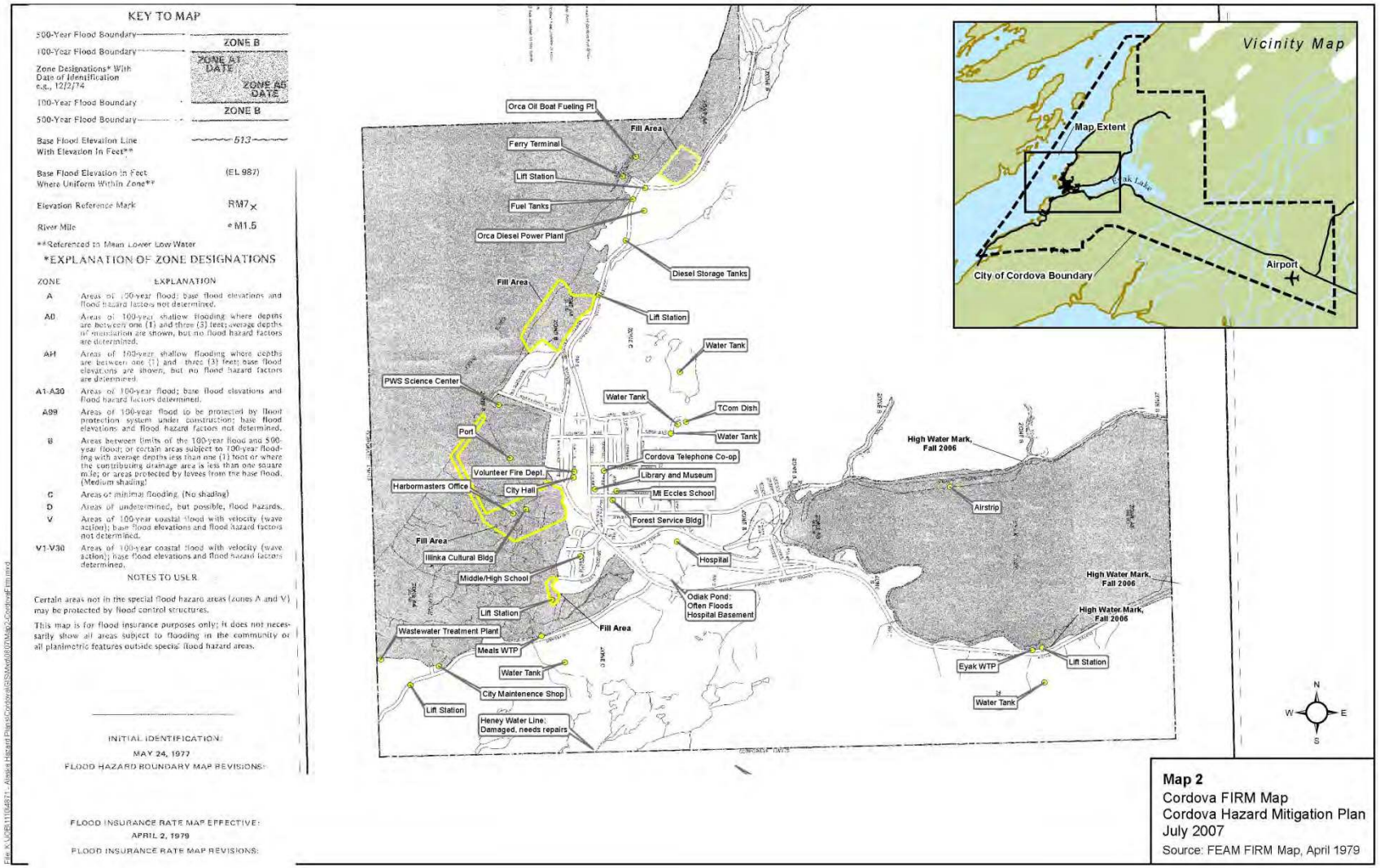
http://www.cityofcordova.net/boards-commissions/planning-zoning/

Follow this link to read the 2008 plan.

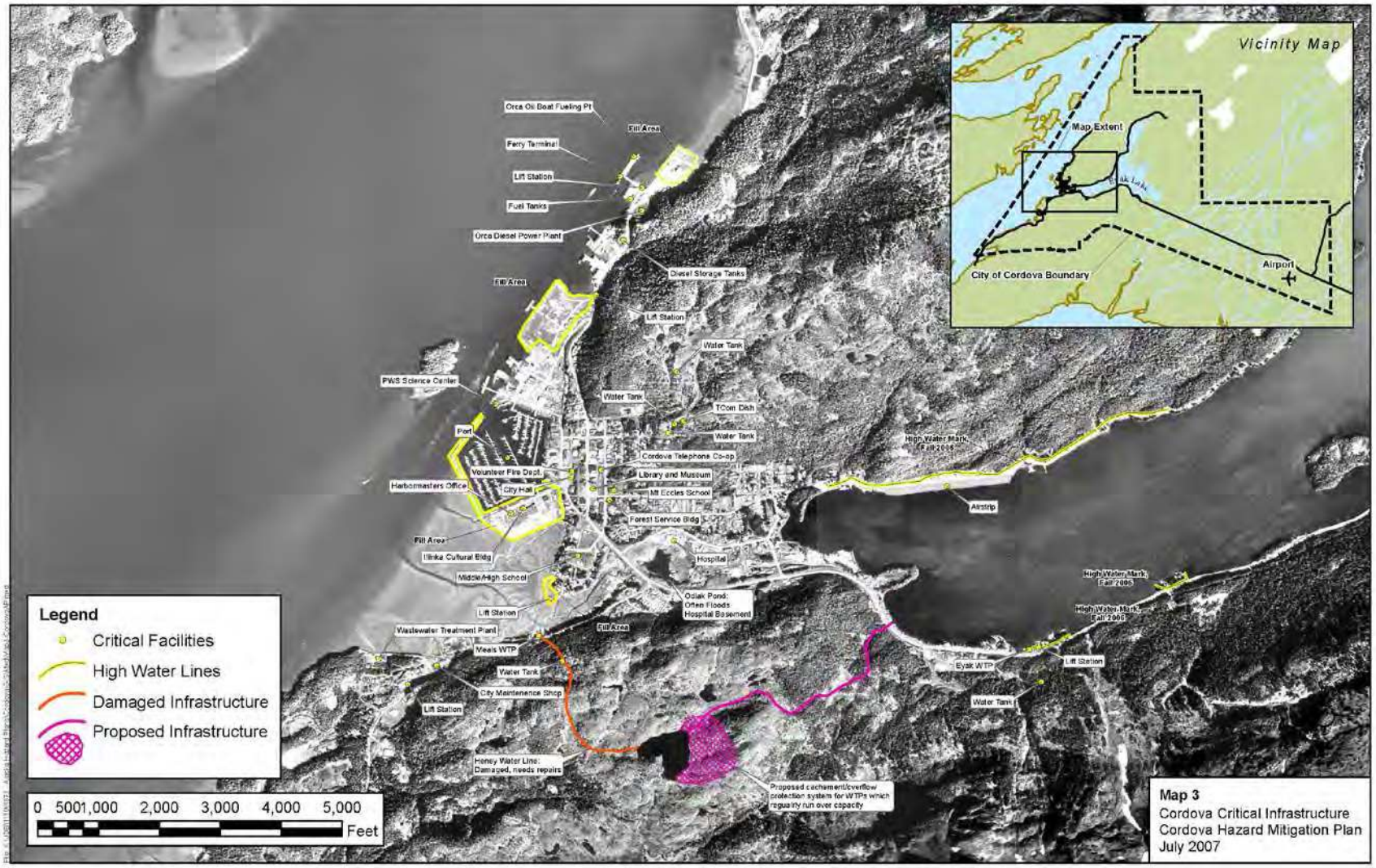
http://www.cityofcordova.net/city-administration/planning-department/

Map 1. Cordova Regional Map

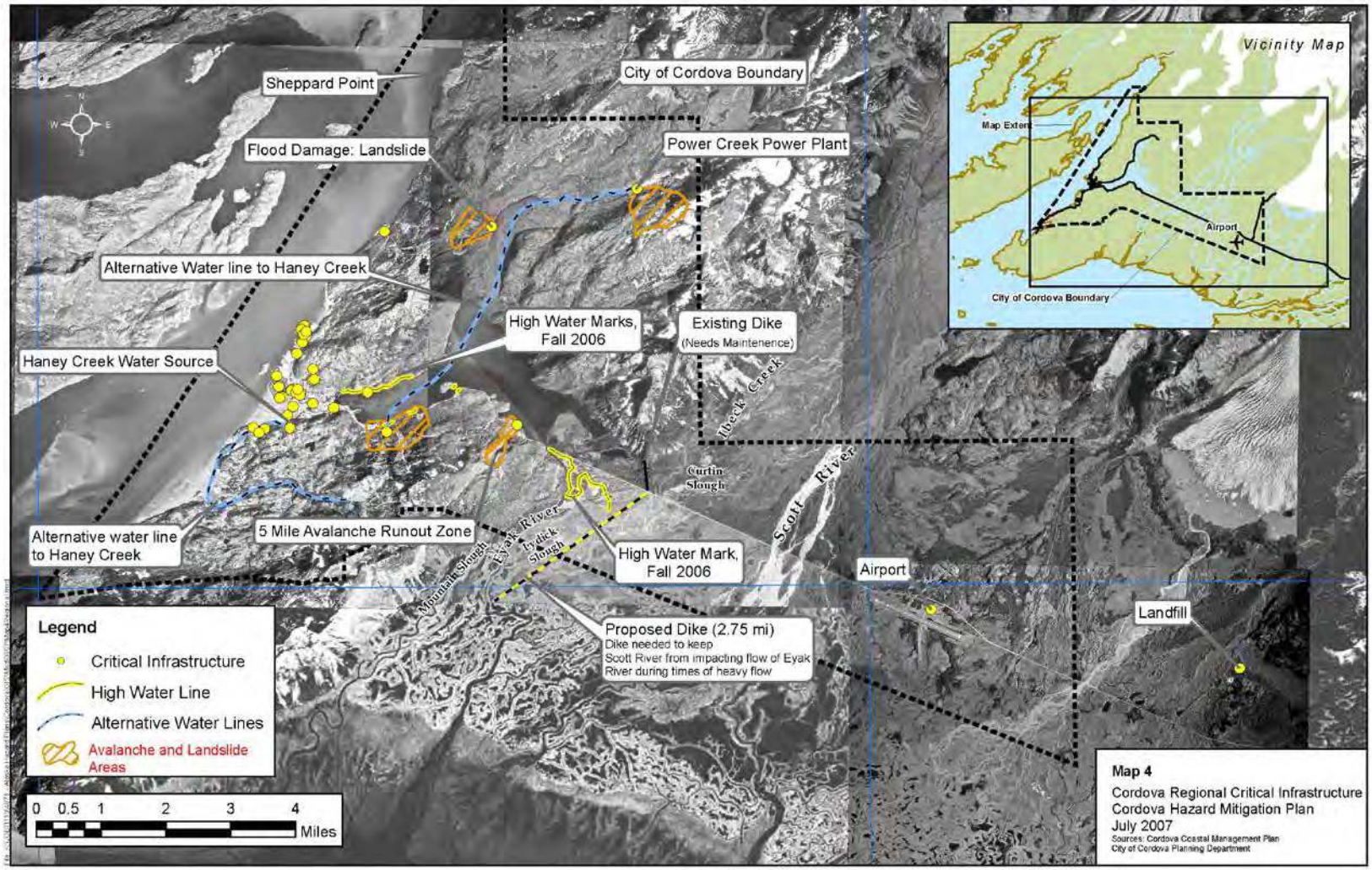
Map 2. Cordova Flood Rate Insurance Map



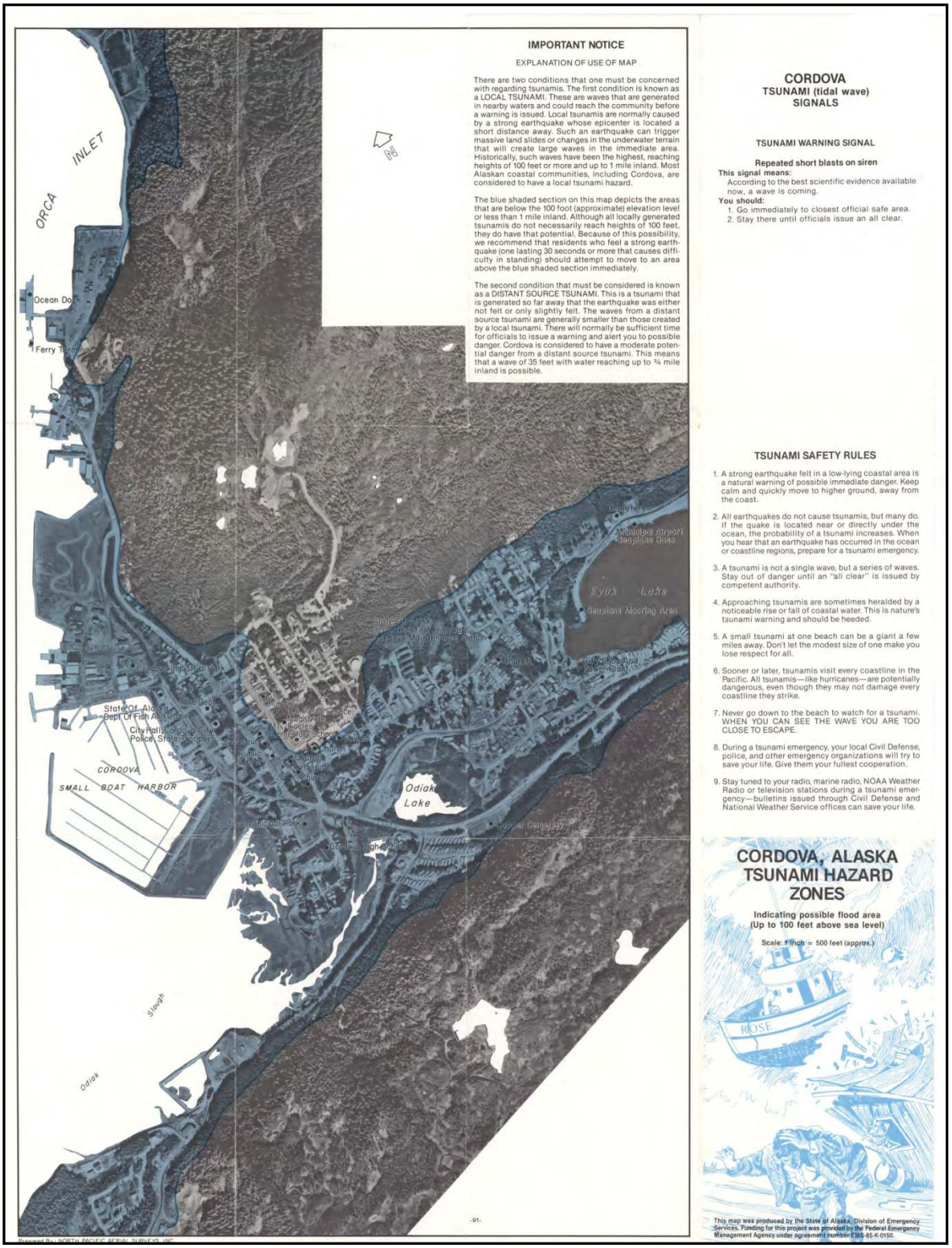
Map 3. Cordova Critical Infrastructure



Map 4. Cordova Regional Critical Infrastructure



Map 5. Tsunami Hazard Zones



Photos 1. Orca Creek, 11/01/06

Cordova – Orca Creek
November 1, 2006
Water Supply Intake Clogged, Holding Pond filled with Bedload

Photos 2. Airport and Eyak Lake, 10/31/06

Cordova – Dept. of Transportation
October 31, 2006 Flood Pictures

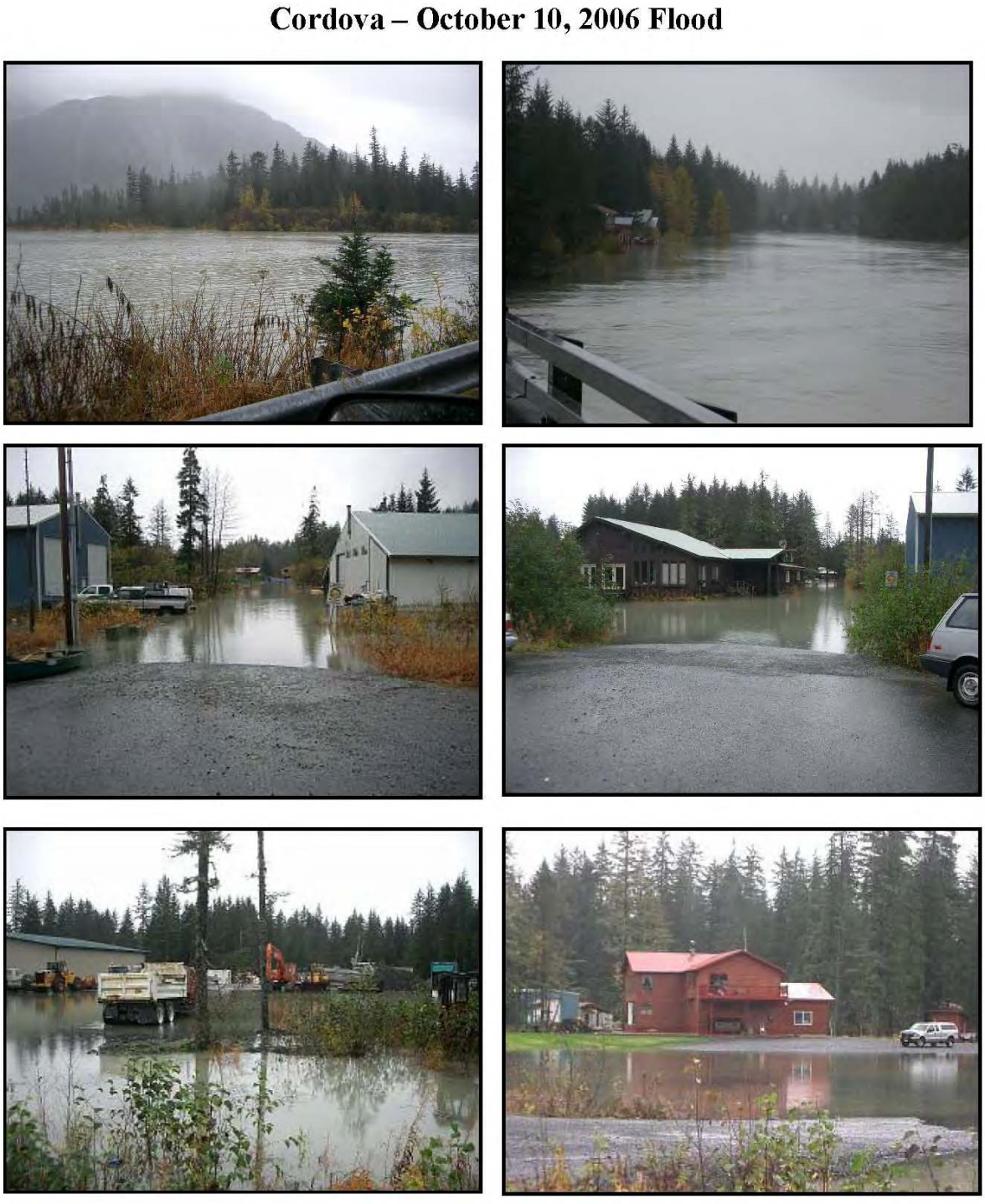
Cordova Municipal Airport

Repaired

Eyak Lake Erosion

Eyak Lake Erosion - Repaired

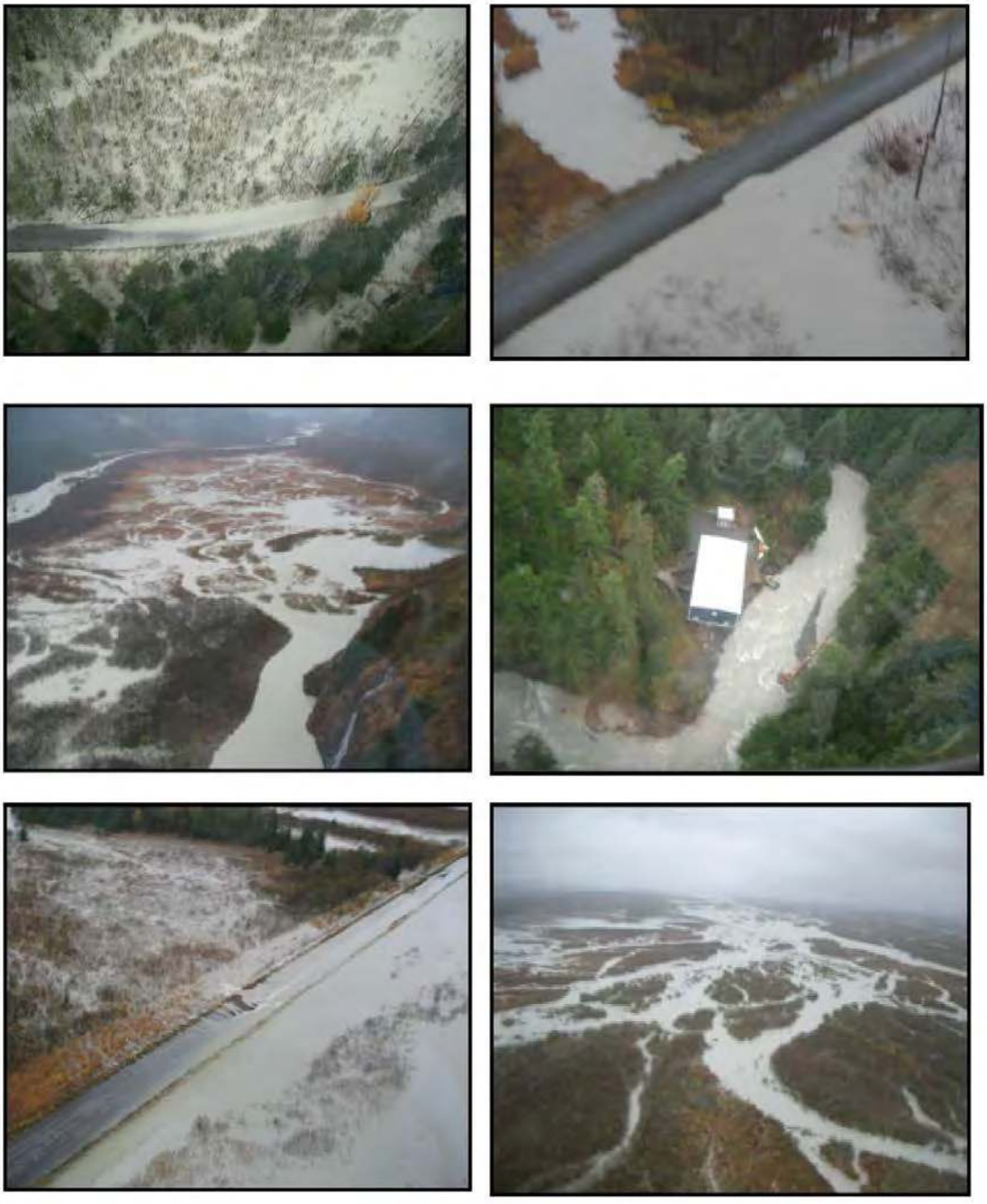
Photos 3. Cordova Flood Pictures, 10/10/06



Photos 4. Cordova Flood Pictures, 10/10/06

Photos 5. Regional Flood Pictures, 10/10/06

Cordova – October 10, 2006 Flood



Photos 6. Power Creek, October 2006

Power Creek, October 2006
USGS Survey Mark and Gage Site

Photos 7. Damage to Hydro Plant, 10/31/06

Cordova – October 31, 2006
Damage to Humpback Creek Hydro plant

Photos 8. Damage from Snow, January 2012

Photos 9. Avalanche, April 2012

Pending agenda:

Holly Wells, City Attorney – agenda item in re Council emails, **August 21** agenda

Further Council work on Title 4/Personnel Handbook – **schedule** another work session

Providence Review/Evaluation of Management – discussion item on a **future** agenda

Schedule Mikunda Cottrell to present the 2012 City Financial Audit – during a regular meeting in **August** or **September**

Saw Mill Avenue Extension Project – P&Z options/recommendations

Capital Priorities List Meeting –**September 2013, December 2013, March 2014, June 2014**

Discussion of City Auditor RFP – **September 4, 2013** Regular Meeting

Buck Adams to meet with Council in the fall before budget work (**September** or **October**)

Committees:

Cordova Center Committee: Tim Joyce, Sylvia Lange, Dan Logan, Mark Lynch, Sam Greenwood, Moe Zamarron, Dave Reggiani, Cathy Sherman

Fisheries Advisory Committee: David Reggiani, PWSAC; Ken Roemhildt, Seafood Sales; Jim Holley, AML; Torie Baker, Marine Advisory Program Coordinator; John Bocci; and Jeremy Botz, ADF&G

Cordova Trails Committee: Elizabeth Senear, VACANCY, Jim Kallander, Toni Godes, and David Zastrow

Public Services Building Design Committee: David Reggiani **-** Chairman, Chief George Wintle, vacancy, Jim Kacsh, Dick Groff, Mike Hicks, Tom Bailer

E-911 Committee: Chief George Wintle – Chairman, Bret Bradford, Gray Graham, Dick Groff, Mike Hicks (and/or Paul Trumblee), David Allison, George Covel

City Manager Assessment Committee: Cindy Bradford, Mark Frohnapfel, Don Sjostedt, Kelly Weaverling, EJ Cheshier, James Kacsh, Dave Reggiani

Calendars:

3 months of calendars are attached hereto
August 2013; Sept 2013; Oct 2013

August 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	*2*	*3*
4	*5*	*6* Clerk out of office	*7* Clerk back to work 4pm 7:30 reg mtg LMR	*8*	*9*	*10*
11	*12*	*13* 6:30 P&Z LMR	*14* 7:00 Sch Bd HSL 7:00 Hrbr Cms CH	*15*	*16*	*17*
18	*19*	*20*	*21* 7:15 pub hrg LMR 7:30 reg mtg LMR	*22*	*23*	*24*
25	*26*	*27*	*28* First day of School	*29*	*30*	*31*

September 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	*2* Labor Day City Hall Offices Closed	*3*	*4* 7:15 pub hrg (maybe) LMR 7:30 reg mtg LMR	*5*	*6*	*7*
8	*9*	*10* 6:30 P&Z LMR	*11* 7:00 Sch Bd HSL 7:00 Hrbr Cms CH	*12*	*13*	*14*
15	*16*	*17*	*18* 7:15 pub hrg (maybe) LMR 7:30 reg mtg LMR	*19*	*20*	*21*
22	*23*	*24*	*25*	*26*	*27*	*28*
29	*30*					Location Legend CH-City Hall Conference Room LMR-Library Mtg Rm HSL-High School Library

October 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Location Legend CH-City Hall Conference Room LMR-Library Mtg Rm HSL-High School Library		*1*	*2* 7:15 pub hrg (maybe) LMR 7:30 reg mtg LMR	*3*	*4*	*5*
6	*7*	*8* 6:30 P&Z LMR	*9* 7:00 Sch Bd HSL 7:00 Hrbr Cms CH	*10*	*11*	*12*
13	*14*	*15*	*16* 7:15 pub hrg (maybe) LMR 7:30 reg mtg LMR	*17*	*18*	*19*
20	*21*	*22*	*23*	*24*	*25*	*26*
27	*28*	*29*	*30*	*31*		Location Legend CH-City Hall Conference Room LMR-Library Mtg Rm HSL-High School Library