January 19, 2011
5:30 P.M.

Cowles Council Chambers
491 East Pioneer Avenue
Homer, Alaska

WORK SESSION
Advisory Planning Commission
AGENDA

1. Call To Order, 5:30 P.M.

2. Discussion of Items on the Regular Meeting Agenda

3. Staff Report PL 10-111, Draft Ordinance amending the City of Homer Comprehensive Plan to include the Homer Spit Comprehensive Plan and Recommending Adoption to the Kenai Peninsula Borough
   (Please refer to page 241 of the regular meeting packet.)

4. Public Comments
   The public may speak to the Planning Commission regarding matters on the work session agenda that are not scheduled for public hearing or plat consideration. (3 minute time limit).

5. Commission Comments

6. Adjournment

HOMER ADVISORY PLANNING COMMISSION
491 E. PIONEER AVENUE
HOMER, ALASKA

JANUARY 19, 2011
WEDNESDAY AT 7:00 P.M.
COWLES COUNCIL CHAMBERS

REGULAR MEETING AGENDA

1. Call to Order

2. Approval of Agenda

3. Public Comment

The public may speak to the Planning Commission regarding matters on the agenda that are not scheduled for public hearing or plat consideration. (3 minute time limit).

4. Reconsideration

5. Adoption of Consent Agenda

All items on the consent agenda are considered routine and non-controversial by the Planning Commission and are approved in one motion. There will be no separate discussion of these items unless requested by a Planning Commissioner or someone from the public, in which case the item will be moved to the regular agenda and considered in normal sequence.

1. Approval of Minutes of January 5, 2011 ***Page 1***
2. Time Extension Requests
3. Approval of City of Homer Projects under HCC 1.76.030 g.
4. KPB Coastal Management Program Reports
5. Determination of Nonconforming Use as a bulk petroleum site loading facility located at 4755 Homer Spit Road ***Page 9***

6. Presentations

7. Reports

a. Staff Report PL 11-12, City Planner's Report ***Page 13***

8. Public Hearings

Testimony limited to 3 minutes per speaker. The Commission conducts Public Hearings by hearing a staff report, presentation by the applicant, hearing public testimony and then acting on the Public Hearing items. The Commission may question the public. Once the public hearing is closed the Commission cannot hear additional comments on the topic. The applicant is not held to the 3 minute time limit.

A. Staff Report PL 11-10, CUP 11-03, A Request for a Conditional Use Permit (CUP) for a day care facility in a single family residence at 4136 Hohe Street ***Page 15***
B. Staff Report PL 11-09, CUP 11-02, A Request for a Conditional Use Permit (CUP) to add a petroleum tank at 4755 Homer Spit Road ***Page 25***
C. Staff Report PL 11-06, CUP 11-01, A Request for a Conditional Use Permit (CUP) for the Bridge Creek Fire Hazard Mitigation Project ***Page 39***

9. Plat Consideration

10. Pending Business

A. Staff Report PL 10-111, Draft Ordinance amending the City of Homer Comprehensive Plan to include the Homer Spit Comprehensive Plan and Recommending Adoption to the Kenai Peninsula Borough ***Page 241***

11. New Business

12. Informational Materials

A. City Manager's Report dated January 10, 2011 *Page 255*

13. Comments of The Audience

Members of the audience may address the Commission on any subject. (3 minute time limit)

14. Comments of Staff

15. Comments of The Commission

16. Adjournment

Meetings will adjourn promptly at 10 p.m. An extension is allowed by a vote of the Commission. The next regular meeting will be held on February 2, 2011 at 7:00p.m. There will be a work session at 5:30p.m.

HOMER ADVISORY PLANNING COMMISSION
REGULAR MEETING MINUTES
JANUARY 5, 2010

UNAPPROVED

Session 11-01, a Regular Meeting of the Homer Advisory Planning Commission was called to order by Chair Minsch at 7:05 p.m. on January 5, 2011 at the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

PRESENT: COMMISSIONERS DOLMA, DRUHOT, HIGHLAND, KRANICH, MINSCH, VENUTI

ABSENT: COMMISSIONER BOS

STAFF: CITY PLANNER ABBOUD
DEPUTY CITY CLERK JACOBSEN

APPROVAL OF AGENDA

The agenda was approved by consensus of the Commission.

PUBLIC COMMENT

The public may speak to the Planning Commission regarding matters on the agenda that are not scheduled for public hearing or plat consideration. (3 minute time limit).

There were no public comments.

RECONSIDERATION

There were no items for reconsideration.

ADOPTION OF CONSENT AGENDA

All items on the consent agenda are considered routine and non-controversial by the Planning Commission and are approved in one motion. There will be no separate discussion of these items unless requested by a Planning Commissioner or someone from the public, in which case the item will be moved to the regular agenda and considered in normal sequence.

1. Approval of the December 1, 2010 minutes
2. Time Extension Requests
3. Approval of City of Homer Projects under HCC 1.76.030 g
4. KPB Coastal Management Program Reports

The Consent Agenda was approved by the consensus of the Commission.

PRESENTATIONS

There were no presentations scheduled.

REPORTS

A. Staff Report PL 11-05, City Planner's Report

City Planner Abboud reviewed his staff report.

PUBLIC HEARINGS

Testimony limited to 3 minutes per speaker. The Commission conducts Public Hearings by hearing a staff report, presentation by the applicant, hearing public testimony and then acting on the Public Hearing items. The

Commission may question the public. Once the public hearing is closed the Commission cannot hear additional comments on the topic. The applicant is not held to the 3 minute time limit.

A. Staff Report PL 11-02 Draft Ordinance Zoning Enforcement

City Planner Abboud reviewed the staff report. He referenced a lay down letter in support of the draft ordinance.

Patricia Wallace, city resident, said she has lived on Rochelle Road for 19 years and lived Homer 27 years. Off and on in her neighborhood there have been a lot of junk vehicles and just plain clutter and garbage type junk in people's yards. There is still some, but it certainly is getting better. It is very disgusting and hazardous. Homer is a beautiful place, let's take some pride in it and get rid of the eyesores. She would like to thank the people in her neighborhood who have done just that and others in the community who have participated in getting rid of some of this stuff. She thanked the City for helping financially to get rid of abandoned and junk vehicles. She agrees with the 1500 square feet of storage for 2 drivable vehicles, one recreational, one boat less than 36 feet, one work truck, plus 200 square feet for miscellaneous storage. That seems more than fair. If someone needs more storage, they can go rent it. A neighborhood is just that, not a place to accumulate junk and vehicles that don't run or boats that never see the water.

There were no further comments and Chair Minsch closed the public hearing.

KRANICH/HIGHLAND MOVED TO BRING THE DRAFT ORDINANCE TO THE FLOOR FOR DISCUSSION AND POSSIBLE AMENDMENT.

Commissioner Kranich commented that this has been discussed several times at the Commission level and it has been refined to where it should work for most people.

Regarding enforcement, there was discussion that it should be identifiable if a vehicle sits longer than the number of days allowed. It was clarified that line 182 refers to one year after adoption of the ordinance. It was noted that the commercial districts are not included as they have different provisions than the residential chapters, and City Planner Abboud said he could provide the Commission with a better explanation at another time.

KRANICH/DOLMA MOVED TO FORWARD THE DRAFT ORDINANCE ZONING ENFORCEMENT TO CITY COUNCIL AND RECOMMEND ADOPTION.

There was no further discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

B. Staff Report PL 10-111 Draft Ordinance Amending the City of Homer Comprehensive Plan to Include the Homer Spit Comprehensive Plan and Recommending Adoption to the Kenai Peninsula Borough

City Planner Abboud reviewed the staff report.

Chair Minsch opened the Public Hearing.

Hal Sheppard, Acting Director with the Kachemak Bay Conservation Society, commented regarding concerns about residential development on the spit. Concern was expressed about it during the public process as it is unnerving that the city is considering more residential uses on the spit. He said it's been suggested that there could be question if the City met the letter of the law on public notice about residential uses in this case since there has been strong opposition and concern about it. He asked they go beyond the letter of the law to get more notice out there. Mr. Sheppard also commented in the plan it says the City is working with the ACOE regarding the dredge spoils but there's not a lot of description of a plan, again full disclosure about the plan and criteria for the spoils, and where the overburden might be placed is important. He feels there should be more public hearing about that. Lastly he commented about the reference to the Climate Action Plan, he encouraged more provisions of implementing the plan be incorporated in to the Spit Plan, since it appears the City is implementing it already. He asked the Commission to refer to their written comments.

Pat Cue, resident outside city limits, thanked the Commission for their work on the plan. She commented that it is her understanding that there is a proposed area for residential development towards the end of the spit. She expressed concern not only with additional development, but also how that development could adversely affect the areas that are available for public use. She encouraged the Commission to ask themselves what living legacy they want to leave, and she asked that they strongly consider conservation recommendations.

Jack Wiles commented that as he said last time, more isn't always better, sometimes it is just more; don't overdevelop the spit. You don't know what you have until it's gone and he hopes they don't pave paradise by putting up more condo's and blocking views on the west side of the spit in particular. In looking at the 25 foot height limitation in the plan, he suggested that they do not allow that conditional use on the west side. He encouraged they consider the campground lease at the end of the spit as the transitional area in terms of a buffer to maintain the last piece open of space at the end of the spit. He hopes the Commission will keep the public value of the area in mind.

Lani Raymond, resident outside city limits, suggested reasons not to develop the spit too much more. One, migratory bird habitat, especially in the spring and fall, it is called critical habitat. Two, dangers due to evacuation problems, too many people out there can't get off safely. Three, large businesses and development mean loss of ambience for tourists and natural beauty being ruined. An alternative to more development would be encouraging development in downtown Homer and in the Old Town areas. People will always want to go out on the spit and they need reasons to go to the other parts of town. Four, we should want to pass the spit on as a natural and healthy place for future generations as well as ourselves now. We should collectively say yes to the outdoor activities that make our spit a treasure.

Robert Archibald, city resident, commented that the spit plan has come a long way but he knows there a lot of ideas that have come out and pages of things that probably deserve a little more consideration. He likes the idea of taking another look at the input. The spit is a natural wonder and there aren't many like it in the world. The decisions that the City makes are going to be the future of the spit. Do it wisely.

Barb Peterson, city resident, recalled when Pier One was first located on the city dock and they had to use the restrooms at Land's End. At its current location people are amazed at this activity in the middle of a campground. It has impressed her that when you are there, you are

in the middle of people fishing, flying kites, and having campfires. There is this wildness and it's what part of the spit is. The other thing she noticed is having an alternative type of activity that draws people out to be part of the spit. 70% of the audience is local. Let's keep this legacy as close to what it is that we can.

There were no further comments and Chair Minsch closed the public hearing.

KRANICH/HIGHLAND MOVED TO BRING THE DRAFT SPIT COMPREHENSIVE PLAN TO THE FLOOR FOR DISCUSSION.

No objection was expressed and discussion ensued.

There was discussion that a lot of public comment has been received and reviewed. While all the ideas aren't adopted specifically many are blended in. It is a good document and a little more worksession time would be beneficial. If there are minimal amendments it probably won't come back for a hearing but substantial changes will trigger another public hearing. It was suggested that the ownership map from a previous draft be added in.

KRANICH/HIGHLAND MOVED TO MOVE THE DRAFT SPIT COMPREHENSIVE PLAN TO THE NEXT WORKSESSION.

There was no further discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

C. Staff Report PL 11-08, Nonconforming Use Status as a Bulk Petroleum Storage Site Located at 4755 Homer Spit Road, aka Tract A and Lot 22A Lands End Subdivision.

Commissioner Druhot stated she has a conflict of interest in this action.

KRANICH/HIGHLAND MOVED THAT COMMISSIONER DRUHOT HAS A CONFLICT OF INTEREST.

Commissioner Druhot stated that she has a financial interest that exceeds the limitations outlined in code.

VOTE: YES: MINSCH, HIGHLAND, VENUTI, KRANICH, DOLMA

Motion carried.

Commissioner Druhot left the table.

City Planner Abboud reviewed the staff report.

James Beckham, Vice President of Operations for Harbor Enterprises Inc., dba Petro Marine Services, commented that in the course of other business with the City they discovered some missing paperwork, approvals, and authorizations for the tank farm at the end of the Homer Spit. In conjunction with that discovery, they are trying to chart a course forward to clean it up and comply for forward movement in the future. He said he is available for questions.

There was brief question and discussion of a discrepancy in the staff report regarding number of tanks that would be addressed after the public hearing. Question was also raised regarding the availability of the company's contingency plan. Mr. Beckham advised that a copy of the plan is available through the City and through DEC. The plan does meet all the state DEC and Federal requirements.

Chair Minsch opened the public hearing.

Kevin Hogan, city resident, commented in support of what ever gets this through the process as smoothly and quickly as possible. The applicant is a good corporate citizen and an integral part of the community. This use has been in existence prior to the existence of the City. Mr. Hogan said bulk fuel storage needs to be an outright permitted use in Marine Industrial not a conditional use. It is adjacent to both of the docks where most of the delivery is through barges. It is a change that should be made in the zoning code.

There were no further comments and Chair Minsch closed the public hearing.

In response to questions regarding quality control, Mr. Beckham provided an overview of the requirements, standards, and procedures regarding inspections of their tanks and pipelines, noting that leaks are bad for business so they do what they can to prevent them.

KRANICH/DOLMA MOVED TO APPROVE GRANTING NON CONFORMING USE STATUS AS A BULK PETROLEUM STORAGE SITE LOCATED AT 4755 HOMER SPIT ROAD AKA LOT 22A AND TRACT A LAND'S END SUBDIVISION.

There was discussion clarifying that the use extends over both lots as the tanks are on one lot and the support equipment, such as the containment rack and the loading facility, extend to the other lot. It was suggested amending through out the staff report to add "and loading facility" to clarify.

HIGHLAND/KRANICH SO MOVED TO AMEND THROUGH OUT THE STAFF REPORT WHERE IT SAYS BULK PETROLEUM STORAGE ADD "AND LOADING FACILITY".

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

City Planner Abboud commented to the amendments regarding the discrepancy regarding the tanks referenced in the time line. He clarified the following for staff report PL 11-11:

- 1966 change six (6) to 12
- Add 1975 "aerial photo showing 8 tanks, storage pump building, and warehouse building
- 1981 strike six (6)
- 1986 strike six (6)
- Strike 1992 reference to the attachment
- 2003 strike six (6) and replace with eight (8)

KRANICH/HIGHLAND SO MOVED TO IDENTIFY THE AMENDMENTS OUTLINED BY THE City PLANNER.

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

There was no further discussion on the main motion as amended.

VOTE (Main motion as amended): YES: HIGHLAND, MINSCH, VENUTI, KRANICH, DOLMA

Motion carried.

Commissioner Druhot returned to the table.

Chair Minsch called for a short break at 8:30 p.m. The meeting resumed at 8:36 p.m.

PLAT CONSIDERATION

A. Staff Report PL 11-03, Anderson 2011 Subdivision Preliminary Plat

City Planner Abboud reviewed the staff report.

Roger Imhoff, project surveyor and applicant representative, commented regarding a letter he submitted that the subject of the unsubdivided remainder comes up time and time again. An unsubdivided remainder is not part of the subdivision and is not subject to review by the City or Borough except to see that it does meet the code for unsubdivided remainders, which is if it is less than 40 acres it must abut a dedicated right-of-way. It does meet that code requirement. Mr. Imhoff also commented that there is the request for drainage easements but he has yet to see staff provide a code citation for that, and the Borough does not have one, or even the definition of one. He noted what he failed to address is Borough Code 20.21.010 that generally requires a 60 foot right-of-way when a road accesses this number of lots. He explained that Rainbow Place is a 50 foot wide right-of-way. It was originally a through street which connected to what is now the high school property, but was re-platted into a cul-de-sac. The City and Borough Planning Commissions in the past have granted exceptions to the street width in cases like he has explained in his letter. Pennock Street is an example of this situation where a 40 foot right-of-way was granted an exception to extra right-of-way width.

It was noted that the Public Works comment #3 refers to Rainbow Avenue, in the staff recommendation it is referred to as Rainbow Court. Mr. Imhoff clarified that it is Rainbow Place and the utility easement should be on the north side where it fronts on proposed Lot one and Tract A.

There were no public comments.

DOLMA/HIGHLAND MOVED TO ADOPT STAFF REPORT PL 11-03 ANDERSON 2011 PRELIMINARY PLAT WITH STAFF RECOMMENDATIONS.

There was brief discussion regarding the zoning and the status of the unsubdivided remainder.

KRANICH/HIGHLAND MOVED TO AMEND STAFF RECOMMENDATION 2 TO READ ALONG RAINBOW PLACE AS INDICATED ON THE PRELIMINARY PLAT.

There was brief discussion whether it needed to be changed elsewhere and it was suggested that this makes the recommendation correspond with the preliminary plat.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

There was brief discussion regarding procedure.

VOTE (Main motion as amended): NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

PENDING BUSINESS

A. Staff Report PL 11-01 East End Mixed Use District

Roberta moved to move to next worksession. Ray. 8:59

HIGHLAND/KRANICH MOVED TO DISCUSS THIS AT A WORKSESSION.

There was brief discussion about scheduling.

VOTE: NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

NEW BUSINESS

A. Staff Report PL 11-07, Exclusion from Bridge Creek Watershed Protection District

City Planner Abboud reviewed the staff report.

HIGHLAND/KRANICH MOVED TO DISCUSS AND MAKE RECOMMENDATIONS REGARDING EXCLUSIONS FROM THE BRIDGE CREEK WATERSHED DISTRICT.

There were comments supporting a recommendation that no exclusions be allowed. This is currently the only watershed and it would be in the best interest of the city to remove the allowance. It was pointed out that surface water isn't the only issue, and you don't know where subsurface water goes.

Other comments suggested that if the lot slopes away from the water shed it could be considered for exclusion. It was requested that GIS information be provided to show the slopes of the lots in the watershed district.

KRANICH/VENUTI MOVED TO POSTPONE THIS TO A WORKSESSION PENDING GIS INFORMATION FROM STAFF.

There was brief discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

INFORMATIONAL MATERIALS

A. City Manager's Report

COMMENTS OF THE AUDIENCE
Members of the audience may address the Commission on any subject. (3 minute time limit)

There were no audience comments.

COMMENTS OF STAFF

There were no additional staff comments.

COMMENTS OF THE COMMISSION

Commissioners Dolma, Venuti, and Kranich had no comments.

Commissioner Highland commented that she has been looking at the Comprehensive Economic Development Strategy (CEDS) and she loves to repeat herself about one of her goals to see balance between economy and the environment. She apologized to the Commission for her late submittal of information for the Spit Comprehensive Plan.

Commissioner Druhot wished everyone Happy New Year.

Chair Minsch initiated conversation the CEDS and its relation to the Comprehensive Plan. City Planner Abboud said it may be coming to the Commission for consideration of if this should tie in with the Comprehensive Plan.

Chair Minsch commented that there is a lot of work to do and reminded them that she will be leaving the next meeting at 9:15, and will miss both meetings in February.

ADJOURN
There being no further business to come before the Commission, the meeting adjourned at 9:17 p.m. The next regular meeting is scheduled for January 19, 2011 at 7:00 p.m. in the City Hall Cowles Council Chambers. There is a worksession at 5:30 p.m. prior to the meeting.

_____
MELISSA JACOBSEN, CMC, DEPUTY CITY CLERK

Approved: _____

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-3106
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

DETERMINATION OF NONCONFORMING USE AS A BULK PETROLEUM SITE AND LOADING FACILITY LOCATED AT 4755 HOMER SPIT ROAD

Meeting date: January 5, 2011

Applicants: Harbor Enterprises dba Petro Marine Service

Location: 4755 Homer Spit Road, Homer, AK 99603

Parcel ID: 18103406 a 1.3 acre parcel and 18103407 a 0.19 acre parcel

Legal: Tract A and Lot 22A Lands End Subdivision

Zoning: Marine Industrial

Introduction. Harbor Enterprises applied to the Homer Advisory Planning Commission, the Commission, under Homer City Code (HCC) 21.30.030(c) for approval of a Bulk Petroleum Storage and loading facility at 4755 Homer Spit Road in the Marine Industrial district. The site has been used for bulk petroleum storage and loading facility since before the 1960's. Until now, there were no City records granting nonconforming status for use or structures at this address. The site consists of two lots, a small triangle lot that is 0.19 aces and a larger lot, 1.3 acres. Prior to 1982 the property was governed by the Kenai Peninsula Borough (KPB). The site became nonconforming in 1982 when Ord. 82-15 required a Conditional Use Permit (CUP) for "Bulk petroleum storage."

The application was scheduled for a public hearing as required by HCC 21.94 before the Commission on January 5, 2011. Notice of the public hearing was published in the local newspaper and sent to 31 property owners of 55 parcels (including condominium owners).

At the January 5, 2011 meeting of the Commission, the Commission voted to approve the request with six (6) Commissioners present and one (1) was excused due to a conflict of interest. The remaining five (5) Commissioners approved the nonconforming use.

After due consideration of the evidence presented, the Homer Advisory Planning Commission, hereby makes the following findings of fact and conclusions of law.

Nonconforming Use: HCC 21.61.040 Nonconforming uses. A nonconforming use may be continued so long as it remains otherwise lawful, subject to the following provisions:

a. No nonconforming use shall be enlarged or increased, nor extended to occupy a greater area of land than was occupied as of the date it became nonconforming;

Finding: The use as a "bulk petroleum storage" and loading facility identified in the 1975 and 1981 aerial photos has not expanded beyond the containment area to occupy a greater area of land than was occupied in 1982.

b. No nonconforming use shall be moved in whole or in part to any other portion of the lot that was not occupied by the nonconforming use as of the date it became nonconforming;

Finding: Petroleum storage use identified in the 1975 and 1981 aerial photos has not moved or expanded beyond the containment area.

c. Any new structure built in connection with the nonconforming use must be in full compliance will all applicable provisions of the zoning code and other laws then in effect.

Finding: Future additions and structures must be in full compliance with applicable provisions of local, state and federal regulations.

d. If at any time a nonconforming use is abandoned, changed, discontinued, or ceases to be the primary use of a lot, the use of that lot shall thereafter conform to the code provisions applicable in the zone in which the lot is located, and the nonconforming use shall not thereafter be resumed or allowed to continue.

Finding: The use of "bulk petroleum storage" and loading facility has not been abandoned, changed or discontinued.

Conclusion/Determination: The Homer Advisory Planning Commission hereby grants nonconforming use as a bulk petroleum storage site and loading facility located at 4755 Homer Spit Road, Tract A and Lot 22A Lands End Subdivision.

Date:_____ _____
Chair, Sharon Minsch

Date:_____ _____
City Planner, Rick Abboud

NOTICE OF APPEAL RIGHTS

Pursuant to Homer City Code, Chapter 21.93, any person with interests in land that is affected by this decision may appeal this decision to the Homer Board of Adjustment within thirty (30) days of the date of distribution indicated below. Any decision not appealed within that time shall be final. A notice of appeal shall be in writing, shall contain all the information required by Homer City Code, Section 21.93.080, and shall be filed with the Homer City Clerk, 491 East Pioneer Avenue, Homer, Alaska 99603-7645.

CERTIFICATION OF DISTRIBUTION

I certify that a copy of this Decision was mailed to the below listed recipients on _____, 2011. A copy was also delivered to the City of Homer Planning Department and Homer City Clerk on the same date.

Date:_____ _____

Shelly Rosencrans, Planning Assistant

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-8121
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

STAFF REPORT PL 11-12

TO: Homer Advisory Planning Commission
FROM: Rick Abboud, City Planner
MEETING: January 19, 2011
SUBJECT: Planning Director's Report

Mark your calendars:

March 7, 2011 at 6 pm: joint worksession with Council to discuss code enforcement on the Spit.

Upcoming commissioner absences: February 2nd, James Dolma, Sharon Minsch
February 16, Sharon Minsch

January 10th City Council Meeting Outcome:

Ordinance 10-54 Stormwater and Dirt work. Adopted. Council commented they would like the see a master drainage plan for the community. Public Works Director Meyer gave a rough cost estimate of several hundred thousand dollars, and that the City has been pursuing funding. (No success yet!)

Memorandum 11-003, from City Clerk, Re: Vacate a 28-foot Wide Portion of the 33- foot Section Line Easement Along the West Boundary of Tract 4B-1 Dierich Addition (Plat HM 72-1059), South of Nelson Avenue; Location: City of Homer. APPROVED without discussion.

January 24th City Council Meeting

Ordinance 10-56 Steep Slope: Second reading

Ordinance 10-57 Subdivisions: Second reading

Ordinance 10-58 Rezones: Second reading

Ordinance 11-XX Zoning Enforcement: First reading

Activities

CESLC course in Homer Feb. 16-17, 2011. Learn installation methods of erosion and sediment controls methods.

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-8121
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

STAFF REPORT PL 11-10

TO: Homer Advisory Planning Commission
THROUGH: Rick Abboud, City Planner
FROM: Dotti Harness-Foster, Planning Technician
MEETING: January 19, 2011
SUBJECT: CUP 11-03 for a day care facility in the Residential Office district per HCC 21.16.030(g).

SYNOPSIS: The applicant proposes a day care facility in a single family residence on the corner of Hohe Street and Danview Avenue, in the Residential Office District. A CUP is required for a day care facility per HCC 21.16.030(g). Approval of a CUP requires 5 yes votes.

Applicants:	Susannah Webster (Lessee) PO Box 3570 Homer, AK 99603	
	Carol Cordes (property owner) 146 E. Fairview Homer, AK 99603	
Location:	4136 Hohe Street	
Parcel ID:	17506317	
Size of Existing Lot:	0.55 acres	
Zoning Designation:	Residential Office	
Existing Land Use:	Single family residence	
Surrounding Land Use:	North:	Residential/ Office
	South:	Vacant
	East:	Residential
	West:	Residential/Office
Wetland Status:	No designated wetlands on this parcel.	
Flood Plain Status:	Not in a floodplain.	
BCWPD:	Not within the Bridge Creek Watershed Protection District	
Utilities:	Public utilities service the site.	
Public Notice:	Notice was sent to 34 property owners of 39 parcels as shown on the KPB tax assessor rolls.	

ANALYSIS: The applicant will lease a single family residence on the corner of Hohe Street and Danview Avenue in the Residential Office district. This site is not the principal dwelling of the applicant, so by definition this is a "day care facility" not a "home day care." A "day care facility" in the Residential Office district requires a Conditional Use Permit per HCC 21.16.030(g) and must provide a fenced play area.

Fence: Due to frozen conditions, the play area can't be fenced until June 15, 2011.

Licensing: Day care facilities are licensed and inspected by the state.

Parking: Four (4) parking spaces are required per HCC 21.55.090(a)(17). At least four parking spaces are provided.

The criteria for granting a Conditional Use Permit is set forth in HCC 21.61.020, General conditions, and establishes the following conditions:

a. The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district;

> **Finding 1:** HCC 21.16.030(g) authorizes day care facilities as a conditional use in the Residential Office District.

b. The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.

> **Applicant:** Home day care is often located in residential zones, low traffic, proximity to parks and families make this location ideal.
>
> **Finding 2:** Day care facilities meet the purpose of the Residential Office District which is to provide a mix of low to medium density residential uses with mix of professional offices and services per HCC 21.16.010.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

> **Applicant:** I do not foresee any negative impact on the local area, surrounding homes and businesses.
>
> **Finding 3:** No evidence has been presented that indicates that a day care facility would have a negative impact on the adjoining properties greater than permitted or conditional permitted uses such as museums and offices.

d. The proposal is compatible with existing uses of surrounding land.

> **Applicant:** The use is appropriate for the Residential Office district and fits with other surrounding uses.

Finding 4: The proposed day care facility is compatible with the existing homes and offices.

e. Public services and facilities are or will be, prior to occupancy, adequate to serve the proposed use and structure.

Finding 5: Existing public, water, sewer, and fire services are adequate to serve the proposed day care facility.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

Applicant: The facility will be open from 8:30am- 5:30pm, Monday through Friday, with a maximum of eight (8) children per day. Peak drop-off and pick-up times are 8am-9am, and 5pm-6pm.

Finding 6: The building scale, bulk, coverage, and density will not change. Traffic is comparable to other permitted uses such as homes and clinics. Traffic will be significantly less than other permitted uses such as office or museum.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

Finding 7: The State of Alaska licenses childcare facilities. The licensing process includes background checks and on-site inspections for health. State Fire Marshal review is also required. The day care facility will not negatively affect the health, welfare or safety of the surrounding area or the city as a whole.

h. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

Analysis: From the 2010 Comprehensive Plan, Chapter 4, p 4-5, Residential Office – "Allow for a range of residential and residential compatible uses. Buildings and sites must have a scale and character similar to single family detached or small multifamily homes."

Finding 8: A day care facility in a single family detached home is compatible with residential/office uses and meets the goals and objectives of the Comprehensive Plan.

i. The proposal will comply with the applicable provisions of the Community Design Manual (CDM).

Finding 9: Outdoor lighting must be down lit per HCC 21.59.030 and the CDM

HCC 21.71.040(b). b. In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

1. **Special yards and spaces:** A fenced play area will be located on the south side of the house.
2. **Fences and walls:** The play area will be fenced.
3. **Surfacing of parking areas:** No specific conditions deemed necessary.
4. **Street and road dedications and improvements:** No specific conditions deemed necessary.
5. **Control of points of vehicular ingress and egress:** No specific conditions deemed necessary.
6. **Special provisions on signs:** No specific conditions deemed necessary.
7. **Landscaping:** No specific conditions deemed necessary.
8. **Maintenance of the grounds, building, or structures:** No specific conditions deemed necessary.
9. **Control of noise, vibration, odors or other similar nuisances:** No specific conditions deemed necessary.
10. **Limitation of time for certain activities:** No specific conditions deemed necessary.
11. **A time period within which the proposed use shall be developed:** No specific conditions deemed necessary.
12. **A limit on total duration of use:** No specific conditions deemed necessary.

PUBLIC WORKS COMMENTS: Reviewed and no comment.

FIRE DEPARTMENT COMMENTS: State Fire Marshal review is needed.

PUBLIC COMMENTS: None

STAFF COMMENTS/RECOMMENDATIONS: Five yes votes are required to approve a CUP. Planning Commission approve CUP 11-04 with the following conditions.

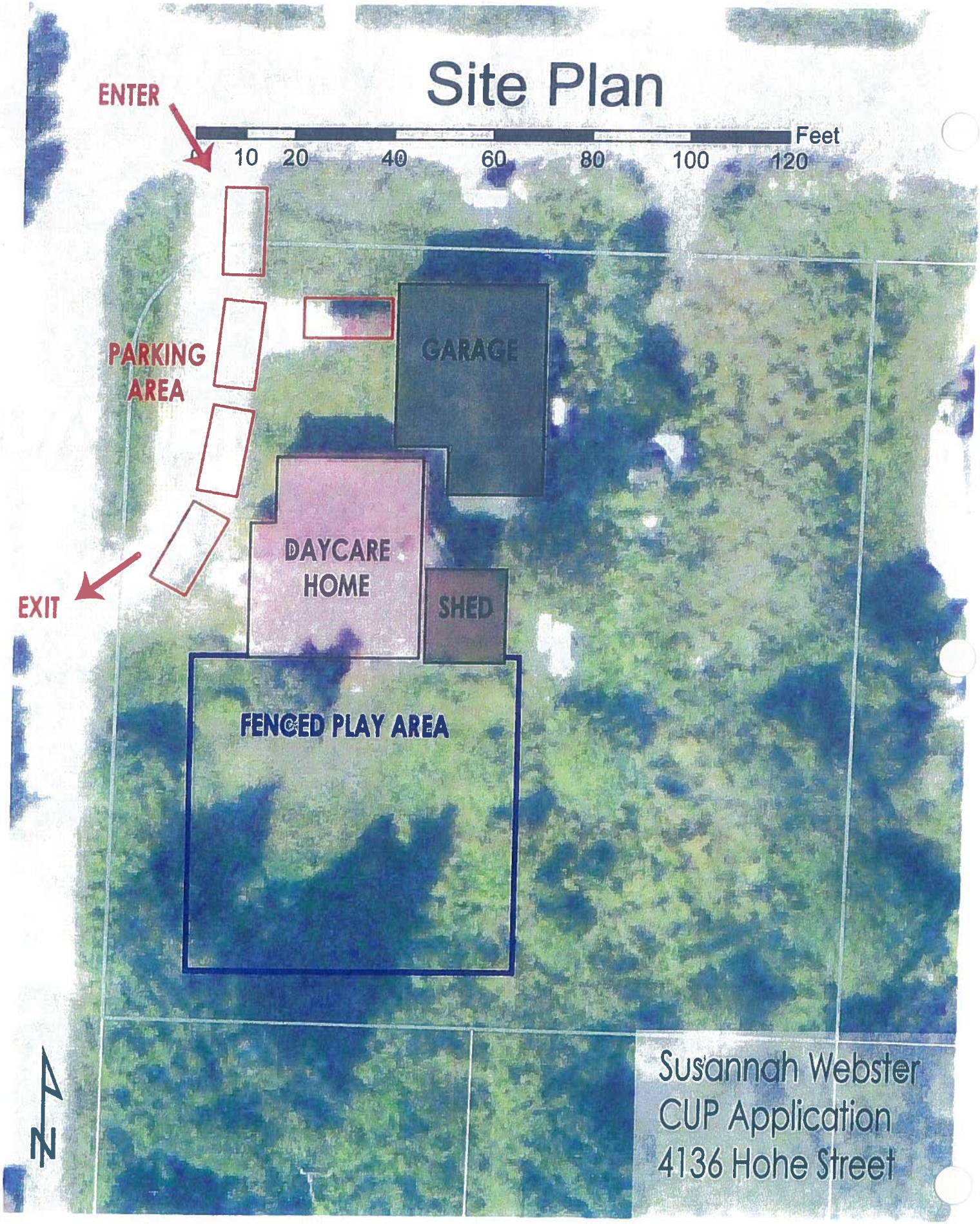
1. The play area must be fenced by June 15, 2011.

2. State Fire Marshal certification and State Child Care licenses are required prior to the opening of the day care facility.

ATTACHMENTS

1. Surrounding uses map
2. Site plan
3. CUP application

Vicinity Map
HOHEST.
Private Residence/ Home Office
Private Residence
Private Residence
Private Residence
W. DANVIEW AVE
Private Residence
Home Daycare proposed location
Private Residence
Physical Therapy Building
Empty lot
Private Residence
Private Residence
W. FAIRVIEW AVE.
N
0
150
300
Feet


Site Plan
ENTER
0 10 20 40 60 80 100 120 Feet
PARKING AREA
GARAGE
DAYCARE HOME
SHED
EXIT
FENCED PLAY AREA
N
Susannah Webster
CUP Application
4136 Hohe Street

City of Homer Planning & Zoning

491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-3106
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

Applicant

Name: Susannah Webster _Telephone No.: 907-235-2310
299-4511

Address: PO Box 3570
Homer, AK 99603

Email: homermun@gmail.com

Property Owner (if different than the applicant):

Name: Carol Cordes Telephone No.: 907-299-2781

Address: 146 E. Fairview
Homer, AK 99603

Email: merlin@alderfergroup.com

PROPERTY INFORMATION:

Address: 4136 Hohe St. Lot Size: .55 acres KPB Tax ID # 17506317
Homer, AK 99603

Legal Description of Property: Fairview Sub replat Lots 7+8 Block 3 Lot 7A, Bl. 3

For staff use:

Date: 12/27/10 Fee submittal: Amount $200.00

Received by: SR Date application accepted as complete 12/27/10

Planning Commission Public Hearing Date: 1/19/11

Conditional Use Permit Application Requirements:

1. A Site Plan

2. Right of Way Access Plan
3. Parking Plan
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning can provide a blank map for you to fill in).
5. Completed Application Form
6. Payment of application fee (nonrefundable)
7. Any other information required by code or staff, to review your project

Circle Your Zoning District

	RR	UR	RO	CBD	TCD	GBD	GC1	GC2	MC	MI	OSR	BCWPD
Level 1 Site Plan	X	X	X			X			X		X	X
Level 1 ROW Access Plan	X	X							X		X	
Level 1 Site Development Requirements	X	X										
Level 1 Lighting			X	X	X	X	X	X	X	X		
Level 2 Site Plan			X	X	X		X	X		X		
Level 2 ROW Access Plan			X	X	X		X	X		X		
Level 2 Site Development Requirements			X*	X	X	X	X	X	X	X		
Level 3 ROW Access Plan						X						
DAP/SWP questionaire				X	X	X	X	X	X	X		

Circle applicable permits. Planning staff will be glad to assist with these questions.

Y(N) Are you building or remodeling a commercial structure, or multifamily building with more than 3 apartments? If yes, Fire Marshal Certification is required. Status: _____

Y(N) Will your development trigger a Development Activity Plan? Application Status: ___

Y(N) Will your development trigger a Storm water Plan? Application Status:

Y(N) Does your site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: _____

Y(N) Is your development in a floodplain? If yes, a Flood Development Permit is required.

Y(N) Does your project trigger a Community Design Manual review? If yes, complete the design review application form. The Community Design Manual is online at: http://www.ci.homer.ak.us/documentsandforms

Y(N) Do you need a traffic impact analysis?

Y(N) Are there any nonconforming uses or structures on the property?

Y/N Have they been formally accepted by the Homer Advisory Planning Commission?

Y/N Do you have a state or city driveway permit? Status: unknown

(Y)N Do you have active City water and sewer permits? Status: _____

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?

There is currently a one bedroom, single family residence, a garage and a storage shed.

2. What is the proposed use of the property? How do you intend to develop the property?

(Attach additional sheet if needed. Provide as much information as possible).

See attached.

CONDITIONAL USE INFORMATION: (Please use additional sheet(s), if necessary)

a. What code citation authorizes each proposed use and structure by conditional use permit?
21.16.030(g)

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district.
home daycare is often located in residential zones, low traffic proximity to parks and families and this location ideal

c. How will your proposed project affect adjoining property values?
not at all

d. How is your proposal compatible with existing uses of the surrounding land?
appropriate for office/residential, fits with other surrounding uses.

e. Are/will public services adequate to serve the proposed uses and structures?
yes

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?
no negative affect. Home daycare is a very low impact business.

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?
not at all

h. How does your project relate to the goals of the Comprehensive Plan? unsure
The 2006 Town Center Plan and the 2008 Comprehensive Plan are online at:
http://www.ci.homer.ak.us/documents/planning

i. The Planning Commission may require you to make some special improvements. Are you planning on doing any of the following, or do you have suggestions on special improvements you would be willing to make? **(circle each answer)**

1. (Y)/N Special yards and spaces.
2. (Y)N Fences, walls and screening.
3. Y(N) Surfacing of parking areas.
4. Y(N) Street and road dedications and improvements (or bonds).
5. Y(N) Control of points of vehicular ingress & egress.
6. Y(N) Special provisions on signs.
7. Y(N) Landscaping.
8. Y(N) Maintenance of the grounds, buildings, or structures.

9. Y(N) Control of smoke, odors, gases, particulate matters, noise, vibration, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances.
10. Y(N) Time for certain activities.
11. Y(N) A time period within which the proposed use shall be developed.
12. Y(N) A limit on total duration of use.
13. Y(N) Special dimensional requirements such as lot area, setbacks, building height.
14. Y(N) Other conditions deemed necessary to protect the interest of the community.
15. Y(N) Control of smoke, odors, gases, particulate matters, noise, vibration, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances.

PARKING

1. How many parking spaces are required for your development? >4
   If more than 24 spaces are required see HCC 21.50.030(f)(1)(b).
2. How many spaces are shown on your parking plan? 5 + 1 space in garage.
3. Are you requesting any reductions? no

Include a site plan, drawn to a scale of not less than 1" = 20' which shows allow existing and proposed structures, clearing, fill, vegetation and drainage.

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

CIRCLE ONE: Owner of record (Lessee) Contract purchaser

Applicant signature: _____ Date: 12/23/10

Property Owner's signature: Carol Cordes Date: 12/23/10

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-8121
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

STAFF REPORT PL 11-09

TO: Homer Advisory Planning Commission
THROUGH: Rick Abboud, City Planner
FROM: Dotti Harness-Foster, Planning Technician
MEETING: January 19, 2010
SUBJECT: CUP 11-02 for an additional tank to the existing bulk petroleum storage facility
PROCEED: Hold the public hearing. Five yes votes are needed to approve a CUP.

SYNOPSIS: This site has been used for bulk petroleum storage and loading facility since before the 1960's. The applicants would like to add a 44 foot in diameter by 30 foot high petroleum tank. The nonconforming use as a bulk petroleum storage and loading facility was approved at the January 5, 2011 HAPC meeting. In order to expand, a Conditional Use Permit is needed for:

HCC 21.30.030(f). **"Bulk petroleum storage"**

HCC 21.30.040(d). **"No lot shall contain more than 8,000 square feet of building area (all buildings combined), nor shall any lot contain building area in excess of 30 percent of the lot area without an approved conditional use permit."**

Applicants:	Harbor Enterprises Inc., dba Petro Marine, POBox 389, Seward, AK 99664
Location:	4755 Homer Spit Road
Parcel ID:	18103406 a 1.3 acre parcel and 18103407 a 0.19 acre parcel
Legal:	Tract A and Lot 22A Lands End Subdivision
Zoning Designation:	Marine Industrial
Land Use:	North: Ferry Terminal South: Condominiums East: Hotel West: RV Park/Hotel, water tank, maintenance building.
Wetland Status:	No designated wetlands
Flood Plain Status:	X zone, 500 year flood event
BCWPD:	Not within the Bridge Creek Watershed Protection District
Utilities:	Public water and sewer serve the site.
Public Notice:	Notice was sent to 31 property owners of 55 parcels as shown on the KPB tax records and includes condominium owners.

Introduction: This site consists of two lots, a small 0.19 acre parcel and a larger 1.3 acre parcel. The applicants would like to construct a 44 foot in diameter by 30 foot high fuel tank in the existing containment area which is located on the larger lot. On January 5, 2011 the HAPC granted nonconforming use as a "bulk petroleum storage" facility. This CUP addresses ALL structures and additions from 1982 (nonconformity) to the present.

Tank size: The table below helps to provide a dimensional comparison of the existing tanks to that of the proposed tank. All the existing and the proposed tank will be located with the containment area on the larger lot. The existing tanks range from 12 feet to 52 feet in diameter with a height of 30 feet. The proposed tank will be 44 feet in diameter by 30 feet high.

Tank #	Diameter	Height	Yr. Built
6	12 ft	30 ft	1941
7	25 ft	30 ft	1951
8	20 ft	30 ft	1951
9	30 ft	30 ft	1960
10	52 ft	30 ft	1954
11	39 ft	30 ft	1954
12	28 ft	30 ft	1954
13	10.5 ft	30 ft	1955
Proposed Tank	44 ft	30 ft	2011
Shed	96 sf		1970
Office/Warehouse	5,480 sf		1971

Permits: Harbor Enterprise is waiting for Fire Marshal approval. All other agencies have reviewed and accepted the proposal as in:

A Coastal Management Consistency Review was completed by the Kenai Peninsula Borough.
Dept. of Environment Conservation
Army Corps of Engineers
Dept. of Fish and Game
Dept. of Natural Resources
US Coast Guard
Environmental Protection Agency
FEMA: The additional tank will be located in the X Flood Zone, or 500 yr. floodplain.
HCC 21.41 does not regulate the X zone.

Containment/Stormwater: The site's containment wall was upgraded in 1995. The concrete wall surrounds all the fuel tanks. The containment area is approximately 29,000 square feet and lined with an impervious shield. All the stormwater from the containment area drains into an oil/water separator. No new impervious surface is planned with this project and an SWP is not required. Per the Commission's request the Dept. Environmental Conservation Certificate of Approval for Oil Discharge Prevention and Contingency Plan is attached.

8,000 square feet of building area and/or 30% of the lot area: If the 29,000 square foot containment area is regarded as "building area" then combined with the office/warehouse building, the total "building area" is 34,480 square feet or approximately 60% of the larger lot area. Based on the above, a CUP is needed for more than 8,000 square feet of building area and/or building area in excess of 30% of the lot area, large lot only. This CUP includes improvements completed between 1982, the year the site became nonconforming, to the present. In part, these improvements include an office addition in 1987, a 2,000 square foot steel warehouse in 1993 and plant upgrades in 1995. The calculations below will be confirmed by an as-built survey:

29,000 sf Containment area
5,480 sf Office/warehouse
34,480 sf Total "building area" on the larger lot

The criteria for granting a Conditional Use Permit are set forth in HCC 21.61.020.

a. **The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district.**

Analysis: In 1982, Ord. 82-15 "Bulk petroleum storage" became a Condition Use Permit in the MI district. In 2004, Ord. 04-11(A)) required a Conditional Use Permit for any "lot contain(ing) more than 8,000 square feet of building area, nor shall any lot contain building area in excess of 30% of the lot area without an approved conditional use permit."

The containment area is approximately 29,000 square feet. When combined with the office/warehouse building (5,480 square feet) the total building area is 34,480 square feet which is approximately 60% of the larger lot area.

Finding 1: HCC 21.30.030(f) authorizes "Bulk petroleum storage" as a conditional use and structures in the Marine Industrial district.

Finding 2: HCC 21.30.040(d) requires a CUP when lots contain more than 8,000 square feet of building area (all buildings combined), or have a building area that covers more than 30 percent of the lot area.

b. **The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.**

Analysis: "The purpose of the Marine Industrial District is primarily to provide adequate space for those water-dependent industrial uses that require direct marine access for their operation, such as fishing, fish processing, marine transportation, off-shore oil development and tourism; giving priority to those water-dependent uses over other industrial, commercial and recreational uses." per HCC 21.30.010.

Finding 3: Adding a 44 foot in diameter by 30 foot high petroleum tank within the existing containment area is compatible with the Marine Industrial district. Fuel stored in the tanks service water-dependent users such as the fishing, marine transportation and tourism industries.

Finding 4: The majority of the fuel deliveries to the petroleum storage facility are ship to shore. HCC 21.30.010 gives priority to water-dependent uses.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

Applicant: No effect. Original project completed in the 1950s prior to other developments on the Spit. Developments after that time have industrial use considered in the property values.

Finding 5: No evidence has been presented indicating that adjoining properties have been, or will be negatively affected by the addition of a 44 foot diameter by 30 foot high fuel tank.

d. The proposal is compatible with existing uses of surrounding land.

Finding 6: Adding a 44 foot in diameter by 30 foot high petroleum tank within the existing containment area is compatible with the ferry terminal, port maintenance buildings, municipal water tank, and fish processing plants.

e. Public services and facilities are or will be adequate to serve the proposed use and structure.

Finding 7: Public services and facilities are adequate to serve the project. Public water and sewer serve the property. Homer Spit Road is state maintained.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

Finding 8: The proposed tank, 44 foot in diameter by 30 foot high, is similar to the other tanks and located in the existing containment area. The scale, bulk coverage and density are similar to the existing tanks.

Finding 9: Majority of the fuel deliveries are ship to shore, so the traffic generation is not expected to change.

Finding 10: No evidence has been presented that indicates the bulk petroleum storage and loading facility causes harmful or undesirable effects to the Marine Industrial area.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

Analysis: Harbor Enterprise is waiting for Fire Marshal approval. All the agencies below have reviewed and accepted the proposal:

A coastal management consistency review by the Kenai Peninsula Borough.
Dept. of Environment Conservation
Army Corps of Engineers
Dept. of Fish and Game
Dept. of Natural Resources
US Coast Guard
Environmental Protection Agency
FEMA: The additional tank will be located in the X Flood Zone, or 500 yr. floodplain. HCC 21.41 does not regulate the X zone.

Finding 11: Harbor Enterprise is waiting for Fire Marshal approval. All other agencies have reviewed and accepted the proposal. The reviews include evaluation for health and safety standards. The bulk petroleum facility is not detrimental to the health, welfare or safety of the surrounding area or the city as a whole.

h. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

Analysis: The 2010 Comprehensive Plan in Chapter 8, page 2, Goal 6: "Strengthen the marine trade, mariculture, and shipping industries."

Chapter 4, page 4-17 Objective C: "Encourage complementary commercial activity between the CBD and Homer Spit that benefits both in the appropriate locations and builds upon their geographic strengths."

Finding 12: This proposal meets the goals and objectives of the 2010 Comprehensive Plan.

i. The proposal will comply with all applicable provisions of the Community Design Manual.

Analysis: Outdoor furnishings are encouraged in the Marine Zoning districts. For security reasons the site is completely fenced and locked on evening and weekends.

Finding 13: The facility is completely surrounded with a security fence so outdoor furnishings are not appropriate. The project complies with the applicable provisions of the Community Design Manual.

In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

1. **Special yards and spaces.** No conditions deemed necessary.
2. **Fences, walls and screening.** For security reasons the entire site is fenced.
3. **Surfacing of vehicular ways and parking areas.** No conditions deemed necessary.
4. **Street and road dedications and improvements (or bonds).** No conditions deemed necessary.
5. **Control of points of vehicular ingress and egress.** No conditions deemed necessary.
6. **Special restrictions on signs.** No conditions deemed necessary.
7. **Landscaping.** No conditions deemed necessary.
8. **Maintenance of the grounds, buildings, or structures.** No conditions deemed necessary.
9. **Control of noise, vibration, odors, lighting or other similar nuisances.** No conditions deemed necessary.
10. **Limitation of time for certain activities.** No conditions deemed necessary.
11. **A time period within which the proposed use shall be developed and commence operation.** No conditions deemed necessary.
12. **A limit on total duration of use or on the term of the permit, or both.** No conditions deemed necessary.

PUBLIC WORKS COMMENTS: Reviewed and no comments.

FIRE DEPARTMENT COMMENTS: Fire Marshal approval needed.

STAFF COMMENTS/RECOMMENDATIONS: *Approval of a CUP requires five yes votes.*

Approve CUP 11-02 located at 4755 Homer Spit Road, Tract A and Lot 22A Lands End Subdivision with Findings 1-13 to allow:

1. "Bulk petroleum storage" per HCC 21.30.030(f).

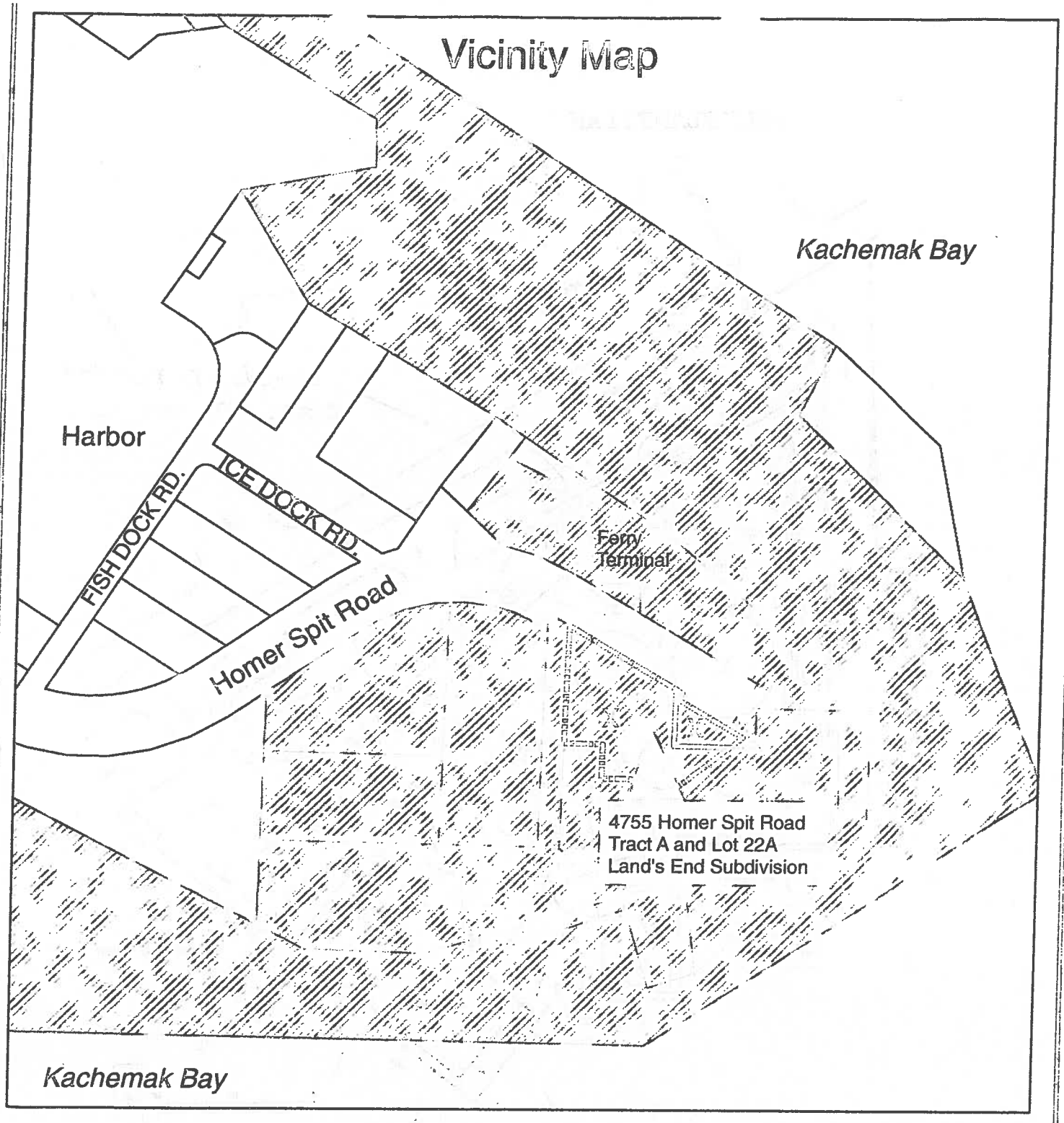
2. The addition of a fuel tank that is 44 foot in diameter by 30 foot high and located within the existing containment area.

3. The lot may contain more than 8,000 square feet of building area (including the containment area), and contain building area in excess of 30 percent of the lot area per HCC 21.30.030(f).

4. Include improvements such as an office addition in 1987, a 2,000 square foot steel warehouse in 1993 and plant upgrades in 1995.

ATTACHMENTS

1. Vicinity Map
2. 2005 site layout
3. Oil Discharge Prevention and Contingency Plan certificate
4. CUP application (discrepancies in square footage of warehouse/office area)



City of Homer
Planning and Zoning Department
December 20, 2010

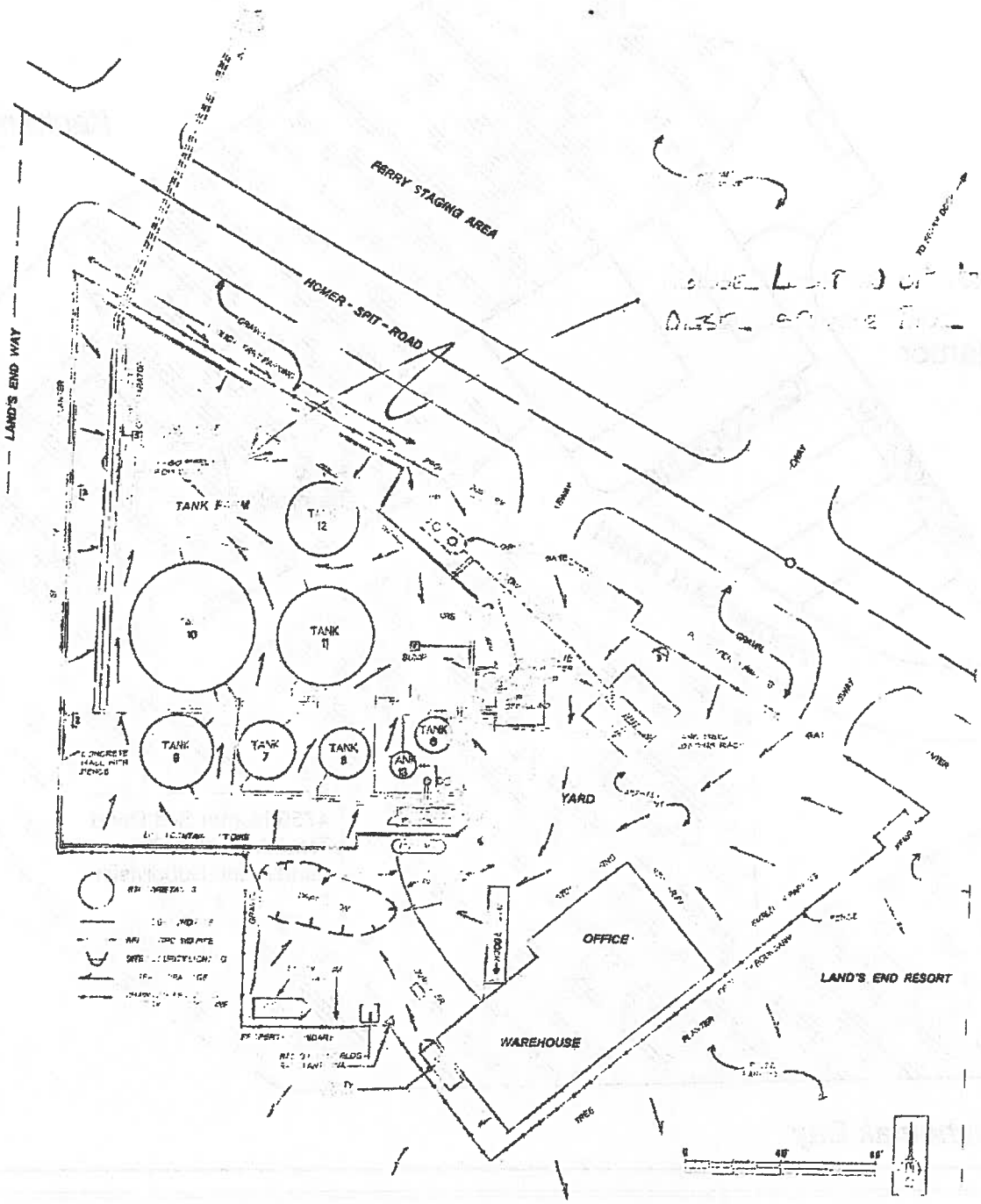
Request for acceptance of a non-conforming use, Petro Marine bulk petroleum storage
4755 Homer Spit Road

Shaded areas are within 300 feet and property owners notified

Feet
0 150 300 600

Disclaimer:
It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.

BULK PLANT PLAN



PETROMARINE SERVICES - HOMER

MAIN BULK PLANT SITE LAYOUT

Prepared July 2005 by R.T. Rozak from Terminal ... Tank Survey, Ability Survey, Atlantic ... Kenai Peninsula Borough Assessor Map 161-034, dated 2/2/05, and taped measurements of the site security fence and tank farm containment dike by Petromarine personnel, July 2005

ALASKA DEPARTMENT
of
Environmental Conservation
Certificate of Approval
for
Oil Discharge Prevention and Contingency Plan

Certificate Number: 07CER-025

Plan Number: 07-CP-2055

PlanTitle: **Petro Marine Services Homer Bulk Plant Oil Discharge Prevention and Contingency Plan**

Name of Facility: **Petro Marine Services Homer**

Facility Physical Location: **Homer, Alaska**

Facility Mailing Address: **4755 Homer Spit Rd., Homer, Alaska 99603**

Telephone: **(907) 235-8818** Fax: **(907) 235-2144**

Region(s) of Operation (18 AAC 75.495): **Cook Inlet Region**

Effective Date of Approval: **July 31, 2007** Expiration Date: **July 30, 2012**

This approval is subject to the terms and conditions of the applicable Department of Environmental Conservation contingency plan approval letter and continuing compliance with the requirements of AS 46.04 and 18 AAC 75.

A renewal application for contingency plan approval must be received by the Department at least one-hundred-eighty days prior to the expiration date noted above.

Betty Schorr 07/31/2007

Betty Schorr, Approving Authority **Date**
Manager, Industry Preparedness Program

City of Homer Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645
Telephone (907) 235-3106
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

RECEIVED
DEC 23 2010
CITY OF HOMER
PLANNING/ZONING

Applicant

Name: Harbor Enterprises Inc dba Petro Marine Services Telephone No.. 907 224 3190

Address: PO Box 389 Seward, AK 99664 Email:caroli@harborent.com, jimb@harborent.com

Property Owner (if different than the applicant):

Name: _____ Telephone No.: _____

Address: _____ Email: _____

PROPERTY INFORMATION:

Address: 4755 Homer Spit Rd Lot Size: 1.33 ac & 0.19 acres Tax ID # 18103407 & 18103406

Legal Description of Property: Tract A Lands End Subdivision and Lot 22 A LANDS END SUB

For staff use:
Date: 12/23/10 Fee submittal: Amount Check in process
Received by: _____ Date application accepted as complete _____
Planning Commission Public Hearing Date: 1/19/2011

Conditional Use Permit Application Requirements:

1. A Site Plan
2. Right of Way Access Plan
3. Parking Plan
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning can provide a blank map for you to fill in).
5. Completed Application Form
6. Payment of application fee (nonrefundable)
7. Any other information required by code or staff, to review your project

Circle Your Zoning District

	RR	UR	RO	CBD	TCD	GBD	GC1	GC2	MC	MI	OSR	BCWPD
Level 1 Site Plan	x	x	x			x			x		x	x
Level 1 ROW Access Plan	x	x							x		x	
Level 1 Site Development Requirements	x	x										
Level 1 Lighting			x	x	x	x	x	x	x	x		
Level 2 Site Plan			x	x	x		x	x		x		

Level 2 ROW Access Plan	x	x x	x	x	x
Level 2 Site Development Requirements	x *				
Level 3 ROW Access Plan		x x	x x	x x	x
DAP/SWP questionaire		x x	x x x	x x	x

Circle applicable permits. Planning staff will be glad to assist with these questions.

Y/N Are you building or remodeling a commercial structure, or multifamily building with more than 3 apartments? If yes. Fire Marshal Certification is required. Status: NO

Y/N Will your development trigger a Development Activity Plan? Application Status: NO

Y/N Will your development trigger a Storm water Plan? Application Status: NO

Y/N Does your site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: NO

Y/N Is your development in a floodplain? If yes, a Flood Development Permit is required. YES

Y/N Does your project trigger a Community Design Manual review? NO If yes, complete the design review application form. The Community Design Manual is online at: http://www.ci.homer.ak.us/documentsandforms

Y/N Do you need a traffic impact analysis? NO

Y/N Are there any nonconforming uses or structures on the property? NO

Y/N Have they been formally accepted by the Homer Advisory Planning Commission? N/A

Y/N Do you have a state or city driveway permit? Status: NO

Y/N Do you have active City water and sewer permits? Status: NO

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?

   Bulk fuel storage, retail and wholesale sales of refined petroleum products and lubricants and related products. Warehouse and office building on site, WH is approx 3000sqft and office is approx 1000sqft.

2. What is the proposed use of the property? How do you intend to develop the property? (Attach additional sheet if needed. Provide as much information as possible).

Use is the same as it has been since early 1950s. No change.

CONDITIONAL USE INFORMATION: (Please use additional sheet(s), if necessary)

a. What code citation authorizes each proposed use and structure by conditional use permit? Conditional uses and structures in the MI district:
   HCC 21.30.030(f) Bulk petroleum storage.
   HCC 21.30.040(c) Building area in excess of 8,000 sf or 30% of the lot area.

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district. Marine Industrial; storage of bulk petroleum products

c. How will your proposed project affect adjoining property values? No effect. Original project completed in the 1950s prior to any development. Development after that time has industrial use considered in property values.

d. How is your proposal compatible with existing uses of the surrounding land? In marine industrial area which is zoned for this use

e. Are/will public services adequate to serve the proposed uses and structures?

Yes

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?

N/A the facility is in existence and has been in use for many decades.

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?

N/A Facility is already in existence and does not have a detrimental effect.

h. How does your project relate to the goals of the Comprehensive Plan?
The 2006 Town Center Plan and the 2008 Comprehensive Plan are online at:
http://www.ci.homer.ak.us/documents/planning
N/A Facility and business is established and has been since early 1950s and predates all plans. Is a viable and contributing business to the economic vitality of Homer.

i. The Planning Commission may require you to make some special improvements. Are you planning on doing any of the following, or do you have suggestions on special improvements you would be willing to make? **(circle each answer)**

1. Y/N Special yards and spaces. YES
2. Y/N Fences, walls and screening. YES
3. Y/N Surfacing of parking areas. YES
4. Y/N Street and road dedications and improvements (or bonds). NO
5. Y/N Control of points of vehicular ingress & egress. YES
6. Y/N Special provisions on signs. YES
7. Y/N Landscaping. YES
8. Y/N Maintenance of the grounds, buildings, or structures. YES
9. Y/N Control of smoke, odors, gases, particulate matters, noise, vibration, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances. YES
10. Y/N Time for certain activities. NO
11. Y/N A time period within which the proposed use shall be developed. N/A
12. Y/N A limit on total duration of use. NO
13. Y/N Special dimensional requirements such as lot area, setbacks, building height. NO
14. Y/N Other conditions deemed necessary to protect the interest of the community. YES

15. Y/N Control of smoke, odors, gases, particulate matters, noise, vibration, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances. YES

PARKING

1. How many parking spaces are required for your development? Office requires 1 parking space per 300 sf and warehouse/storage requires one parking space per 3,000 sf.
   Approximately 5
   If more than 24 spaces are required see HCC 21.50.030(f)(1)(b).
2. How many spaces are shown on your parking plan? At least 5
3. Are you requesting any reductions? NO

Include a site plan, drawn to a scale of not less than 1" = 20' which shows allow existing and proposed structures, clearing, fill, vegetation and drainage.

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

CIRCLE ONE: Owner of record Lessee Contract purchaser

Applicant signature: _____ Date: _____

*Property Owner's signature: Carol a Lindsey Date: ___

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-8121
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

STAFF REPORT PL 11-06

TO: Homer Advisory Planning Commission
THROUGH: Rick Abboud, City Planner
FROM: Julie Engebretsen
MEETING: January, 5, 2011
SUBJECT: CUP 2011-01 Bridge Creek Fire Hazard Mitigation

SYNOPSIS: The City of Homer, Kenai Peninsula Borough, and the University of Alaska own property surrounding the Bridge Creek Reservoir. They are applying for a conditional use permit to cut dead standing timber and lay it on the ground in order to reduce the fire hazard. Among the activities that require a conditional use permit, is approval from the HAPC to cut trees within the stream buffers, and within the 500 foot reservoir buffer.

This is a quasi judicial action, and requires five yes votes for approval.

Applicants:	Walt Wrede, City Manager City of Homer 491 E Pioneer Ave Homer, AK 99603 Max Best, Planning Director Kenai Peninsula Borough 144 N. Binkley St. Soldotna, AK 99669 University of Alaska Statewide Office of Land Management 1815 Bragaw St Ste 101 Anchorage AK 99508
Requested Action:	Approval of a conditional use permit for activities within the stream and reservoir buffers and within the Conservation District.
Location:	Properties surrounding the Bridge Creek Reservoir, on Crossman Ridge Road
Parcel ID:	17305301, 7062, 5120, 5199, 5118, 5234, 5111, 5236, 5235, 7064, 7057, 7053, 7060, 7059
Lot Size(s)	Lot sizes range from 0.13 acres to 80 acres. Total acreage is 410.9 acres according to the Kenai Peninsula Borough tax records, and includes 14 lots.
Zoning Designation:	Bridge Creek Watershed Protection District. City lands with city limits are also zoned Conservation. Eight parcels are within city limits and zoned conservation. (See attached zoning map)
Existing Land Use:	Vacant and water treatment facilities (dam and pump house)
Surrounding Land Use:	North: Vacant South: Vacant/residential

	East: Vacant/large lot Residential West: Vacant
Comprehensive Plan:	Chapter 4 Goal 2: Maintain the quality of Homer's natural environment and scenic beauty. Objective E: Collaborate with jurisdictions outside of the City of Homer, as well as state and federal agencies, to ensure that environmental quality is maintained.
Wetland Status:	Homer Wetland Map indicates riparian wetlands along stream corridors, and some discharge slope wetlands.
Flood Plain Status:	Zone D: Flood Hazards undetermined.
BCWPD:	Within the Bridge Creek Watershed Protection District
Utilities:	No city water or sewer is available. Roads and electricity are very limited.
Public Notice:	Notice was sent to 19 property owners of 46 parcels as shown on the KPB tax assessor rolls. An additional courtesy notice was sent to 94 owners of 155 properties at the request of the applicant.

Introduction

The Kenai Peninsula Borough received economic stimulus funds for the spruce bark beetle mitigation program. The Spruce Bark Beetle program (SSB) would like to use the funds to reduce the fire hazard on Borough, City and University lands around the Bridge Creek Reservoir. All three property owners are applying for a Conditional Use Permit from the Homer Advisory Planning Commission, with the City of Homer administration being the primary applicant. The Borough will manage the project and work with the contractor.

Project History

The SBB approached the City and the City council about this project, with the intent of logging the land and removing the trees. City code requires the concurrence of the soil and water conservation district for timber activities in the watershed, the district held a meeting in October. Notes from the meeting are attached. The formal recommendations from Mitch Michaud, NRCS Forester, are attached to this staff report. After receiving comments from NRCS, the city and SBB revised the work plan to avoid skidding logs from the site, or removing them at all. Pages 14-16 of the application contain the revised work plan.

Actions such as scarification prior to planting seedlings are no longer part of the proposal. The SBB document titled "Manpower and Mechanical Equipment Operations Standards" was not updated with the new plan, but it is understood by all parties that the application as written on pages 14-16 is the current proposal, and what the HAPC is being asked to consider.

Work Plan

The proposal in front of the Commission is not to log the properties. Rather, the proposal is to have a combination of logging equipment and chainsaw fallers cut the dead timber and leave it on the ground, to reduce the fire hazard risk. Please refer to pages 14-16 of the application for a detailed explanation. The trees would be delimbed, and brush scattered.

Reason for concern over fire hazard

On page 15 of the notes from the Soil and Water Conservation District, is an explanation of why extreme fires are a serious problem in beetle killed forests, and for the city water supply. The presence of a lot of dead trees can allow a fire to burn very intensely, with enough heat to alter the soil characteristics. If a fire were to alter the soil, a spruce forest may not regrow for decades. The District further notes the soils around the reservoir are highly erosive. Bare ground, or alteration of soils is undesirable for water quality. Conventional logging, with road building (even 'winter roads') and log skidding, compact the soil and are undesirable. Also due to the level of decay in the trees, it is not very good fire wood so there is little value in removing the trees form the site. The applicants have concluded the greatest fire hazard reduction with the least impact to the watershed is to delimb and cut down the dead trees, scatter the brush, and leave the trees on the ground.

A few definitions....see photos in attachments

"Jackstraw timber" loosely means fallen, intertwined dead timber, that result from dead trees breaking off or falling over time into a jumbled pile. Jackstraw timber conditions are undesirable because its hard for moose and people to move through, and can delay regeneration. See photo on page 87 of the application.

"Feller-buncher" – is a piece of heavy machinery, typically on tracks like an excavator or shovel. Instead of a bucket attachment to dig with, there is a cutting head attached. The cutting attachment has grapples that can grab a tree in the upright position. There is a saw on the bottom of the cutting head that cuts the tree off at the stump (or the height the operator decides). The feller buncher can then rotate the cutting/grabbing head, and lay the tree on the ground. A feller buncher with a 'processing head' allows the machine to strip the braches from the tree. The Borough refers to this type of machinery or something similar, as 'primary machinery' in the attached application.

Activities that require a conditional use permit

There are three reasons this project requires CUP approval.

A. 21.40.110, Stream buffers
B. 21.40.130 Exceptions to buffers
C. 21.34.030 (d) (Conservation Zone): Other conservation uses that will enhance the conservation district, approved by the Planning Commission, provided, however, a finding of no adverse impact to the integrity of the fish and wildlife resources and habitat must be found.

Please see page 17 of the application. The applicant notes that 21.40.80 Timber Harvesting, and 21.40.100 Erosion Sediment Control are not required. The applicant provided information on how the proposal will meet the intent of these sections anyway. After the initial submission, staff found that an erosion and sediment control plan is a code requirement when applying for an exception to the 500 foot reservoir buffer. The applicant revised the initial application to include the required plan.

Part A: 21.40.110 Stream buffers. a. A stream buffer must be preserved and maintained along all perennial and intermittent streams in the BCWP district. The stream buffer must be at least 50 feet on each side of the stream measured from the top of the stream bank. Buildings and other features that require grading or construction must be set back at least ten additional feet from the edge of the buffer.

To avoid a decrease in the buffer's effectiveness in protecting the stream the buffer shall remain in natural and undisturbed vegetation.

b. The following exceptions or intrusions into the stream buffer may be granted by conditional use permit approved by the Planning Commission:

1. Street, driveway, culvert, recreational features, intakes, utilities, bridges or other crossings, provided that they are designed to minimize the amount of intrusion into the buffer. The aforementioned structures and improvements may run generally within the stream buffer only where no other access route is available and when their design minimizes the amount of intrusion of the stream buffer.

Finding 1: No other access routes are available and stream crossings are needed to access some of the lots.

5. Timber harvest operations, provided that:

a. along perennial streams the buffer must include, but is not limited to, a 50-foot permanent buffer of undisturbed natural vegetation and an additional 75-foot buffer area of selective logging leaving no less than 30% of the original standing timber; and

b. along intermittent streams or drainages the buffer must include, but is not limited to, a 25-foot buffer area of selective logging leaving no less than 30% of the original standing timber; and

c. vegetation sufficient to stabilize the soil shall be established on all disturbed areas.

Condition 1: Timber falling shall meet the requirements of 21.40.110(b)(5).

21.40.120 Bridge Creek Reservoir buffer. A 500-foot reservoir buffer must be maintained from the banks of the Bridge Creek Reservoir, measured at normal full water level. The reservoir buffer must remain in undisturbed natural vegetation. The facilities and improvements of the city water utility are exempt from this section.

Part B: 21.40.130 Exceptions to buffers. a. A conditional use permit is required for any intrusion into a required buffer including, but not limited, to those intrusions and exceptions listed in HCC § 21.40.110 (b). When any approved intrusion into a buffer involves excavation or clearing, the conditional use permit must require the disturbed area to be revegetated immediately.

b. Upon application of the property owner, the Planning Commission may grant a conditional use permit to reduce the **reservoir buffer requirements** on a case-by-case basis only if it finds that:

1. The full reservoir buffer would result in an exceptional hardship, depriving the property owner of the economic advantages of ownership, i.e., all potential for appreciation and all opportunity for development of the property. Mere failure to realize the maximum appreciation or full development potential from the property shall not be considered an exceptional hardship.

Finding 2: The property owners are not seeking appreciation or development of the properties. The applicants have applied for an exception to the reservoir buffer requirements to reduce the risk and potential intensity of a future wildfire. A wildfire under current conditions could cause economic hardship for the City of Homer and consumers of the City of Homer water utility due to increased water treatment costs.

2. The intrusion into the reservoir buffer is the minimum necessary to relieve that exceptional hardship.

Finding 3: The intrusion into the reservoir buffer is the minimum needed to substantially reduce the fire hazard risk, and maintain good forestry practices.

3. The intrusion will not cause a degradation of the water quality or endanger the suitability of the Bridge Creek Reservoir as a water supply source for the City's public water utility. In making such findings, the Planning Commission must consider topography, water quality protection, erosion potential, surrounding uses, the size of the parcel, and any other relevant factors. A site plan and an erosion and sediment control plan must be provided by the property owner. The Planning Commission must impose any conditions necessary to protect the water quality and ensure continued suitability of the Bridge Creek Reservoir as a water supply source for the City's public water utility.

Finding 4: The long term water quality of the reservoir is best protected by reducing the fire hazards in the immediate area. The standing dead timber is a fire hazard and a wildfire could cause significant siltation into the reservoir. Reducing the fuel load in this area reduces the risk of a catastrophic fire over the long term.

Pact C: 21.34.030 (d) (Conservation Zone): "Other conservation uses that will enhance the conservation district, approved by the Planning Commission, provided, however, a finding of no adverse impact to the integrity of the fish and wildlife resources and habitat must be found."

Staff analysis: over the long term, there will be little impact on fish and wildlife resources. The land is owned by the city and is used to protect the public drinking water supply. There is no change in land use proposed. These conservation lands will remain in conservation. Best management practices will be followed for stream crossings and clearing within stream buffers.

Staff contacted Fish and Game, and found that no permits are required for stream crossings above the dam.

Finding 5: The proposed activities will have no adverse impact to the integrity of fish and wildlife resources.

The criteria for granting a Conditional Use Permit is set forth in HCC 21.61.020.

a. The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district.

Applicant: HCC 21.40.045 Zoning Permit, 21.40.060 Conditional Uses, 21.40.080 Timber Harvesting, 21.40.100 Erosion and Sediment Control, 21.40.110 Stream Buffers, 21.40.120 Reservoir Buffer, 21.40.130 Exceptions to buffers

Staff addition: 21.34.030 (d) Other conservation uses

Finding 6: Homer City Code authorizes each proposed use by conditional use permit in the Conservation and Bridge Creek Watershed Protection Districts.

b. The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.

Purpose of the Conservation District: 21.34.010 Purpose. The purposes of the conservation district are primarily to identify, protect and enhance those public lands that have been identified by state or federal agencies or the City of Homer as habitat critical to the maintenance of fish and wildlife resources, and secondarily including parks whose recreation activities and facilities are passive in nature, e.g., those activities that include wildlife viewing, nature walks, educational and interpretive uses and other uses that do not change the character of the land or disrupt fish and wildlife.

Purpose of the Bridge Creek Watershed Protection District: 21.40.010 Purpose. The purpose of this chapter is to prevent the degradation of the water quality and protect the Bridge Creek Watershed to ensure its continuing suitability as a water supply source for the City's public water utility. These provisions benefit the public health, safety, and welfare of the residents of the City of Homer and other customers of the city's water system by restricting land use activities that would impair the water quality, or increase the cost for treatment.

Applicant: (see purpose BCWPD, above) The project is consistent with the purpose of the zoning district. This project is intended to reduce the fire hazard around the reservoir. A large, hot burning fire could cause serious erosion and ash problems for the reservoir. Fires in this area would be difficult to fight for fire fighters and the City does not wish to see bulldozers or fire retardants use there for obvious reasons. The project would reduce fire danger and expedite restoration of forest health so that water quality can be protected into the future.

Staff Discussion: Conservation district resources are protected and maintained by not constructing roads or encouraging more intense long term use of the property.

Finding 7: The proposed use is compatible with the purpose of the zoning districts in which the lots are located.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

Applicant: This project will improve property values because the fire danger on adjacent wild lands will be reduced, scenic values will be improved, and habitat for wildlife will be enhanced.

Finding 8: Property values of adjoining property will not be negatively affected. The land use of the property will not change; the lands will remain in conservation and Bridge Creek Watershed zoning. Removal of dead timber will reduce the likelihood of a future wildfire which would be detrimental to adjoining property values.

d. The proposal is compatible with existing uses of surrounding land.

Applicant: This project is compatible with existing uses of the surrounding land. The surrounding tracts include large sections of undeveloped land, scattered residential uses, and infrastructure related to the

water utility. There is no new development proposed, just fire mitigation, forest restoration, and water quality protection measures described herein.

Finding 9: The proposal will not change the existing land use nor the usability of the surrounding land.

e. Public services and facilities are or will be, prior to occupancy, adequate to serve the proposed use and structure.

Applicant: No public services are required for this project.

Finding 10: No public services are required for this project.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

Applicant: The project will have no impact with respect to harmony, bulk, coverage and density upon adjacent neighborhoods. The applicants view this as an improvement to the area that will benefit adjacent land owners.

Finding 11: The project will have no impact with respect to harmony, bulk, coverage and density upon adjacent neighborhoods nor will it cause undue harmful effects on the rural neighborhood character.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

Applicant: No, on the contrary, this project is proposed to enhance public safety by reducing the fire danger and the threat to adjacent residences and subdivisions, protecting water utility infrastructure, and protecting the quality of the only public source of drinking water.

Finding 12: The project will be beneficial to the health, safety and welfare of the surrounding area by reducing the fire hazard, and beneficial to the city as a whole by protecting the water quality of the public water supply.

h. The proposal does or will comply with the applicable regulations and conditions specified in this title for such use.

Finding 13: The proposal complies with applicable regulations. The applicants shall comply with all conditions of this permit.

i. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

Applicant: The Comprehensive Plan emphasizes public health and safety in many sections. This proposed use is entirely consistent with the Comprehensive Plan and the Bridge Creek zoning district.

Staff comment: See page 2 of the staff report, Comprehensive Plan Chapter 4 Goal 2 Objective E.

Finding 14: The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

j. The proposal will comply with all applicable provisions of the Community Design Manual.

Finding 15: The Community Design Manual does not apply to this project.

In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

1. **Special yards and spaces.**
2. **Fences, walls and screening.**
3. **Surfacing of vehicular ways and parking areas.**
4. **Street and road dedications and improvements (or bonds).**
5. **Control of points of vehicular ingress and egress.**
6. **Special restrictions on signs.**
7. **Landscaping.**
8. **Maintenance of the grounds, buildings, or structures.**
9. **Control of noise, vibration, odors, lighting or other similar nuisances.**
10. **Limitation of time for certain activities.**
11. **A time period within which the proposed use shall be developed and commence operation.**
12. **A limit on total duration of use or on the term of the permit, or both.**
13. **More stringent dimensional requirements, such as lot area or dimensions, setbacks, and building height limitations. Dimensional requirements may be made more lenient by conditional use permit only when such relaxation is authorized by other provisions of the zoning code. Dimensional requirements may not be altered by conditional use permit when and to the extent other provisions of the zoning code expressly prohibit such alterations by conditional use permit.**
14. **Other conditions necessary to protect the interests of the community and surrounding area, or to protect the health, safety, or welfare of persons residing or working in the vicinity of the subject lot.**

Applicant: This application describes the steps the applicants are planning to take to control vehicular access, control pollution, place limits on the duration of the project, and time limits on certain activities. The applicants are more than willing to work with the Planning Commission on other conditions that might be deemed necessary to protect the interest of the community.

Condition 2: This CUP shall be valid for five years from the time of an approval.

Condition 3: The summer following completion of logging activities, the Borough shall conduct a tree survey and supply the results, and plans for any tree planting if needed, to the City of Homer Planning Department.

PUBLIC WORKS COMMENTS: Wildfire is a hazard to the water quality of the public drinking water source. Reducing the fire risk is less detrimental than what the effects of a fire would be on water quality. If there were a large fire, poor water quality could substantially raise the water treatment costs.

These increased costs would continue until soil stabilization occurs, which may take more than one growing season, or longer. See also Fire Chief Painter's memo.

FIRE DEPARTMENT COMMENTS: Please see attached memo dated January 6, 2011

STAFF COMMENTS/RECOMMENDATIONS:

Planning Commission approve Conditional Use Permit 2011-01 with findings 1-15 and conditions 1-3.

Note: Approval of a Conditional Use Permit requires five yes votes

ATTACHMENTS

1. Application
2. January 6, 2011 memo from Fire Chief Painter to Walt Wrede, City Manager
3. Soil and Erosion Sediment and Control Plan
4. Specific Recommendations from NRCS Forester with attachments
5. Location map
6. Public Notice
7. Zoning Map
8. Buffer and Wetland Map
9. Examples of logging equipment

CONDITIONAL USE PERMIT APPLICATION

BRIDGE CREEK FUEL MITIGATION

AND

FOREST HEALTH RESTORATION PROPOSAL

Submitted December 15, 2010

By

The City of Homer on behalf of itself, the Kenai Peninsula Borough, the University of Alaska, and the Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program

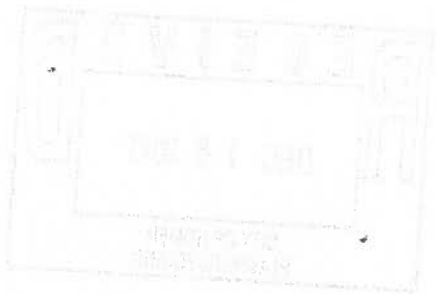


TABLE OF CONTENTS

	Page
Application Form	3-6
Supplements to Application Form	
Land Owner Certifications / Legal Descriptions	7-12
Narrative Description / Existing Uses / Neighboring Properties	13
Proposed Use of the Property	14-16
Conditional Use Information	17-18
Homer Soil and Water Conservation District Report	19-31
Public Works Director's Certification	32
Manpower & Mechanical Equipment Operations Standards	33-36
Maps	37
APPENDICES	41
Resolution 10-67	42
Bride Creek Soils and Compaction	43-45
Fuel Mitigation and Forest Health Restoration Report	46

City of Homer Planning & Zoning

491 East Pioneer Avenue
Homer, Alaska 99603-7645
Telephone (907) 235-3106
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

Applicant

Name: WALT WREDE Telephone No.: 235-8121

Address: 491 E. PIONEER AVE. Email: WWREDE@CI.HOMER.AK.US

Property Owner (if different than the applicant):

Name: CITY OF HOMER Telephone No.: 235-8121

Address: 491 E. PIONEER AVE. Email: WWREDE@CI.HOMER.AK.US

PROPERTY INFORMATION: *SEE SUPPLEMENTAL ATTACHMENT

Address: _____ Lot Size: _____ acres KPB Tax ID # _____

Legal Description of Property: *SEE SUPPLEMENTAL ATTACHMENT

For staff use:
Date: 12/16/10 Fee submittal: Amount N/A
Received by: SQ Date application accepted as complete _____
Planning Commission Public Hearing Date: _____

Conditional Use Permit Application Requirements:

1. A Site Plan
2. Right of Way Access Plan
3. Parking Plan N.A.
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning can provide a blank map for you to fill in).
5. Completed Application Form
6. Payment of application fee (nonrefundable)
7. Any other information required by code or staff, to review your project

Circle Your Zoning District

	RR	UR	RO	CBD	TCD	GBD	GC1	GC2	MC	MI	OSR	BCWPD
Level 1 Site Plan	X	X	X			X			X		X	X
Level 1 ROW Access Plan	X	X							X		X	
Level 1 Site Development Requirements	X	X	X									
Level 1 Lighting				X	X	X	X	X	X	X		
Level 2 Site Plan				X	X		X	X		X		
Level 2 ROW Access Plan			X	X	X		X	X		X		
Level 2 Site Development Requirements				X	X	X	X	X	X	X		
Level 3 ROW Access Plan						X						
DAP/SWP questionaire				X	X	X	X	X	X	X		

Circle applicable permits. Planning staff will be glad to assist with these questions.

Y (N) Are you building or remodeling a commercial structure, or multifamily building with more than 3 apartments? If yes, Fire Marshal Certification is required. Status: _____

Y (N) Will your development trigger a Development Activity Plan?
Application Status: _____

Y (N) Will your development trigger a Storm water Plan?
Application Status: _____

(Y) N Does your site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: PERMITS NOT REQUIRED FOR THIS ACTIVITY

Y (N) Is your development in a floodplain? If yes, a Flood Development Permit is required.

Y (N) Does your project trigger a Community Design Manual review?
If yes, complete the design review application form.

Y (N) Do you need a traffic impact analysis?

Y (N) Are there any nonconforming uses or structures on the property?

Y (N) Have they been formally accepted by the Homer Advisory Planning Commission?

Y (N) Do you have a state or city driveway permit? Status: NOT APPLICABLE

Y (N) Do you have active City water and sewer permits? Status: _____

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)? NO STRUCTURES ON PROPERTY. ALL VACANT LAND.

2. What is the proposed use of the property? How do you intend to develop the property? (Attach additional sheet if needed. Provide as much information as possible).

PLEASE REFER TO ATTACHED

CONDITIONAL USE INFORMATION: (Please use additional sheet(s), if necessary)
PLEASE REFER TO ATTACHMENT

a. What code citation authorizes each proposed use and structure by conditional use permit? _____

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district. _____

c. How will your proposed project affect adjoining property values? _____

d. How is your proposal compatible with existing uses of the surrounding land? _____

e. Are/will public services adequate to serve the proposed uses and structures?

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?

h. How does your project relate to the goals of the Comprehensive Plan?
The 2006 Town Center Plan: _http://clerk.ci.homer.ak.us/tcdplan.pdf
The 1999 Comprehensive Plan:
http://planning.ci.homer.ak.us/PLANNINGWEBPAGES/DefaultLinks/Complan99.pdf

_____

_____

i. The Planning Commission may require you to make some special improvements. Are you planning on doing any of the following, or do you have suggestions on special improvements you would be willing to make? **(circle each answer)**

1. Y/(N) Special yards and spaces.
2. Y/(N) Fences, walls and screening.
3. Y/(N) Surfacing of parking areas.
4. Y/(N) Street and road dedications and improvements (or bonds).
5. (Y)/N Control of points of vehicular ingress & egress.
6. Y/(N) Special provisions on signs.
7. Y/(N) Landscaping.
8. Y/(N) Maintenance of the grounds, buildings, or structures.
9. (Y)/N Control of smoke, odors, gases, particulate matters, noise, vibration, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances.
10. (Y)/N Time for certain activities.
11. (Y)/N A time period within which the proposed use shall be developed.
12. (Y)/N A limit on total duration of use.
13. Y/(N) Special dimensional requirements such as lot area, setbacks, building height.
14. (Y)/N Other conditions deemed necessary to protect the interest of the community.
15. (Y)/N Control of smoke, odors, gases, particulate matters, noise, vibration, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances.
16. (Y)/N Time for certain activities.
17. (Y)/N A time period within which the proposed use shall be developed.
18. (Y)/N A limit on total duration of use.
19. Y/(N) Special dimensional requirements such as lot area, setbacks, building height.
20. (Y)/N Other conditions deemed necessary to protect the interest of the community.

5

PARKING

1. How many parking spaces are required for your development? NONE
   If more than 24 spaces are required see HCC 21.50.030(f)(1)(b).:_____
2. How many spaces are shown on your parking plan? NONE
3. Are you requesting any reductions? NO

Include a site plan, drawn to a scale of not less than 1" = 20' which shows allow existing and proposed structures, clearing, fill, vegetation and drainage.

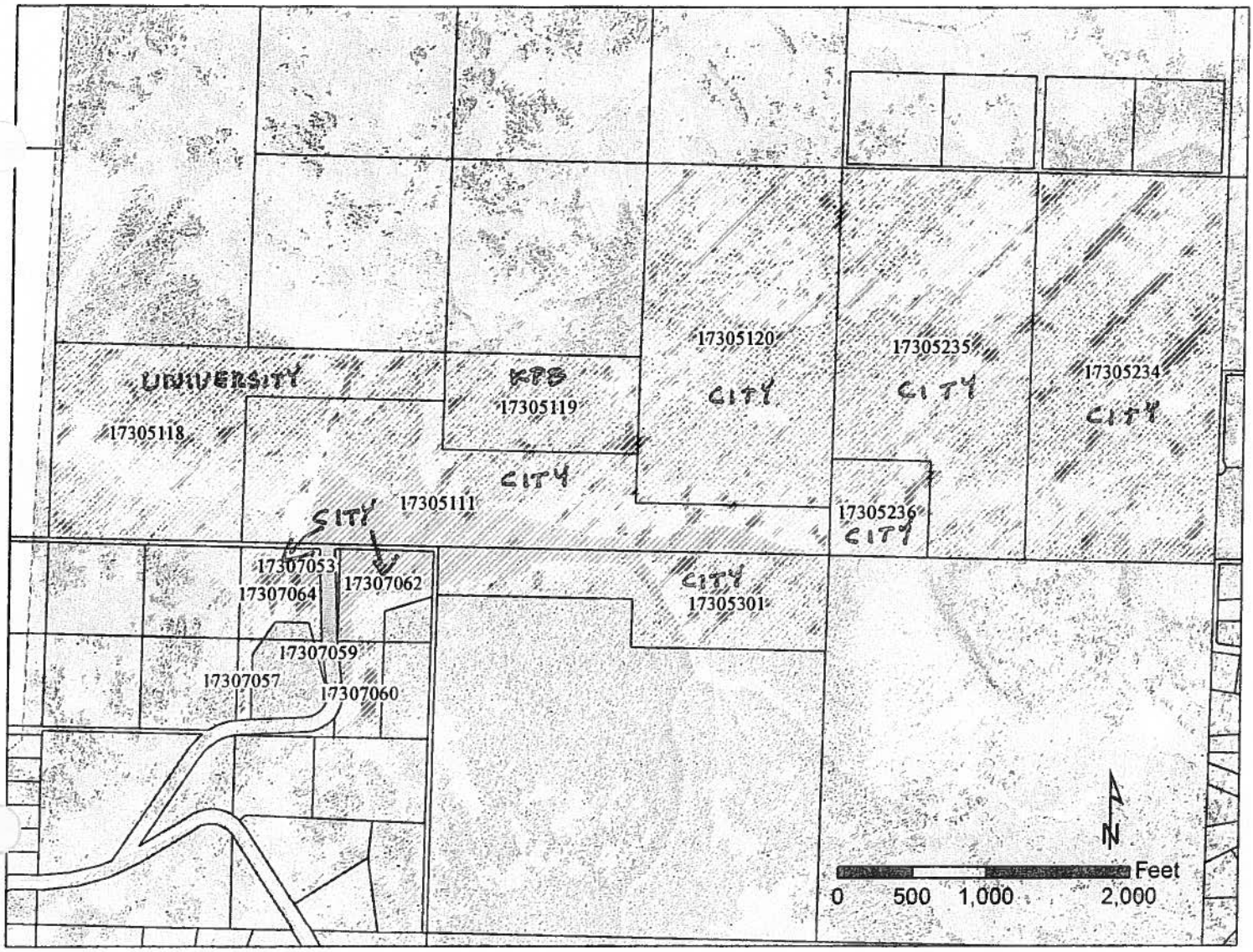
I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

CIRCLE ONE: (Owner of record) Lessee Contract purchaser

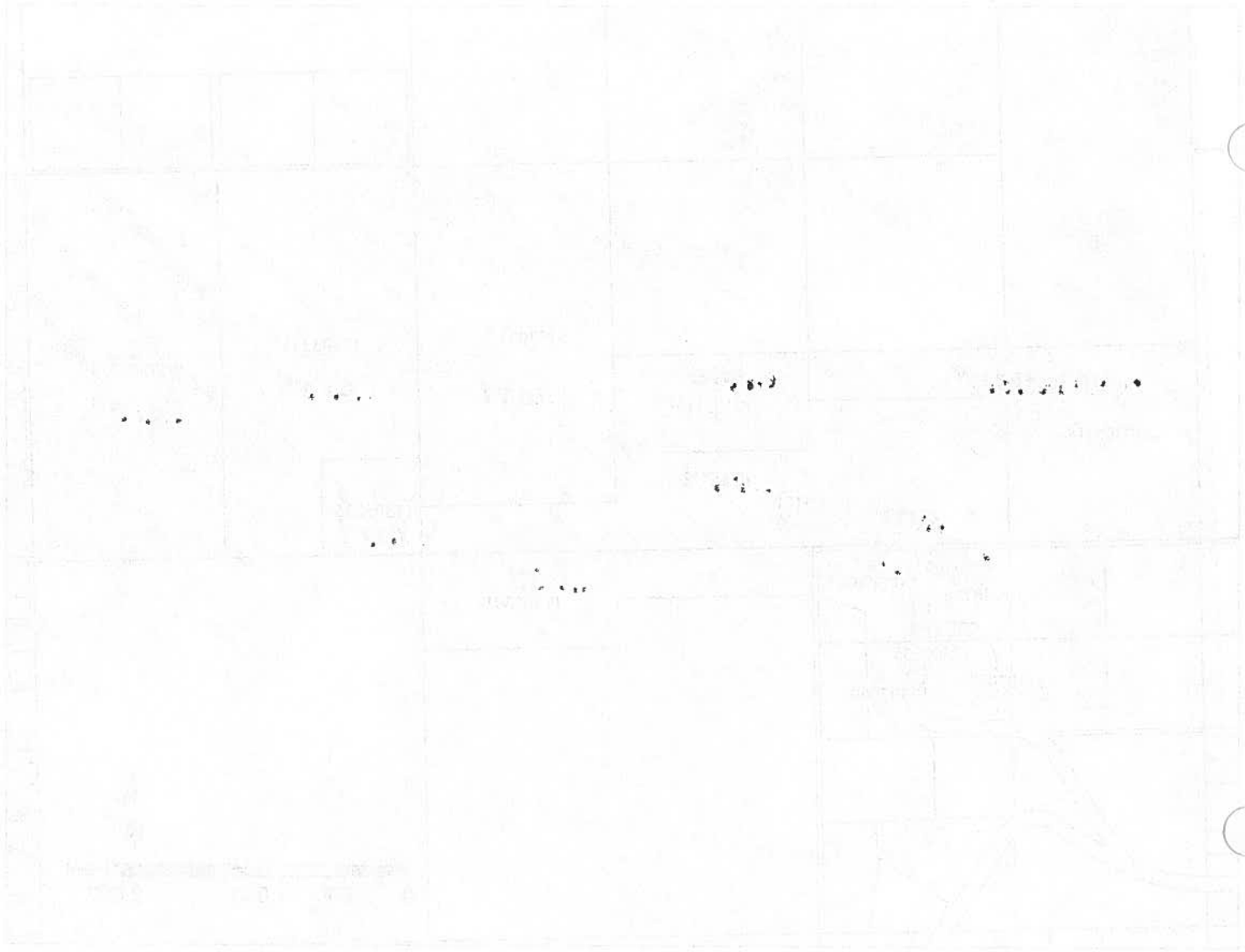
Applicant signature: _____ Date: _____

Property Owner's signature: Walt Wrede Date: 12/15/10

6


UNIVERSITY
17305118
KPS
17305119
CITY
17305120
CITY
17305235
CITY
17305234
CITY
17305111
CITY
17305236
CITY
17307053
17307064
17307062
17307059
17307057
17307060
CITY
17305301
N
Feet
0
500
1,000
2,000

7



PARCEL_ID	ACREAGE	LEGAL	OWNER
17305301	30.00	T 6S R 13W SEC 8 SEWARD MERIDIAN HM N1/2 N1/2 NW1/4 NW1/4 & N1/2 NE1/4 NW1/4	HOMER CITY OF
17307062	7.35	T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 1 PORTION THEREOF	HOMER CITY OF
17305120	70.00	T 6S R 13W SEC 5 SEWARD MERIDIAN HM NE1/4 SW1/4 & N1/2 SE1/4 SW1/4 & N1/2 S1/2 SE1/4 SW1/4	HOMER CITY OF
17305119	20.00	T 6S R 13W SEC 5 SEWARD MERIDIAN HM N1/2 SW1/4 SW1/4 OF SEC 5	KENAI PENINSULA BOROUGH
17305118	50.00	T 6S R 13W SEC 6 SEWARD MERIDIAN HM N1/2 N1/2 SE1/4 SE1/4 & SW1/4 SE1/4 OF SEC 6	UNIVERSITY OF ALASKA
17305234	80.00	T 6S R 13W SEC 5 SEWARD MERIDIAN HM E1/2 SE1/4	HOMER CITY OF
17305111	60.00	T 6S R 13W SEC 5 & 6 SEWARD MERIDIAN HM S1/2 S1/2 SE1/4 SW1/4 & S1/2 SW1/4 SW1/4 OF SEC 5 & S1/2 SE1/4 SE1/4 & S1/2 N1/2 SE1/4 SE1/4 OF SEC 6	HOMER CITY OF
17305236	10.00	T 6S R 13W SEC 5 SEWARD MERIDIAN HM SW1/4 SW1/4 SE1/4	HOMER CITY OF
17305235	70.00	T 6S R 13W SEC 5 SEWARD MERIDIAN HM NW1/4 SE1/4 & E1/2 SW1/4 SE1/4 & NW1/4 SW1/4 SE1/4	HOMER CITY OF
17307064	6.94	T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 2 PORTION THEREOF	HOMER CITY OF
17307057	1.47	T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 13 A PORTION THEREOF	HOMER CITY OF
17307053	0.41	T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 2 THAT PORTION THEREOF LYING EAST OF DIAMOND RIDGE ROAD	HOMER CITY OF
17307060	4.60	T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 14 THE W1/2 THEREOF	HOMER CITY OF
17307059	0.13	T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 13 A PORTION THEREOF	HOMER CITY OF

KENAI PENINSULA BOROUGH
144 North Binkley Street • Soldotna, Alaska 99669-7520
Toll-free within the Borough: 1-800-478-4441
PHONE: (907) 262-4441 • FAX: (907) 262-1892
www.borough.kenai.ak.us

DAVE CAREY
BOROUGH MAYOR

December 15, 2010

Walt Wrede, City Manager
City of Homer
491 East Pioneer Avenue
Homer, Alaska 99603

Re: Authorization for the Kenai Peninsula Borough participation in the City of Homer Bridge Creek Watershed Fuel Reduction Project

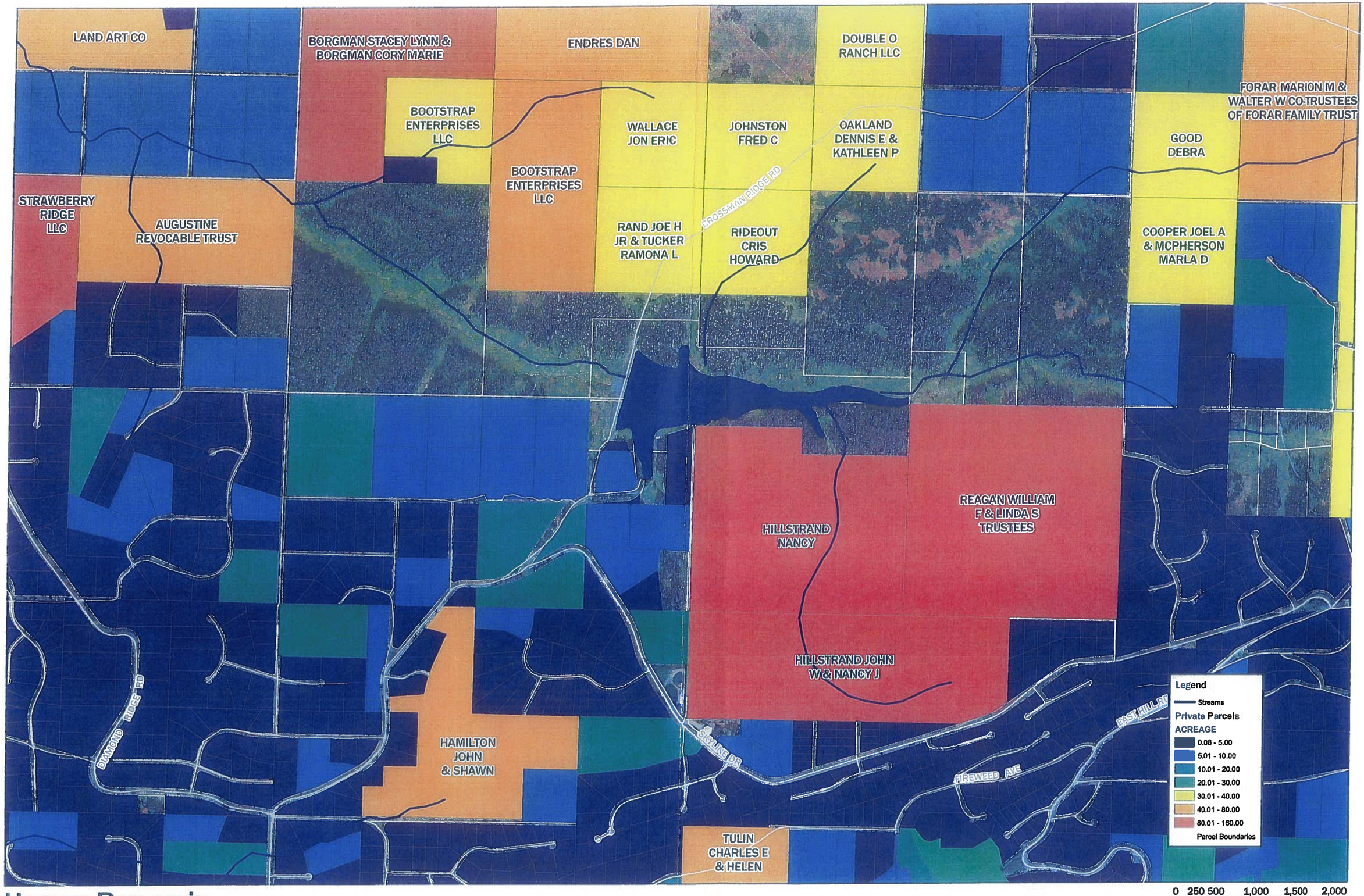
The Kenai Peninsula Borough (KPB) is the owner of KPB Parcel Number 17305119 comprising 20 acres. KPB wishes to participate in the proposed Spruce Bark Mitigation Program within the Bridge Creek Watershed. This project is outlined by the **HOMER RESERVOIR WATERSHED FOREST CONDITION AND FUEL HAZARD ASSESMENT**, prepared by the KPB Spruce Bark Beetle Mitigation Program August 10, 2010.

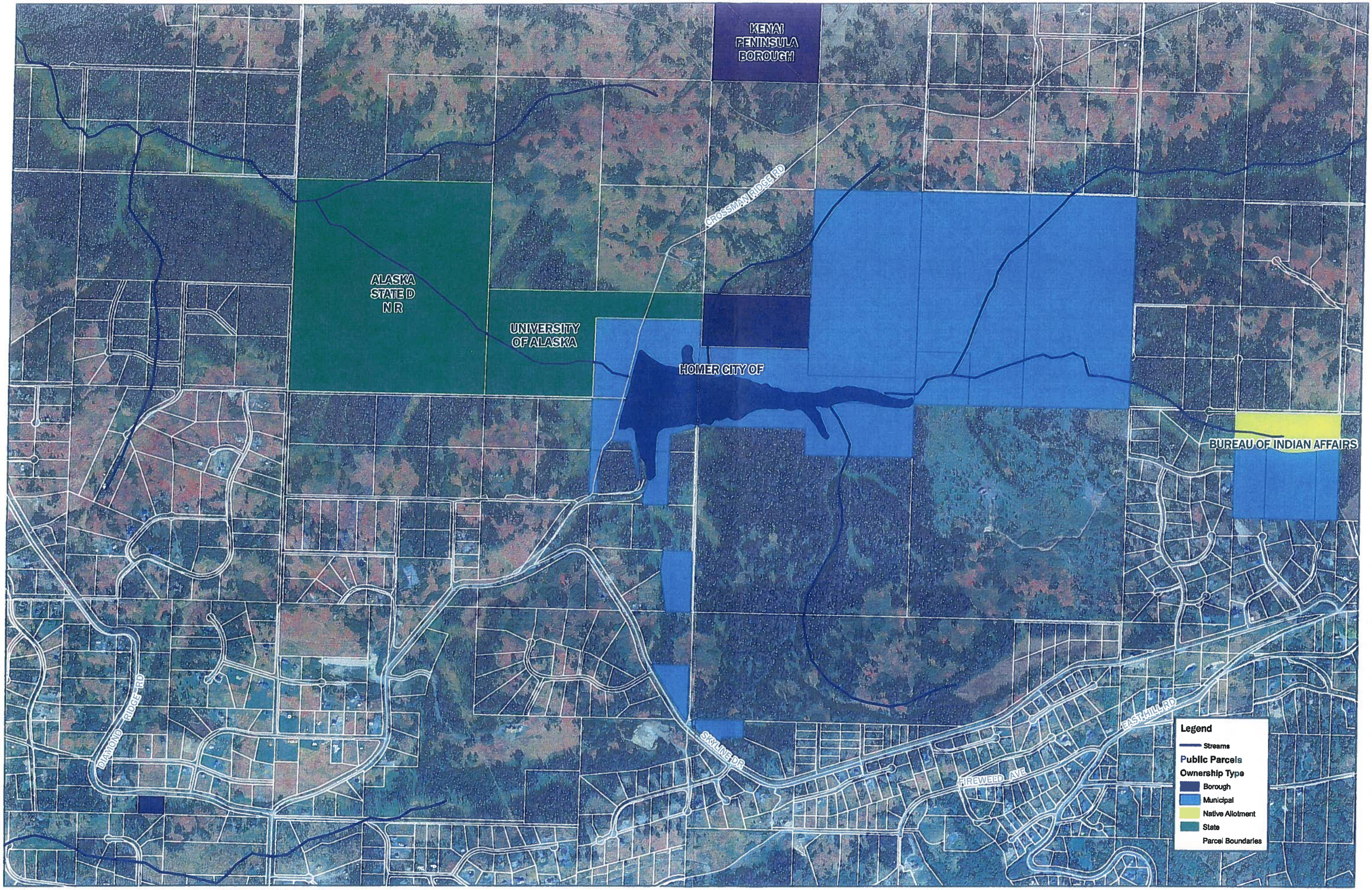
On behalf of the KPB, I authorize the City of Homer to apply for a Conditional Use Permit on the Borough's behalf for mitigation activities on this parcel. I understand that that participation under this joint Conditional Use Permit application (which includes parcels owned by the University of Alaska, KPB, and the City of Homer) binds the Borough to the terms and conditions contained in the Conditional Use Permit, once approved.

Sincerely,

Max Best
Planning Director

9


LAND ART CO
BORGMAN STACEY LYNN & BORGMAN CORY MARIE
ENDRES DAN
DOUBLE O RANCH LLC
FORAR MARION M & WALTER W CO-TRUSTEES OF FORAR FAMILY TRUST
BOOTSTRAP ENTERPRISES LLC
WALLACE JON ERIC
JOHNSTON FRED C
OAKLAND DENNIS E & KATHLEEN P
GOOD DEBRA
STRAWBERRY RIDGE LLC
AUGUSTINE REVOCABLE TRUST
BOOTSTRAP ENTERPRISES LLC
CROSSMAN RIDGE RD
RAND JOE H JR & TUCKER RAMONA L
RIDEOUT CRIS HOWARD
COOPER JOEL A & MCPHERSON MARLA D
REAGAN WILLIAM F & LINDA S TRUSTEES
HILLSTRAND NANCY
HILLSTRAND JOHN W & NANCY J
HAMILTON JOHN & SHAWN
DIAMOND RIDGE RD
SKYLINE DR
FIREWEED AVE
EAST HILL RD
TULIN CHARLES E & HELEN
Legend
Streams
Private Parcels
ACREAGE
0.08 - 5.00
5.01 - 10.00
10.01 - 20.00
20.01 - 30.00
30.01 - 40.00
40.01 - 80.00
80.01 - 160.00
Parcel Boundaries
0 250 500 1,000 1,500 2,000
Feet



Homer Resevoir: Public Ownership

12

DESCRIPTION OF EXISTING USES ON NEIGHBORING LOTS

(Supplement to CUP Application)

A map depicting neighboring lots is attached. Existing uses on neighboring ots consists almost entirely of vacant and undeveloped land, scattered residential development in the Crossman Ridge area, and subdivisions within the City limits adjacent to and in the vicinity of Skyline Drive. The City maintains infrastructure associated with the water utility including a dam, reservoir, pump house, pipelines, water treatment facility, and storage tanks.

PROPOSED USE OF THE PROPERTY

(Supplement to CUP Application)

Introduction / Background

The City of Homer has been discussing how to mitigate the fire danger in the Bridge Creek Watershed area with the Division of Forestry and the Borough Spruce Bark Beetle Mitigation Program for a number of years. The Borough recently received economic stimulus funds to conduct additional fire mitigation activities in and around communities. After consultation with the City, the Spruce Bark Beetle Program staff determined that a project around the reservoir met the program criteria and would represent a clear benefit to the community.

The City of Homer is interested in this project for health and safety reasons. If the project is conducted properly, it should reduce fire danger in a very high hazard area, restore forest health more quickly than natural regeneration, and protect and enhance water quality now and into the future. At the City's request, the Borough Spruce Bark Beetle Program staff produced a report entitled "Fuel Mitigation and Forest Health Restoration Around the Homer City Reservoir." A copy of the report is attached in the Appendices. This report was provided to the Homer City Council and the Spruce Bark Beetle Program staff made a presentation at the regular meeting on August 9, 2010. The Council subsequently adopted Resolution 10-67 authorizing participation in the program. A copy of that Resolution is also included in the Appendices.

After the City Council gave the green light to take the next steps and explore this project further, Borough staff provided maps of projected treatment areas and an outline of the scope of work and proposed treatment alternatives. The City and the Borough consulted with the Homer Soil and Water Conservation District, the Natural Resources Conservation Service, the Division of Forestry, the Department of Fish and Game, and Cook Inlet Keeper. A field trip was conducted with representatives of these agencies in the fall. The Homer Soil and Water Conservation District in cooperation with the Natural Resources Conservation Service, provided written recommendations on how to prevent erosion and sedimentation, how to protect wetlands, and how to avoid unnecessary soils compaction. Those recommendations are included in the application packet. Many, if not all of these recommendations have been incorporated in the operations plan.

The Proposed Use

The proposed use is to reduce the fire hazard by using a combination of mechanized and non- mechanized treatment applications. The operations plan includes selective felling of standing and dead spruce trees. The trees, when felled, will be limbed and then scattered around to get the biomass close to the ground and eliminate "jackstraw" issues. The operations plan is based upon best management practices contained in the Forest Practices Act, best management practices published by other agencies including NCRS, the specific requirements of the Bridge Creek Zoning District ordinance, and the comments received from the agencies consulted. The operations plan and all best practices and safeguards to protect water quality and the environment will be included in the enforceable contract with the contractor. The Spruce Bark Beetle Program will have a Forester / Supervisor on site an average of every other day and a minimum of several times a week. The City and Borough are currently talking with HSWCD about an on-site observer during operations and with Cook Inlet Keeper regarding water quality monitoring stations.

Although the entire watershed (including private lands) might benefit from this type of treatment, the City and Borough have chosen to limit this proposal to public land and treat it as a demonstration project. If the project goes as planned and private land owners like what they see, they can participate in the program at a later date.

Attached is a map that depicts proposed treatment areas, access routes, stream crossings, and landings/staging areas. The only amendments to that map are that there will be no treatment on private lands and the firewood salvage areas have been eliminated to reduce impacts from skidding . The Spruce Bark Beetle Program staff will produce a new map that will depict precise travel corridors which will be along contour lines to reduce the potential for erosion. The packet also includes maps depicting wetlands, soil types, contours, and hydrology. The plan of operation will be based upon the factors described above,

the treatment map, and the report entitled "Manpower and Mechanical Equipment Operation Standards" a copy of which is also attached. The project will be conducted in the winter months when the ground is frozen and there is adequate snow cover. Mechanical treatment will be used in appropriate areas and non-mechanized treatment (crews with chainsaws) will be used in more sensitive areas that include wetlands, unstable soils and slopes, and established buffers around streams and the reservoir.

Following is a discussion about specific areas of concern identified in the code and by the consulting agencies:

Erosion and Sediment Control: Both the HSWCD and the City Engineer have concluded that a formal erosion and sediment control plan as prescribed in HCC 21.40.080 is not necessary in this case because of the nature of the activity. No excavation, grading, or significant disturbance of the ground cover will occur. However, erosion and sediment control remains probably the most important issue to be addressed. The Spruce Bark Beetle Staff have prescribed a number of important steps in the operations plan to prevent erosion and sedimentation. Those steps include:

- Adherence to applicable best management practices
- Incorporation of these practices and other special requirements into the enforceable contract with the operator
- Hand treatment in sensitive areas like the required buffers, wetlands, slopes over 10% or discharge slopes
- No skidding operations
- No mechanical scarification of soils
- Winter operations for mechanical applications
- Logs and slash used for heavy equipment to "walk" over minimizing contact with the surface
- Logs and slash scattered to protect ground cover and soils and logs deposited along contour lines
- Water bars on slopes greater than 10%
- Travel corridors following contour lines
- Other requirements prescribed by the Planning Commission

Stream Crossings: The enclosed map depicts proposed drainage crossings. Erosion control in these areas is especially important. The method of crossing these streams will depend upon their size and the characteristics of the channel and soils through which they flow. In some cases, log stringer bridges will be used. In others, (very small drainages) logs will be placed on either bank and equipment will drive right over top of the stream. In some situations, logs will be placed temporarily directly in the stream in order to protect the structure and integrity of the bank. All stream crossing will be consistent with relevant best management practices. The applicants are open to further suggestions from the Planning Commission.

Soil Compaction: The Bridge Creek Water Shed Protection District contains some highly compactable and erodible soils. Unnecessary soils compaction can lead directly to erosion. The Soil and Water Conservation District and the NRCS provided us with a great deal of information regarding soil characteristics in the area. Some of that is included in the application packet. The operations plan incorporates that information in several ways including:

- Only one main travel corridor in and out. This will be the only corridor that receives repeated passes from mechanized equipment. This will reduce overall compaction.
- Winter only operations for mechanized equipment
- Limited mechanical operations on highly vulnerable soil types

Buffers: HCC 21.40.110 requires stream buffers of 50 feet on each bank. HCC 21.40.120 provides for a 500 foot buffer along the reservoir. HCC 21.40.130 (c) provides for an exception from the buffer requirements if "the intrusion will not cause a degradation of the water quality or endanger the suitability of the Bridge Creek Reservoir as a water supply source for the City's water utility."

The applicants are asking for an exception under HCC 21.40.130. We do not think that the plan of operation as proposed would cause degradation to water quality. The primary area of concern for the applicants is the north shore of the reservoir. This area contains probably the highest concentration of standing dead spruce trees in the treatment area. The operators would go into this area in winter and take all of the steps described above to avoid the potential for erosion and sedimentation. Using hand crews only in these areas is a possibility as is keeping the buffers but reducing them in size. The applicants are willing to work

with the Planning Commission on appropriate limitations on operations in buffer zones. The south side of the reservoir has far fewer dead tress and more wetlands. Operations would be very limited in that area.

The City Engineer advises that he would be more concerned about the buffers around the streams since they have rapidly moving water capable of transporting sediments and steeper slopes. Leaving the buffers along streams undisturbed is something the applicants are willing to consider. That might have the added benefit of leaving some dead tree habitat for nesting birds and other wildlife.

Reforestation: The code contains a strong recommendation for reforestation and replanting. See HCC 21.40.100 (b) 4 and 5, HCC 21.40.110 (b) 3, and HCC 21.40 130 (A). The original intent of the Spruce Bark Beetle Program staff was to plant new trees next spring. The ground would be prepared this fall during the tree cutting activities and certain areas would be mechanically scarified (scratch and rough up vegetation and expose soils) so that that planting trees would be easy and the young trees would not have to complete with the tall grasses. The concern is that natural regeneration is very slow in this area because young trees cannot get established easily in the tall grasses and there are not enough live trees in the area to provide adequate seed stock. The foresters stated that by using this method, we could be more efficient, better insure the survival of young trees and speed up the forest regeneration process by decades. This would provide for a healthy forest and better protect water quality in the long run.

The Soil and Water Conservation District recommended against this for several reasons. First, it felt that if we are trying to prevent erosion, the last thing we want to do is expose the mineral soils and disturb the vegetative mat. Second, they were concerned that by roughing up the grasses and other vegetation, we might be opening the door for invasive weeds to get a foothold. Finally, they felt that regeneration was already occurring naturally although at a very slow rate compared to other areas. (The foresters concluded that evidence of natural regeneration in this area is marginal at best).

If the Planning Commission shares the concerns expressed by HSWCD, the applicants are willing to consider an alternative approach. Mechanical scarification can be eliminated. This spring, after the snow recedes, we could go back in and do a survey of numbers, locations, and overall health of young trees. If at that point, the conclusion is that reforestation would be beneficial, a plan to do so that has the least amount of environmental downside can be implemented. It should also be noted that the plan of operation should in itself aid natural reforestation. Recall that the plan is to cut dead trees, limb them, and scatter the debris across the forest floor. This approach keeps the biomass in the area and gets it closer to the ground where it can decompose faster. Old dead trees lying on the ground often become nurse logs for new trees.

HCC 21.40.100: This section of the code addresses timber growing and harvest operations. Although this is not a timber harvesting or growing operation in the conventional sense, the code contains information requirements that are pertinent to this application. This narrative and the attached maps provide required information on the proposed use and plan of operation, land ownership, operator/program manager, boundaries of the project area, location of streams and wetlands, the location of buffer areas, stream crossings, contours, erosion and sediment control information, reforestation, and comments and recommendations from the Soil and Water Conservation District.

There are no structures, logging yards, or storage areas proposed in the treatment area. Equipment storage and all fueling operations will take place in the existing parking area along the road to Crossman Ridge. This area is depicted on the map and labeled "Landing Area". Appropriate fuel containment and fuel spill cleanup materials and equipment will be present at that site. No other hazardous materials are anticipated. No plan to address slash piles is necessary because there won't be any. The plan is to cut dead trees, limb them, cut everything into small pieces, and scatter the debris over the forest floor such that the debris is not higher than one foot above the ground. There will be no slash piles or "jackstraw" debris remaining. Prior to the meeting, the Spruce Bark Beetle Program staff will provide a map which shows the exact location of transportation corridors and trails.

Vehicular and ATV Access to the Project Area: A great deal of concern was expressed about ATV and vehicular access to the area if new pathways and trails were constructed. The City agrees with this concern. The plan includes placing dead trees and brush on travel corridors to discourage and make it difficult for motorized access. No visible roads or trails should be evident after the snow melts in the Spring. If necessary, the City can barricade project access points and provide adequate signage.

CONDITIONAL USE INFORMATION

(Supplement to CUP Application Form)

What code citation authorizes each proposed use and structure by conditional use permit?

HCC 21.40.045 (Zoning Permit), 21.40.060 (Conditional Uses), 21.40.080 (Timber Harvesting), 21.40.100 (Erosion and Sediment Control), 21.40.110 (Stream Buffers), 21.40.120 (Reservoir Buffer), 21.40.130 (Exceptions to Buffers).

Notes: The applicant does not believe that 21.40.080 strictly applies because this is not a timber harvesting operation. However, this section provides excellent guidance regarding important issues to be addressed in this application. Further, both the Soil and Water Conservation District and the City Engineer have concluded that a formal Erosion and Sediment Control Plan as prescribed in 21.40.100 is not necessary due to the nature of the activity and the operational methods proposed. But again, the applicant relied heavily on this section to identify relevant sections to address in this application.

Describe how the proposed uses and structures are compatible with the purpose of the zoning district.

The proposed activity takes place in the Bridge Creek Watershed Protection District. The purpose of this district is to prevent the degradation of the water quality and protect the Bridge Creek Watershed to ensure its continuing suitability as a water supply source for the City's public water utility. These provisions benefit the public health, safety, and welfare of the residents of the City of Homer and other customers of the City's water system by restricting land use activities that would impair the water quality, or increase the cost for treatment.

This project is consistent with the purpose of the zoning district. The project is intended to reduce the fire hazard around the reservoir. A large, hot burning fire could cause serious erosion and ash problems for the reservoir. Fires in this area would be difficult to fight for fire fighters and the City does not wish to see bulldozers or fire retardants used there for obvious reasons. The project would reduce fire danger and expedite restoration of forest health so that water quality can be protected into the future.

How will your proposed project affect adjoining property values?

The applicants believe that this project will improve property values because the fire danger on adjacent wildlands will be reduced, scenic values will be improved, and habitat for wildlife will be enhanced.

How is your proposal compatible with existing uses of the surrounding land?

This proposal is compatible with existing uses of the surrounding land. The surrounding tracts include large sections of undeveloped land, scattered residential uses, and infrastructure related to the water utility. There is no new development proposed, just fire mitigation, forest restoration, and water quality protect measures described herein.

Are/will public services adequate to serve the proposed uses and structures?

No public services are required for this project.

How will the proposed development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?

This project will have no impact with respect to harmony, bulk, coverage, and density upon adjacent neighborhoods. The applicants view this as an improvement to the area that will benefit adjacent neighborhoods.

Will your proposal be detrimental to the health, safety, or welfare of the surrounding area or the City as a whole?

No, on the contrary, this project is proposed to enhance public safety by reducing the fire danger and the threat to adjacent residences and subdivisions, protecting water utility infrastructure, and protecting the quality of the only public source of drinking water.

How does your project relate to the goals of the Comprehensive Plan?

The Comprehensive Plan emphasizes public health and safety in many sections. This proposed use is entirely consistent with the Comprehensive Plan and the Bridge Creek zoning district.

Special Improvements

17

This application describes the steps the applicants are planning to take to control vehicular access, control pollution, place limits on duration of the project, and time limits on certain activities. The applicants are more than willing to work with the Planning Commission on other conditions that might be deemed necessary to protect the interest of the community.

Homer Soil & Water Conservation District

4014 Lake St., Suite 201
Homer, AK 99603
907-235-8177 ext. 5
info@homerswcd.org

Introduction

Below, we provide comments on the "Bridge Creek Watershed Fuel Hazard Mitigation Project" proposed by Kenai Peninsula Spruce Bark Beetle Mitigation staff. In addition to these comments, we include in this package under separate cover: (1) Notes on Soil Compaction and (2) Bridge Creek watershed custom Web Soil Survey report, both of which were provided by NRCS soils staff.

This write-up is divided into two sections:

> Section I consists of excerpts from Homer City Code that are relevant to the proposed project. HSWCD and NRCS staff reviewed these sections to ensure relevancy of comments.
>
> Section II consists of notes summarized from a meeting held on October 21 involving HSWCD and NRCS staff and a former board member of the HSWCD Board of Supervisors. HSWCD staff incorporated a number of maps to supplement the notes.

Section I

Homer City Code, Title 21 (Zoning and Planning), Article 3 (Overlay Districts and Sensitive Areas), Section 40 (Bridge Creek Watershed Protection District) includes the following language relevant to the proposed fuel hazard mitigation project (emphasis added):

> 21.40.010 Purpose. The purpose of this chapter is to **prevent the degradation of the water quality** and protect the Bridge Creek Watershed to ensure its continuing suitability as a water supply source for the City's public water utility. These provisions benefit the public health, safety, and welfare of the residents of the City of Homer and other customers of the city's water system **by restricting land use activities that would impair the water quality, or increase the cost for treatment.** (Ord. 08-29, 2008).
>
> 21.40.045 Permits Required. In the BCWP District, a Zoning Permit issued under HCC Chapter 21.70 is required for all activity described in HCC § 21.70.010. [A] Zoning Permit is also required for the following activity in the BCWP District:
>
> f. Cutting or clearing of brush or trees, or other **disturbance of ground cover** over an area in excess of 2500 square feet;
> g. **Disturbance of ground cover** within the required setback or buffer of any stream or reservoir;
> i. Construction on private land of a road, **trail** or driveway longer than 100 feet;
> k. For any use requiring a conditional use permit in the BCWP district;
>
> 21.40.060 Conditional uses and structures. The following uses are permitted in the BCWP District if authorized by a conditional use permit granted in accordance with HCC Chapter 21.71 and subject to the other requirements of this chapter:
>
> c. **Timber harvesting operations**, timber growing, and forest crops, provided they conform to HCC § 21.40.100;
>
> 21.40.080 Erosion and sediment control. a. All activities within the BCWP District involving the disturbance of the existing ground cover (i.e., topsoil or vegetation or both) resulting from excavation, grading or filling or other similar activity and involving (i) any area within 500 feet of Bridge Creek Reservoir or 100 feet from any known stream or tributary or (ii) an area in excess of 6,000 square

feet, require a conditional use permit approved by the Planning Commission. **The conditional use permit must require that the activity comply with a site-specific Erosion and Sediment Control Plan prepared and signed by a certified hydrologist, professional engineer, or soil scientist whose qualifications to prepare such a plan are reviewed and approved by the Public Works Director.**

b. **The Erosion and Sediment Control Plan shall ensure compliance with the following requirements:**

1. A drainage system shall be provided to direct all runoff from impervious coverage or the disturbed ground either into an engineered drainage system or into a natural drainage, but no runoff shall be discharged untreated directly into the Bridge Creek Reservoir, or any stream or watercourse tributary to Bridge Creek Reservoir.
4. Natural vegetation shall remain undisturbed except as necessary to construct improvements and to eliminate hazardous conditions, in which case it must be replanted with approved materials including ground cover, shrubs and trees. Native vegetation is preferred for replanting operations, and will be used where practicable.
7. All exposed, cleared, filled and disturbed soils shall be revegetated within the current growing season, unless required to be revegetated sooner by other provisions of this title or other law.
8. Drainage, erosion, siltation, slope failure and other adverse effects may be prevented or controlled by means other than vegetation, if approved by the Planning Commission.
9. Development activities shall not adversely impact other properties or watershed water quality by causing adverse alteration of surface water drainage, increased turbidity above natural conditions, surface water ponding, slope failure, erosion, siltation, intentional or inadvertent fill, root damage to neighboring trees, or other adverse physical impacts. **The Erosion and Sediment Control Plan shall address this requirement**, and the property owner and developer shall take such steps, including installation of culverts or buffers, or other methods, as necessary to comply with this requirement. (Ord. 08-29, 2008).

21.40.100 Timber growing and harvesting operations. a. Except as provided in subsection (c), no timber harvesting, timber growing, or forest crop activities are allowed without a conditional use permit approved by the Planning Commission.

b. The application for a conditional use permit must include a written plan for each proposed timber harvesting, timber growing, or forest crop use or operation that includes the following:

1. Name, address, phone number and approving signature of the landowner, timber rights owner, and operator or logger.
2. A map showing the area of proposed activity and a written description detailing the activity within that area as follows:

a. the location of all streams, both intermittent and perennial, reservoirs, ponds, wetlands, and other surface waters.
b. the location and proposed means of all stream crossings associated with the above waters.
c. he boundaries of the harvest area(s), types of equipment and techniques to be used in the area(s), and the specific operational period(s) for the area(s).
d. the location of all roads that will be constructed, and the location of construction materials if they are to be obtained onsite.
e. the location of all trails not included in subsection d. that will be used for the harvesting, processing, or transportation of timber.
f. the location of all buffer areas required to protect water quality;
g. the location of all slopes greater than 20% within the affected property.
h. the location and a description of all areas where fuel, equipment and chemicals will be stored and how spills and other potential threats to water quality will be prevented and responded to.
i. the location of all structures, logging yards, and storage areas that will be part of the proposed operation.

3. An Erosion and Sediment Control Plan as described in HCC § 21.40.080.
4. In the case of timber harvesting, the reforestation plan specifications.

5. A restoration plan for logging yards, storage areas, stream crossings, log landings, trails, and roads that will not be maintained after a timber harvesting operation.
6. A plan for maintenance and operation for all roads and trails that will remain after the operation.
7. **A copy of the Homer Soil and Water Conservation District's Soil, Water, Slope and Vegetation Report for the proposed activity.**
8. **A copy of an executed Cooperative Agreement with the Homer Soil and Water Conservation District.**
9. A plan for elimination of slash piles within six months of completion of timber harvesting.

c. Clearing of trees comprising less than 20 cords in one calendar year per lot for noncommercial purposes is exempt from the requirements of this section. (Ord. 08-29, 2008).

21.40.110 Stream buffers. a. A stream buffer must be preserved and maintained along all perennial and intermittent streams in the BCWP District. The stream buffer must be at least 50 feet on each side of the stream measured from the top of the stream bank. Buildings and other features that require grading or construction must be set back at least ten additional feet from the edge of the buffer. To avoid a decrease in the buffer's effectiveness in protecting the stream the buffer shall remain in natural and undisturbed vegetation.

b. The following exceptions or intrusions into the stream buffer may be granted by conditional use permit approved by the Planning Commission:

3. Clearing and re-vegetating the stream buffer for the purposes of improving its pollutant and silt removal efficiency may be permitted based upon clear and convincing proof that efficiency will be improved.
4. Storm water control structures and temporary erosion control structures, provided that:

a. the property owner or applicant demonstrates to the satisfaction of the Public Works Director and Planning Commission that such facilities cannot be practicably located outside of the stream buffer, and that any proposed storm water control structure is sited and designed to minimize disturbance of the stream and stream buffer. Siting storm water control structures away from the stream channel is preferable to siting such structures in the stream channel.
b. a vegetated buffer of a width not less than the minimum recommended by the Public Works Director is provided around the storm water control structures.
c. any land disturbed for construction of these structures is immediately revegetated.

5. **Timber harvest operations, provided that:**

a. along perennial streams the buffer must include, but is not limited to, a 50-foot permanent buffer of undisturbed natural vegetation and an additional 75-foot buffer area of selective logging leaving no less than 30% of the original standing timber; and
b. along intermittent streams or drainages the buffer must include, but is not limited to, a 25-foot buffer area of selective logging leaving no less than 30% of the original standing timber; and
c. vegetation sufficient to stabilize the soil shall be established on all disturbed areas. (Ord. 08-29, 2008).

21.40.120 Bridge Creek Reservoir buffer. A 500-foot reservoir buffer must be maintained from the banks of the Bridge Creek Reservoir, measured at normal full water level. The reservoir buffer must remain in undisturbed natural vegetation. The facilities and improvements of the city water utility are exempt from this section. (Ord. 08-29, 2008).

21.40.130 Exceptions to buffers. a. A conditional use permit is required for any intrusion into a required buffer including, but not limited, to those intrusions and exceptions listed in HCC § 21.40.110 (b). When any approved intrusion into a buffer involves excavation or clearing, the conditional use permit must require the disturbed area to be revegetated immediately.

3. The intrusion will not cause a degradation of the water quality or endanger the suitability of the Bridge Creek Reservoir as a water supply source for the City's public water utility.

In making such findings, the Planning Commission must consider topography, water quality protection, erosion potential, surrounding uses, the size of the parcel, and any other relevant factors. A site plan and an erosion and sediment control plan must be provided by the property owner. The

Planning Commission must impose any conditions necessary to protect the water quality and ensure continued suitability of the Bridge Creek Reservoir as a water supply source for the City's public water utility.

Section II

Below are summarized comments from a meeting on October 21, 2010, to discuss the "Bridge Creek Watershed Fuel Hazard Mitigation Project" proposed by Kenai Peninsula Spruce Bark Beetle Mitigation Program staff. Present at that meeting were NRCS Forester Mitch Michaud, NRCS Soil Scientist Mike Mungoven, HSWCD staff Tara Schmidt and Devony Lehner, and Steve Gibson, former member HSWCD Board of Supervisors and commercial sawmiller and city resident concerned with forestry issues.

The group agreed that legitimate arguments can be made both for and against a "fuel hazard mitigation project" on city-owned lands in the Bridge Creek watershed (BCW). The group identified a number of questions and considerations relevant in deciding the most appropriate action for the city to take with respect to the proposed project. In addition, NRCS soil staff prepared two supplementary documents included in this package under separate cover: (1) Notes on Soil Compaction and (2) Bridge Creek watershed custom Web Soil Survey report. HSWCD staff have added six maps from various sources that provide useful contexts for these notes. Numerous other maps are included in the two NRCS documents. Maps included here are:

Map 1. Spring Fire Hazard Ratings in and around the Bridge Creek watershed,

Map 2. Location of city-owned lands in the Bridge Creek watershed,

Map 3. Spread of spruce bark beetle infestation in the Homer-Anchor Point area,

Map 4. 100-ft contours in the Bridge Creek watershed and surrounding areas,

Map 5. City of Homer ownership in the Bridge Creek watershed and surrounding areas,

Map 6. Wetlands mapped in the Bridge Creek watershed and surrounding areas.

Basic questions:

- What is the nature/extent/degree of the fire threat to the area and how much is that threat reduced by this project? (Considerations listed below relate to how this question might be answered.)
- What specific threat(s) are being mitigated?

  One specific threat seems to be that, given certain conditions, a fire could incinerate surface organic material. This would leave exposed mineral soils, which could lead to soil erosion and sediment runoff into Bridge Creek reservoir, degrading water quality. However, a fire in the area will not necessarily burn off the organic mat nor cause related water quality impacts. Just because the area burns does not mean that water quality will be affected.

  Another specific threat seems to be fire damage to city infrastructure. If this is the concern, other recommendations may be more effective in protecting infrastructure (see INFEST 1998, Forest Information Series #08, attached). In other words, would it be more effective to design a plan specifically tailored to maximize protection of the city's infrastructure rather than trying to "mitigate" fire fuels in the entire project area?

  In deciding the most appropriate actions to take, it is always important to focus on "FSOW," that is, "for the sake of what" will this or that action be taken?

- Given that BCW exists in a larger context than will be addressed by the proposed project (see maps included below), to what degree will the project actually reduce fire risks in the area? For example, looking at the larger context, large areas rated as "low spring fire hazard" are intermixed with areas rated as "moderate" and "high" spring fire hazard (Map 1). Alternatively,

in a worst case scenario, "...long range [fire] spotting of up to 2-3 miles would occur in association with high wind speeds" (INFEST 1998, Forest Information Series #08, attached).

- It is worth noting that felling dead trees does not eliminate the risk of fire. Other vegetation also burns, including bluejoint reed grass:

  > One of the most visible results of the spruce beetle activity is the invasion of grass into the understory of the timber stand after the dying crowns allow additional sunlight to reach the forest floor. A recent study showed that surface coverage of grass increased from under 5% to over 55% five years after a spruce beetle attack. Total fuel loading increased from about 10 tons/acre to over 35 tons/acre. This fuel type burns up to 20 times faster and 6 times more intensely than the fuel type associated with healthy white spruce stands, particularly in the spring and early fall after the grass is frost killed (INFEST 1998, Forest Information Series #08, attached).

- What happens on surrounding lands not managed by the city may be as important in determining fire risks to the area as what happens on city-owned land.

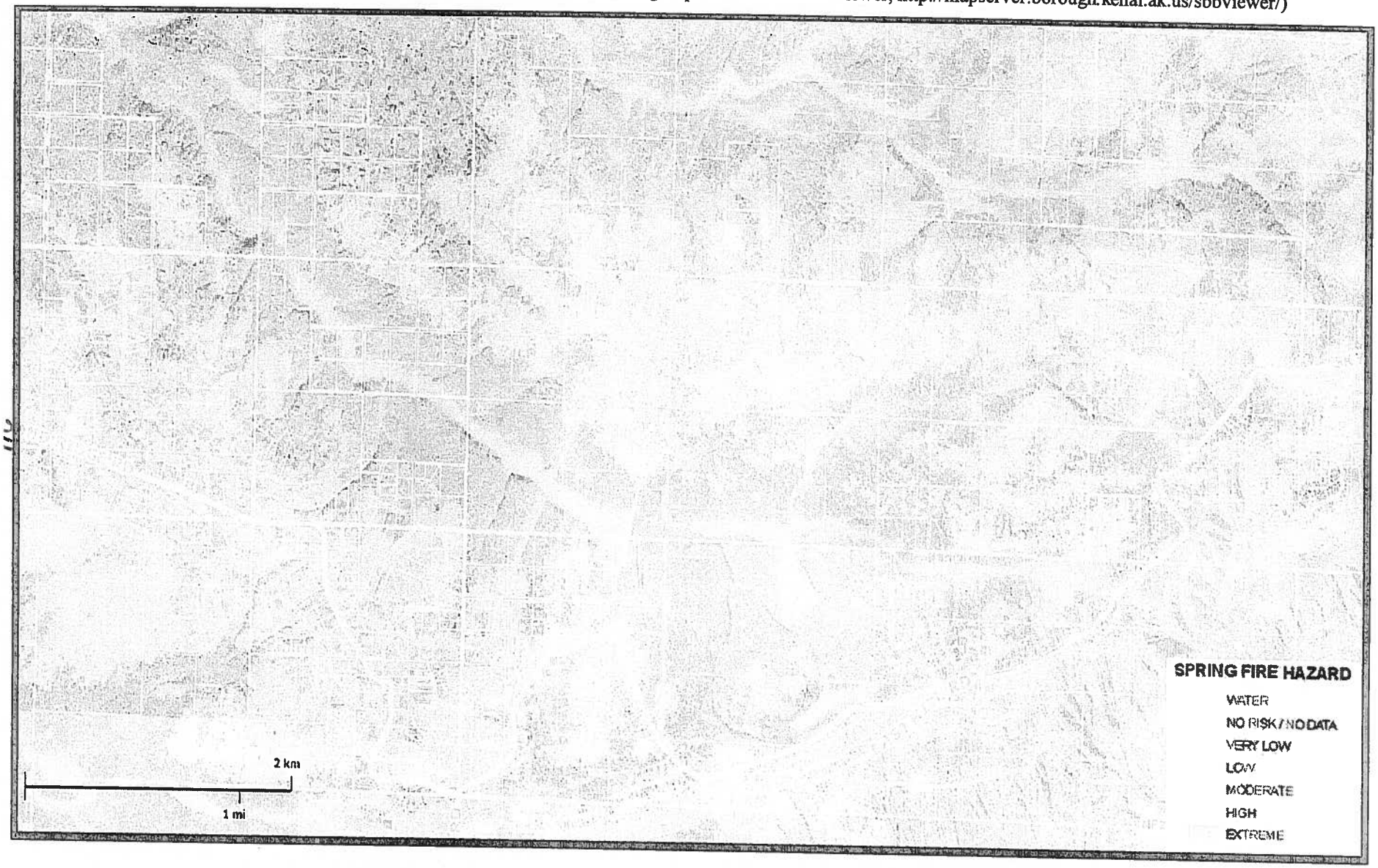
- Are one set of risks—those associated with fire—being traded for another set of risks—those associated with disturbing watershed soils (e.g., with equipment), degrading water quality with fuel spills, introducing invasive weeds (e.g., orange hawkweed, Reed canary grass, fall dandelion, yellow hawksbeard, all of which are now found nearby), etc. The NRCS forester believes that the risks associated with a fire are slight but greater than the risks associated with felling the beetle-killed trees. He notes, however, that any reduction in fire risk will be achieved simply by "knocking down" the trees. The NRCS soil scientist is less sure that the trade-offs are justified. He notes that if the city's goal is to protect watershed soils from disturbance, why disturb the watershed soils? Both note that felling trees will not eliminate the risks associated with fire.

- If the fire threat is perceived to be great enough to conduct the proposed project, it is possible to mitigate water quality effects associated with ground disturbance if appropriate conservation practices are followed (see final group of comments). To ensure that this is so, a suitably qualified forester should be onsite during "fuel hazard mitigation" operations.

- What proposed fuel mitigation practices will actually have the most significant effects on fire risk? Felling standing dead trees will advance forest succession by roughly 15-20 years. Dead trees will then be on the ground, as opposed to snapped off and hung up (jackstraw timber). This will reduce the height of ember vectors in the project area. Again, the NRCS forester notes that any fuel mitigation benefit will occur simply by getting the trees down and on the ground. Limbing, bucking up, yarding, etc. are not necessary to achieve fire reduction goals.

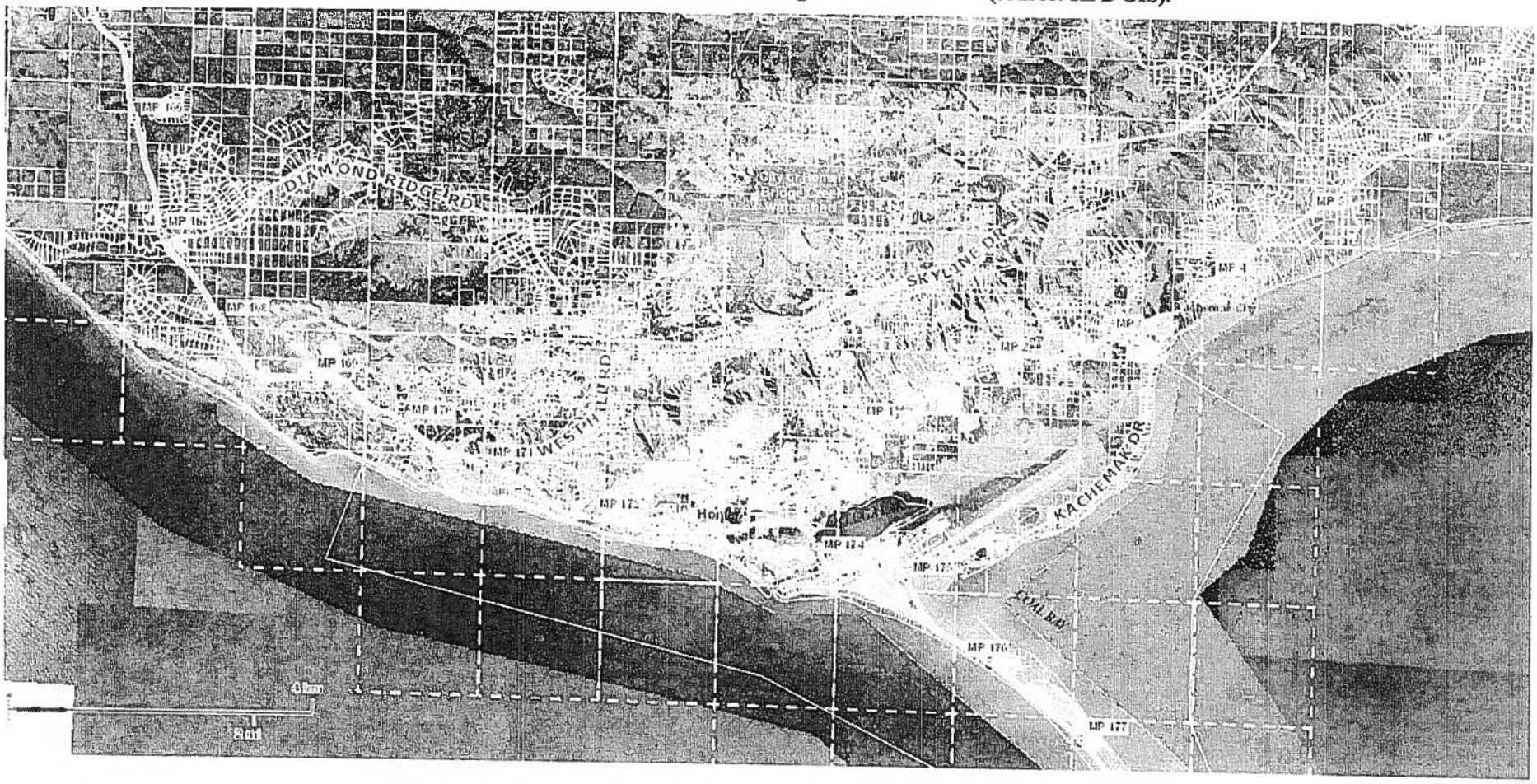
- How susceptible to fire are spruce in the project area? Spruce in the area were killed approximately 15 years ago (see Map 3). They have long since lost their needles (moved beyond the "red needle phase"), as well as their twigs and small-to-moderate diameter branches. Most dead trees in the area will have significant trunk rot by now. These characteristics reduce their role as fuels.

Map 1. Spring fire hazard ratings (source: Kenai Peninsula Borough Spruce Bark Beetle Viewer, http://mapserver.borough.kenai.ak.us/sbbviewer/)



93

Map 2. Location of city-owned lands in Bridge Creek watershed (source: KPB GIS).



25 95

Map 3. Spread of spruce bark beetle infestation in the Homer-Anchor Point area.

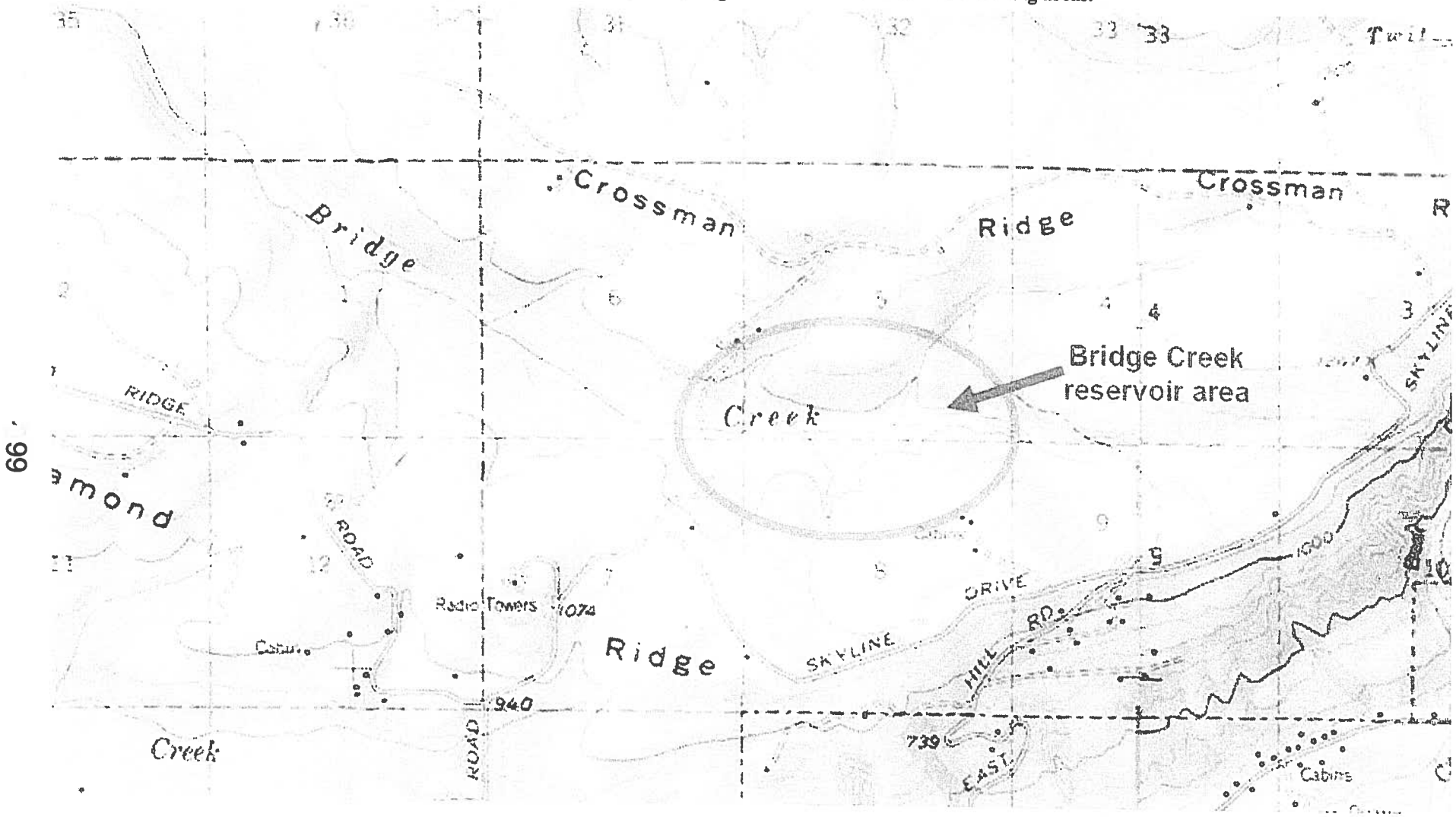
Spread of spruce bark beetle infestation in the Homer-Anchor Point area.

(Adapted from: *The Relationship Between Prior Summer Warmth and Spruce Bark Beetle (Dendroctonus rufipennis) Activity During a Large Epidemic on the Kenai Peninsula,* Alaska2006deptweb.wwu.edu/huxley/huxweb/.../mumm_spruceBeetles/SB_Paper.doc.)

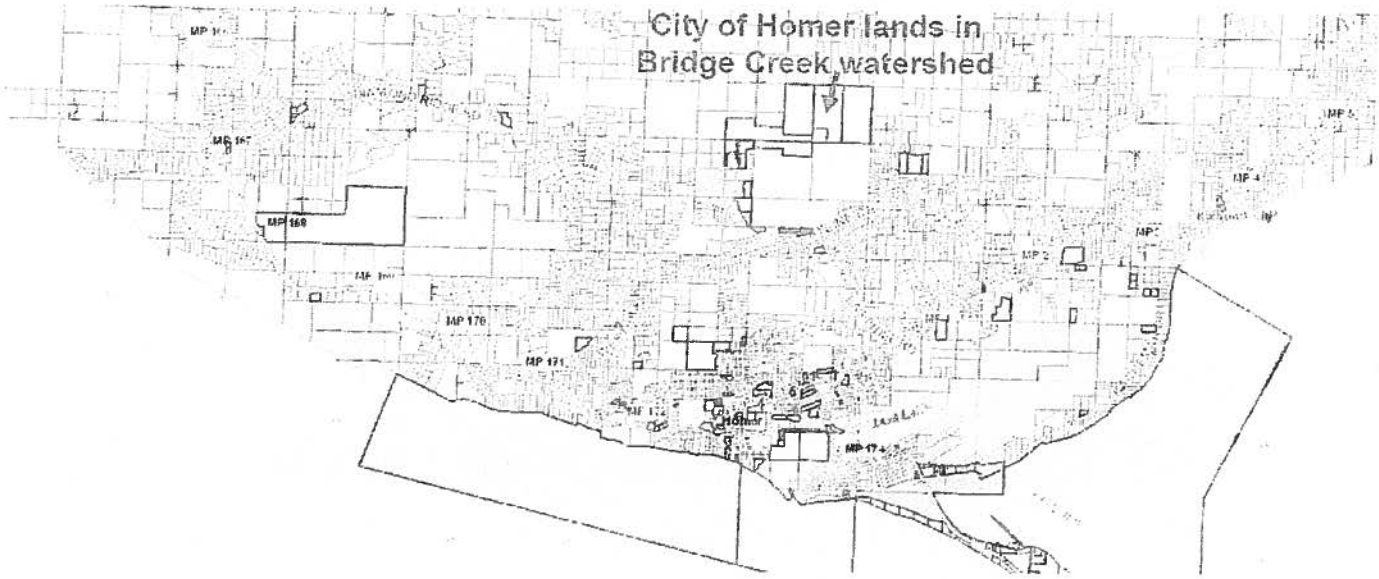
Damage data extracted from annual red tip aerial surveys conducted by AK DNR. Landcover Classification was created by ADFG and Ducks Unlimited using 1989 Landsat TM imagery and is available from the Kachemak Bay Research Reserve. Projection: UTM 6N Datum: WGS 84
Map concept adapted from D. Wittwar. Map created By Joshua Mumm. April, 2006.

97

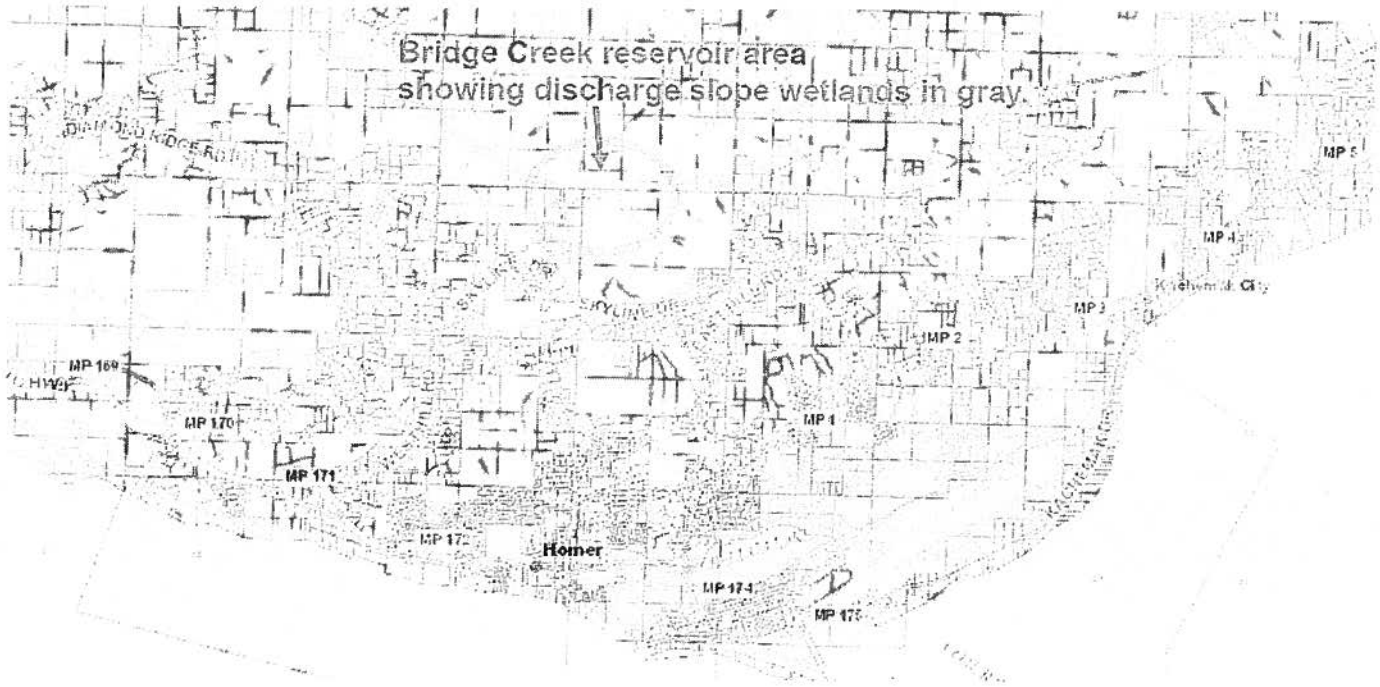
Map 4. 100-ft contours in the Bridge Creek watershed and surrounding areas.



Map 5. City of Homer ownership in the Bridge Creek watershed and surrounding areas (all city-owned properties are outlined in red. (Source: KPB GIS.)



Map 6. Wetlands mapped in the Bridge Creek watershed and surrounding areas (source: KPB GIS).



Other considerations related to fire risk and behavior:

- Every fire is patchy; there are many wet soils in the project area that would be less likely to burn, which would contribute to the patchiness of burn patterns. (See "Notes on Soil Compaction" and "Bridge Creek watershed custom Web Soil Survey report" included under separate cover.) Discharge slopes (see Map 6) will have the lowest fire risk, particularly on north-facing slopes (see Map 4).
- Fire threat can be reduced by increasing the discontinuity of fire-susceptible patches.
- In terms of maintaining as much organic material on the soil surface as possible (which reduces potential soil erosion, see attached "Notes on Soil Compaction") the "best case" scenario would be a fire that occurs when moisture in the organic mat is at its highest—generally early spring or after significant rainfall. The "worst case" scenario would be a fire when moisture in the vegetative mat is at its lowest, at which time the organic mat burn completely, exposing mineral soil to erosion. When soil moisture is high (e.g., early spring), the only material susceptible to burning would be standing vegetation. July would generally be the worst time to have a fire, although once bluejoint grass has greened up, it is less likely to carry a fire.
- Dead trees are at a higher risk to burn than live trees, but their fuel value decreases every year (see "Basic Questions," above).
- Fire hazard rating maps (see Map 1) are based on specific conditions (e.g., wind direction, soil moisture, etc.), which may or may not be present during an actual fire. Fire hazard rating maps are also generalized and represent a "snapshot" of conditions that existed at the time the maps were developed.

Considerations related to soil impacts from proposed activities (which affect water quality, see below).

- As outlined in attached "Notes on Soil Compaction," project area soils have a relatively high susceptibility to compaction. Increased soil compaction decreases soil infiltration rates and increases surface runoff. Predicted compaction rates, even for low ground-pressure equipment, are based on travel over uniform surfaces; ground surface in the project area is not uniform. In addition, ground pressure can be concentrated whenever tires or tracks run over an obstacle that concentrates pressure, such as a tree bole or large rock; concentration of pressure leads to areas of soil compaction. Even frozen soils will experience some compaction. Soil compaction is ameliorated over time by annual freeze-thaw cycles, which loosen and aerate compacted soils.
- Scarifying soils opens up disturbed ground ("soil wounds"); by not scarifying, exposure of bare soil can be reduced by as much as 95%. Bare soil is susceptible to erosion.
- Skidding logs (e.g., for firewood) can cause significant surface rutting. A skidder picks up only half the weight of the log it is skidding, the rest is essentially pushed into the ground.
- "Fuel mitigation" is achieved by knocking down standing dead trees; recommended time to do this is when the ground is frozen but before snow accumulation limits operation of equipment. Once roughly a foot of snow has accumulated (depending on snow density), more cushioning is provided for equipment.
- Knocking over trees creates a "wooded deck" that covers and protects at least another 10% or so of the ground from direct impacts. Leaving this "coarse woody debris" (sticks larger than 6 inches diameter) adds to the total biomass onsite, lessening harvest impacts, especially if large debris is scattered over the area and placed generally on the contour. But, as noted above, some of this material may concentrate pressure when driven over, causing areas of soil compaction.
- The only travel corridors that should receive more than one pass by equipment are ingress/ egress routes. These should be carefully selected based on "vehicle trafficability" ratings, as shown in "Custom Soil Resource Report, Bridge Creek, Western Kenai Peninsula Area, Alaska," included under separate cover with this package.
- Equipment travel across discharge slopes should be avoided (see Map 6). If a discharge slope must be crossed, it should be protected with corduroy. Equipment should be kept out of wetland areas. [In

addition, crossing tributaries to Bridge Creek with heavy equipment may need a Title 16 permit from ADF&G.]

- Only minimal soil disturbance or erosion occurs with tree harvesting; most occurs with skidding (dragging trees over the ground surface). Even then, the major soil disturbance occurs with repeated skidding over the same trail. In this operation, skidding will be limited to trees removed for firewood (if this occurs). The number of repeated traverses of the access trail will likely be no more than two trips per day, maybe four trips for refueling, for less than 7 days per treated area. As noted above, travel routes should be selected based on suitability of soils for trafficability (see "Custom Soil Resource Report, Bridge Creek, Western Kenai Peninsula Area, Alaska," included under separate cover with this package).
- Feller-bunchers can drop branches from de-limbed trees in their path so that they run over the slash. This increases "float" over the soil, but may also concentrate compaction.

Considerations related to water quality in the reservoir:

- Is ash considered a significant water quality threat associated with potential fires? If the proposed project is expected to prevent fire-generated ash from affecting reservoir water quality, note that any significant fire up to 10 or more miles from the site may lead to ash deposition in Bridge Creek reservoir depending on wind and other weather conditions. What were the water quality consequences of ash falls during eruptions of Redoubt Volcano?
- The bottom line with respect to sedimentation and reservoir water quality is that if soils are not disturbed, they will not erode.
- Alternatively, areas of disturbed soils that have an appropriately designed vegetated buffer between them and any surface channels carrying flowing water are unlikely to contribute sediments to the reservoir. The NRCS can provide guidance in identifying which "conservation practices" and "resource management systems" to implement to protect water quality during the proposed fuel mitigation operations. Each conservation practice is described in terms of "standards" and "specifications." As an example, specifications for "riparian forest buffer" (conservation practice code 391) identify two zones and their criteria in forested landscapes:

  TWO ZONE BUFFER DESIGN FOR FORESTED LANDSCAPES
  Zone 1 will be a minimum of 100 feet wide. This zone starts at the high water mark of an anadromous stream or high value resident fish water body [or in this case, tributaries to the Bridge Creek reservoir]. In water not meeting the above designation zone 1 will be a minimum of 50 feet in width. This zone will be composed of native vegetation with no disturbances from logging. Trails in this zone will only be used in crossing streams and for water access. Forest management activities in these areas can be used only for the purpose of maintaining the health and protection of the forest plant community within zone 1. Planned management or treatment action in zone 1 requires the approval of the state specialist and the Alaska Department of Natural Resources State Forester or his or her representative.

  Zone 2 will begin at upper edge of zone 1 and will extend 100 feet from the edge of the water body. Harvest will be limited to leaving 30 percent of the original preharvest canopy. Trails will be kept at a minimum and will be used only for extraction and not for conveying of forest products to a landing area. On mineral soils, no more than 5 percent of the forest duff will be disturbed.

  The minimum overall width of a forested riparian buffer (zone 1 + zone 2) will be 100 feet; additional width will be added based on site specific conditions and additional design criteria.

- As suggested in the previous comment, it is important to avoid disturbing groundcover in areas that drain directly into the reservoir or its tributaries. In particular, access routes used by feller-bunchers or other equipment can leave remnant trails that invite future ATV and ORV use. This can lead to rutting, erosion, and potential water quality impacts.

- Chemical retardants are not expected to be used during fire fighting near the reservoir because their use is generally for the protection of structures. In addition, the reservoir itself provides a source of water for fire fighting.

Considerations related to regeneration and tree planting

- If protection of water supply functions in the watershed is the goal of the proposed fuel hazard mitigation project, planting trees is not necessary because, given dense groundcover vegetation (e.g., bluejoint reed grass), the presence or absence of trees has little effect on water supply functions.
- Nonetheless, existing spruce regeneration in the area appears to be acceptable. Regeneration rates could be more definitively determined if deemed necessary. The NRCS forester recommends that a stocking inventory be done after fuel mitigation operations are complete to determine if there is a need for reforestation.
- If restocking is necessary, soil erosion can be minimized with hand scarification and planting. Since the landowner does not have a forestry objective, there may be no need for 100 percent stocking rates.

Comments related to specific practices:

- "Masticating" slash to an overall height of 1 ft is excessive. NRCS "forest slash treatment" (conservation practice code 384) recommends a height of 4.5 ft for forest slash: "Slash and all downed woody material not utilized or removed will not exceed 4.5 feet in height, unless called for as part of a wildlife prescription." (A copy of that specification is attached to these notes.) Note, there are wildlife benefits to leaving standing snags.
- When operating equipment on frozen soils, "driving the frost down" can create firmer, more resistant travel corridors. This happens in areas that have been compacted as a result of repeated passage of vehicles or equipment. This can also be accomplished by traveling a route several times with a snowmachine and allowing the trail to set up. As noted earlier, however, soil compaction reduces the infiltration rate of the soil, which can lead to increased surface runoff.
- Hand treatment of the area could cost as much as $5000/acre, but on sensitive wetland soils, hand felling may be justified.
- Remaining trees are likely so rotten that they will have little value as firewood. As a result, there may be no reason to yard out logs for firewood.
- The cost of moving a skidder to the area to yard out firewood may be as high as any benefit likely to be obtained from the firewood itself.
- Impacts associated with this project can be minimal if appropriate conservation practices are identified and their specifications fully met. The NRCS can provide a conservation plan addressing environmental quality concerns.
- A suitably trained forester should remain onsite during operations and should lay out appropriate travel routes. It is rarely prudent to have the equipment operator/contractor decide, for example, what routes to follow for ingress/egress, where riparian/wetland buffers should be located, etc.
- All travelways should be on the contour.
- Although the feller-buncher (or other equipment) creates a path as it enters the forest, as it exits, the operator can pick up downed logs and place them in a "jumble" in the travel way to discourage off-road vehicles from following the path created by equipment travel.
- A plan for reducing the threat of invasive weeds during this project should be developed and followed.

Spruce Bark Beetle Activity & Potential Wildland Fire Hazards in Southcentral Alaska

FOREST INFORMATION SERIES # 08

Interagency Forest Ecology Study Team – INFEST

http://www.sf.adfg.state.ak.us/sarr/forestecology/fsfire.cfm

The Interagency Forest Ecology Study Team (INFEST) was formed to aid in ensuring integrated management of the forest ecosystem. The impetus for such a team emerged during the mid 1990's as forest management issues were evolving on the Kenai Peninsula particularly, but not exclusively, related to spruce bark beetle infestations. An interagency team including the Alaska Department of Fish and Game, Alaska Department of Natural Resources, U. S. Fish and Wildlife Service, U. S. Forest Service, and U. S. Geological Survey, Biological Resources Division formed to serve the following purposes:

- Consolidate and disseminate information addressing forest ecology issues appropriate to southcentral Alaska.
- Identify, develop, and execute data collection efforts which are responsive to agency management needs.
- Provide a mechanism for cooperative forest ecosystem studies on all ownerships.
- Provide an avenue for transfer of information among land management agencies.

[HSWCD staff highlighted text of particular relevance to the project discussed in the above notes].

The spruce beetle, Dendroctonus rufipennis (Kirby), infestation in south-central Alaska has impacted more than 2.3 million acres in the last 5 to 7 years. Land and home owners, land managers, local fire departments, and wildland fire managers have expressed concern over the potential hazards created by the increased beetle activity in once healthy spruce stands.

Fire managers from all over North America have noted some distinct changes in fire behavior characteristics in spruce forests that have been attacked by beetles. The major effects of the spruce beetle result from the increasing fuel loads caused by the spruce beetle's voracious appetite. The fire hazard in many areas is increasing at an alarming rate. Coupled with other fire behavior concerns including weather conditions and complex topography, such as steep slopes, canyons and ridges, the potential exists for extreme fire behavior in areas where is was highly unlikely in the past.

Extreme fire behavior characteristics will be observed when the following conditions occur:

- **Long-term drying trends (reduced snowfall or drought) which result in exceptionally low fuel moisture in the heavy (large) fuel particles.**
- **The presence of trees in the "red needle" phase.**
- **"Red Flag" weather conditions, which are a combination of higher than normal temperatures, low humidities (less than 20%), and high winds (generally over 25 mph).**

Combining the above conditions at the same time would cause rates of spread to exceed 1 ½ mph (120 chains/hr.) and severe intensities. Long range spotting of up to 2-3 miles would occur in association with high wind speeds.

What is causing this alarming increase in fire behavior? One of the most visible results of the spruce beetle activity is the invasion of grass into the understory of the timber stand after the dying crowns allow additional sunlight to reach the forest floor. A recent study showed that surface coverage of grass increased from under 5% to over 55% five years after a spruce beetle attack. Total fuel loading increased from about 10 tons/acre to over 35 tons/acre. This fuel type

burns up to 20 times faster and 6 times more intensely than the fuel type associated with healthy white spruce stands, particularly in the spring and early fall after the grass is frost killed.

Following extensive stem breakage, the fire behavior will change as the rates of spread will slow down. The reason for the decreased spread rate is that the heavy fuels break up the continuity of the surface fuel bed, acting as a heat sink to the passing flames. If the heavy (large) fuels support combustion, the resulting fire intensity may preclude control efforts. A hot, intense fire in heavy fuels may also alter the soil characteristics enough to effectively prohibit re-establishment of the climax plant community (spruce/hardwoods) over a portion of the fire area. The spruce forest and related vegetation type may be lost for decades if this occurs.

A good example of extreme fire behavior occurred on the Crooked Creek Fire in June of 1996. The fire area, located east of Ninilchik, contained a significant number of beetle-killed trees. Over seventy percent of the spruce trees in the fire area were dead with many in the red-needle phase. The fire made a run in excess of 8 miles in one day. Weather conditions during that event were by no means extraordinary. Initial attack efforts, although timely, failed.

Fire plays an important role in boreal forest ecosystems by preparing a site for forest vegetation establishment. Considering the importance of fire in the ecosystem, state, federal and local land managers in Alaska have developed interagency fire management plans to preserve this vital management option. Unfortunately, the inclusion of "natural" fires in the ecosystem is not acceptable in many areas because of intermingled private and government land ownership patterns. This intermingling of homes with undeveloped lands is termed the "urban/wildland interface". As the spruce beetle activity continues, Alaskans will be living with an increasing threat of wildland fires.

One solution to the urban/wildland interface problem is for homeowners to create "defensible space". The term "defensible space" refers to practices that dramatically improve a homeowner or landowners' chances of withstanding a wildland fire. The principles are simple:

- **Clear flammable vegetation within 30 feet of your home;**
- **Thin and prune trees beyond the 30 foot perimeter out to at least 100 feet;**
- **Remove beetle-killed trees within 100 feet of structures;**
- **Use metal or other fire resistant roofing materials; and**
- **Move woodpiles and other combustibles away from structures.**

Well constructed defensible space, combined with a good evacuation plan may save lives too!

Selected References:

- Holsten, Edward H., Entomologist, State & Private Forestry, U.S. Forest Service.
- Schulz, Beth. USDA Forest Service Technical Report R10-TP-53.
- Anderson, Hal E. USDA Forest Service, General Technical Report INT-122.
- Norum, Rodney A. Personal correspondence with John W. See.
- Marchbanks, Neil. 1993. National Weather Service, Fire Weather Forecaster. Personal correspondence with John W. See.

Prepared by: John W. See, South Zone Fire Management Officer, Alaska Department of Natural Resources, Division of Forestry - March 1998

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE GENERAL SPECIFICATIONS

FOREST SLASH TREATMENT

(Ac.)

Code 384

General Specifications for All Uses

Slash may be removed, utilized, or treated. Utilization can be for firewood, building materials, process chips, landscaping materials, and other uses that remove, reduce, or change the condition of the material at or from the site. Treatment can be accomplished by crushing, chipping, cutting, burning or by any means that accomplishes the desired residual effect and does not negatively affect or impact the intended use or condition of the land.

Slash and all downed woody material not utilized or removed will not exceed 4.5 feet in height, unless called for as part of a wildlife prescription.

The ground cover of coarse woody debris/slash (3 inches or greater) will not exceed 50% of the total surface area being treated. Scattering of material is allowable to meet this specification.

Slash will be treated or removed where it occurs 100 feet upstream of culverts if the slash could potentially block water flow through the culvert.

Specifications to Reduce Hazardous Fuels

1. Ninety percent (90%) of materials greater than 3 inches in diameter left on site will be in contact with the ground, (duff, organic mat mineral soil or in standing water). Contact with the ground is defined as having contact with ground at least every 8 feet along the length of the stick, stem, branch, pole or log.

2. Ninety percent (90%) of material less than 3 inches in diameter will be left at a maximum of 2 feet above the ground.

Specifications to Reduce the Risk of Harmful Insects and Disease

All material greater than 4 inches in diameter will meet the specifications for reduction of hazardous fuels or will be debarked or treated to prevent the spread of insects and disease as part of a Pest Management Plan as described in Pest Management Standard 595.

Specifications to Improve Access to Forage for Grazing and Browsing Animals (Includes wildlife)

Slash shall be piled or removed sufficiently to allow access to forage by the site's livestock and wildlife to facilitate forage growth. Ground surface occupied by coarse woody debris will be well distributed and not exceed one-quarter (25%) of the total surface area. All other woody debris will be scattered and treated so that 50% of the area is suitable for plant growth and accessible to animals for forage and grazing.

Specifications to Enhance Aesthetics

Slash that is treated, scattered or piled and left on the site will be further treated to meet client objectives and any state or local requirements for aesthetics and visual resources.

Specifications to Reduce the Risk of Harm to Humans and Livestock

Material not in piles or windrows will not exceed 2 feet in height and all end cuts will be perpendicular to the stem or branch.

Additional Criteria to Improve Soil Organic Matter

Slash will be of a size and closeness to the soil to accelerate decomposition. The minimum treatment will be the same as the specification for the reduction of hazardous fuels.

Additional Criteria to Improve the Site for Natural or Artificial Regeneration

Slash will be treated to complement treatments specified in Tree/Shrub Site Preparation - 490.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service Alaska State Office, or download it from the electronic Field Office Technical Guide for Alaska

NRCS, Alaska

December 2007

CITY OF HOMER
PUBLIC WORKS DEPARTMENT

Carey S. Meyer, P.E. - Director
3575 Heath Street
Homer, Alaska 99603

Telephone: (907)235-3170
Fax: (907)235-3145
EMAIL : cmeyer@ci.homer.ak.us

December 15, 2010

Walt Wrede – City Manager
City of Homer
491 E. Pioneer Avenue
Homer, AK 99603

RE: Bridge Creek Watershed
Fuel Hazard Mitigation Project

Mr. Wrede;

Per Homer City Code 21.40.070 – Requirements, timber harvesting activities within the Bridge Creek Watershed Protection District (BSWP District) shall fully conform to the terms HCC Chapter 21.40.

Per 21.40.080 - Erosion and Sediment Control, all activities within the BCWP District involving … (i) any area within 500 feet of Bridge Creek Reservoir or 100 feet from any known stream or tributary or (ii) an area in excess of 6,000 square feet, require a conditional use permit approved by the Planning Commission. The conditional use permit must require that the activity comply with a site specific Erosion and Sediment Control Plan prepared and signed by a certified hydrologist, professional engineer, or soil scientist whose qualifications to prepare such a plan are reviewed and approved by the Public Works Director.

A draft Manpower& Mechanical Equipment Operations Plan for the above referenced mitigation activity has been prepared by the Kenai Peninsula Borough. Under the supervision of the Homer Soils and Water Conservation District (Mr. Mitch Michaud, State Forester and Mike Mungoven, Survey Office Leader), the plan has been modified to minimize, if not eliminate, any ground surface disturbance that might occur. Modifications include completing work in the winter, no log skidding, and other operational constraints. Please consider this as confirmation that Homer Water and Soil Conservation District personnel are qualified to prepare the operations plan and suggest erosion and sedimentation control measures.

Based on the conditions now a part of the plan (conditions that will become part of the Borough's mitigation contract), the work is not anticipated to disturb the existing ground surface and no erosion and sediment plan may be required.

Yours Very Truly;

CITY OF HOMER

Carey Meyer

Carey Meyer, P.E.
Public Works Director

32

BRIDGE CREEK WATERSHED

FUEL HAZARD MITIGATION PROJECT

MANPOWER & MECHANICAL EQUIPMENT OPERATION STANDARDS

GOALS & OBJECTIVES

1. Reduce probability of a catastrophic fire event
   ~ By reducing height of dead spruce fuels to approximately 1 foot above ground
   ~ By reducing volume concentration of small diameter/fine fuels
2. Increase rate of decay and decomposition in beetle-kill spruce
3. Where reasonable, salvage dead spruce for public firewood utilization
4. Reforest mitigation area to improve forest hydrology and water quality

MANPOWER VS MECHANICAL OPERATIONS:

In general, conducting mitigation operations in the Bridge Creek Watershed with mechanical equipment is a more efficient use of energy and fiscal resources when compared to hand/manpower operations. Two pieces of equipment working in tandem can complete about the same amount of work in a day's time as compared to 60-80 people.

Although less productive, certain locations and soil drainage types dictate use of hand crew operations. As example, hand crew work is preferred for beetle impacted forests close to the lake shore. Particularly during non-frozen periods, areas with higher sensitivity to water quality impacts should be conducted with hand crew operations.

Areas planned for hand crew operations have been identified based upon planning and field observations. Once fuel mitigation operations are underway, however, other areas may be encountered where hand work will be advantageous rather than using mechanical operations. Conversely, it may be determined that ground conditions are adequate to negate erosion problems while working equipment closer to the lake shore. Contracts will need to be developed so as to be adaptable to site specific conditions and circumstances.

33

TYPES OF MECHANICAL EQUIPMENT:

Two different types of track based excavator machines are recommended for fuel mitigation operations in the Bridge Creek Watershed. One will be referred to as a "primary machine". This equipment will saw, cut, break and otherwise change the configuration of dead SBB trees to get material close to the ground surface. Project contract standards will fully specify that the contractor and his equipment operators will minimize disturbance to live healthy trees during the process of mitigating spruce dead material.

The primary treatment machine will be a 'medium" size excavator. As first preference, the "working head" will be a single-grip harvesting processor that is capable of cutting standing trees, processing jack-straw trees, delimbing trees on site and cutting log pieces to lengths. If this type of equipment is not available, as second alternative, the working unit can be a double-knuckle grapple unit. This second configuration will require one/two chainsaw operators for cutting standing dead SBB trees in advance of the primary machine.

A second and smaller excavator machine will follow behind operations of the primary equipment. This second excavator will be outfitted with a hydraulic powered masticator head that will reduce concentrations of downed small size/fine spruce fuels. This same machine will also be tasked with creating small vegetative disturbance (scarification) sites for planting tree seedlings the following summer.

OPERATIONAL STRATEGIES AND LOCATIONS:

For mechanical mitigation activity, it will be best to start operations at the "back end" or furtherest distance section first and work the way out of the unit completing around the point of access last. For the Bridge Creek Watershed, this strategy should be weighted against the actual project start date and the probability of completing the entire mitigation operation before the onset of deep snow pack. About 2 feet or greater depth of snow will stymie hand crew project operations. Excavator equipment operations will loose practicality with 3-4 feet snow amounts.

If there are likely limitations for completing the entire project area this fall/early winter season, priority consideration should be given to completing areas with greatest probability of fire ignition. This comes from two likely sources to include powerline failures and human caused fires. In the later case, these are most likely associated with roads.

HAND CREW OPERATIONAL STANDARDS AND CONSIDERATIONS:

Chainsaw felling/cutting operations in this beetle impacted forest configuration will expose personnel to an elevated level of risk/hazard as compared to similar operations in healthy forest stands. Crew leaders should examine stands prior to beginning operations. Evaluation and plans for safety equipment needed on site should be developed. Frequent tail gate safety meetings should be used and crew people should be reminded of safety issues on a routine/daily basis.

Given the location of planned hand felling operations around the lake shore, it is recommended that water transportation be used to reduce hiking time required by the hand crew to reach work areas. Water craft such as a motorized "Zodiak" or other soft hull small vessel can be used for this purpose.

For hand crew operations accessed from roads, as a safety factor, crews should generally start fuel mitigation operations at the front edge of the forest stand and work towards the back. If project operations require walking a distance into work zones, crews should generally vary their hiking routes each day so beaten walking trails are not inadvertently developed during the project activities.

Crew members should be cautioned not to refuel chainsaws near the lake shore or stream tributaries.

EXCAVATOR EQUIPMENT OPERATIONAL STANDARDS AND CONSIDERATIONS:

The primary mechanical equipment contractor will be responsible to cut all standing dead spruce, delimb trees and get all dead spruce material close to the ground level; generally a 12"-18" depth. All jack-straw and/or wind-throw dead spruce will also be treated in the same manner. All busted off tree stumps 4 feet or greater height will be sawed off. Tree boles should be cut as many times as necessary to get log material to lay close to the ground surface.

The secondary excavator machine will follow closely behind operations of the primary contractor. The secondary machine should conduct mitigation treatment within 24 hours of operations by the primary contractor. Secondary treatment will consist of masticating slash and limb debris accumulations along with tilling surface vegetative material for tree planning sites. Tree planting disturbance sites should be developed on a grid pattern with an approximate 15' x 15' spacing.

Equipment contractors should complete units in a progressive manner so that areas are fully mitigated after first entry and repeated equipment operations are not necessary.

35

Generally, equipment operations will be completed on a grid pattern where small blocks, natural drainage areas and/or forest stand patches are completed before moving into an adjoining area.

It is anticipated that excavator equipment will be walked back and forth through treatment units each day after completion of a work day in order to refuel and perform routine maintenance. Contractors should develop and use one main travel route for these purposes rather than multiple access routes.

As portions of units are fully completed, the primary contractor will close out the main access route by spreading large woody debris across trail areas. Water bars will be developed on trail slope gradients that exceed a 6% angle for a distance of 200' or more length. Water bars will be constructed by digging small mounds of soil and vegetative debris at skewed angle to deflect water runoff flow. A greater density of water bars will be required on steeper slopes or because of site specific circumstances.

Protection of water quality is paramount while conducting operations in this watershed. The contractor will use proper erosion control techniques throughout the mitigation areas as necessary to prevent surface material/soil erosion. Any areas of significant vegetative disturbance will be addressed in an expeditious manner. Fuel mitigation treatment operations will be suspended for periods of time as may be necessary to address significant erosion occurrences. If contractors encounter areas prone to significant surface vegetation ground disturbance, because of poor soil drainage or other factors, the contractor will advise the contract administrator in a timely manner of this situation.

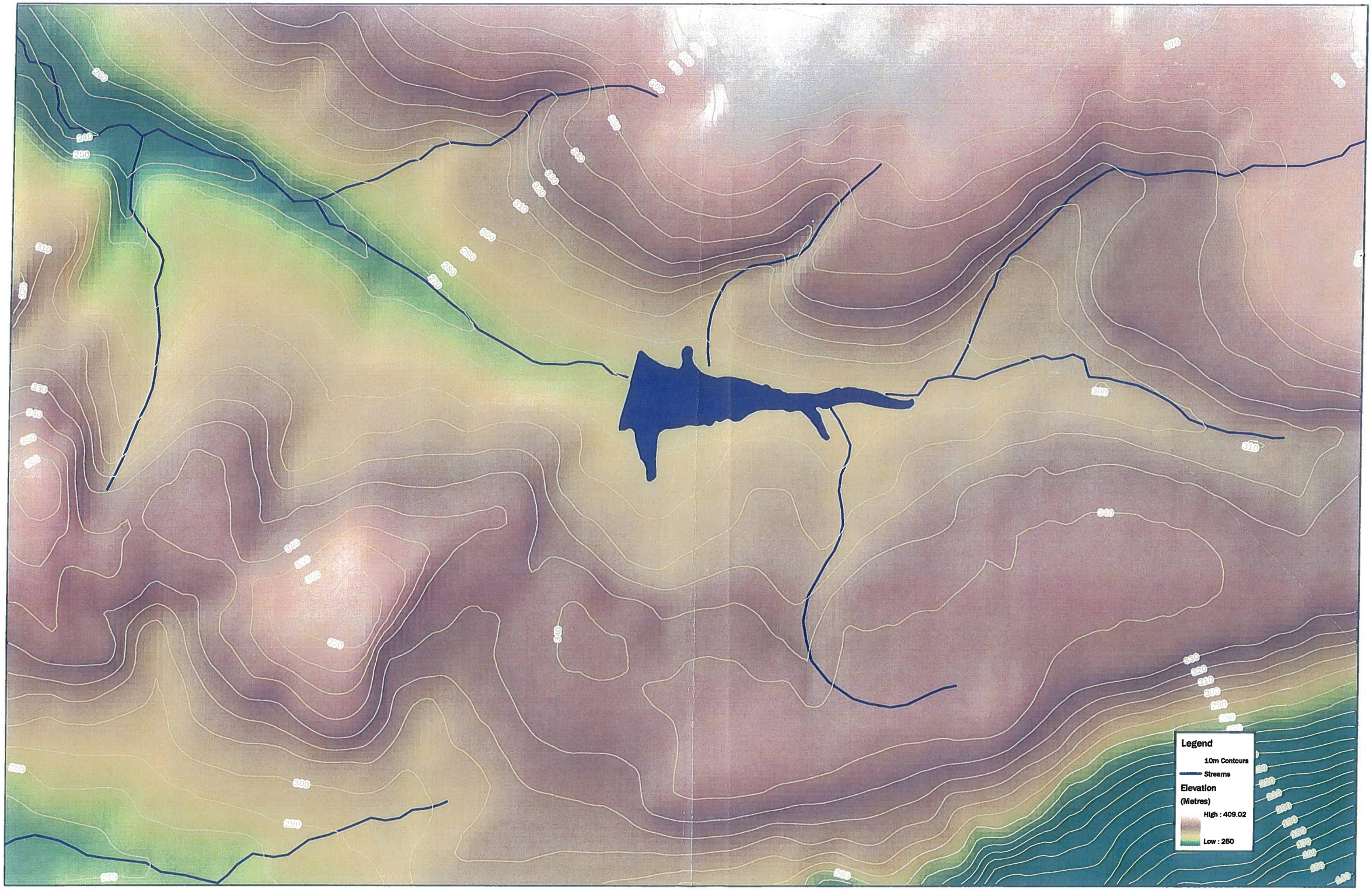
Accessing some mitigation project areas will require crossing small drainage areas and streams. By design, the number of crossings in each drainage will be limited to one or two sites. If saturated soils are encountered in non-forested drainage zones, the contractor will lay down puncheon (tree or brush debris) on the access crossing route as needed to prevent significant soil exposure.

Where it is necessary to gain access across small streams, the contractor will take steps to protect stream banks. Techniques will be used to such as laying walking logs near stream banks and as necessary, putting logs in stream itself to limit displacement or movement of stream bank material.

At the conclusion of drainage access use, the primary contractor will remove log materials used at stream crossings along with loose puncheon in the access trail.

Contracts developed for this project will have a section that addresses standards for equipment fueling and maintenance activities. Included in this section should be strict standards for fueling equipment along with immediate procedures and reporting requirements in case a spill event occurs. Similar reference should be given hydraulic fluid and cleanup in event of equipment hose breakage.

36



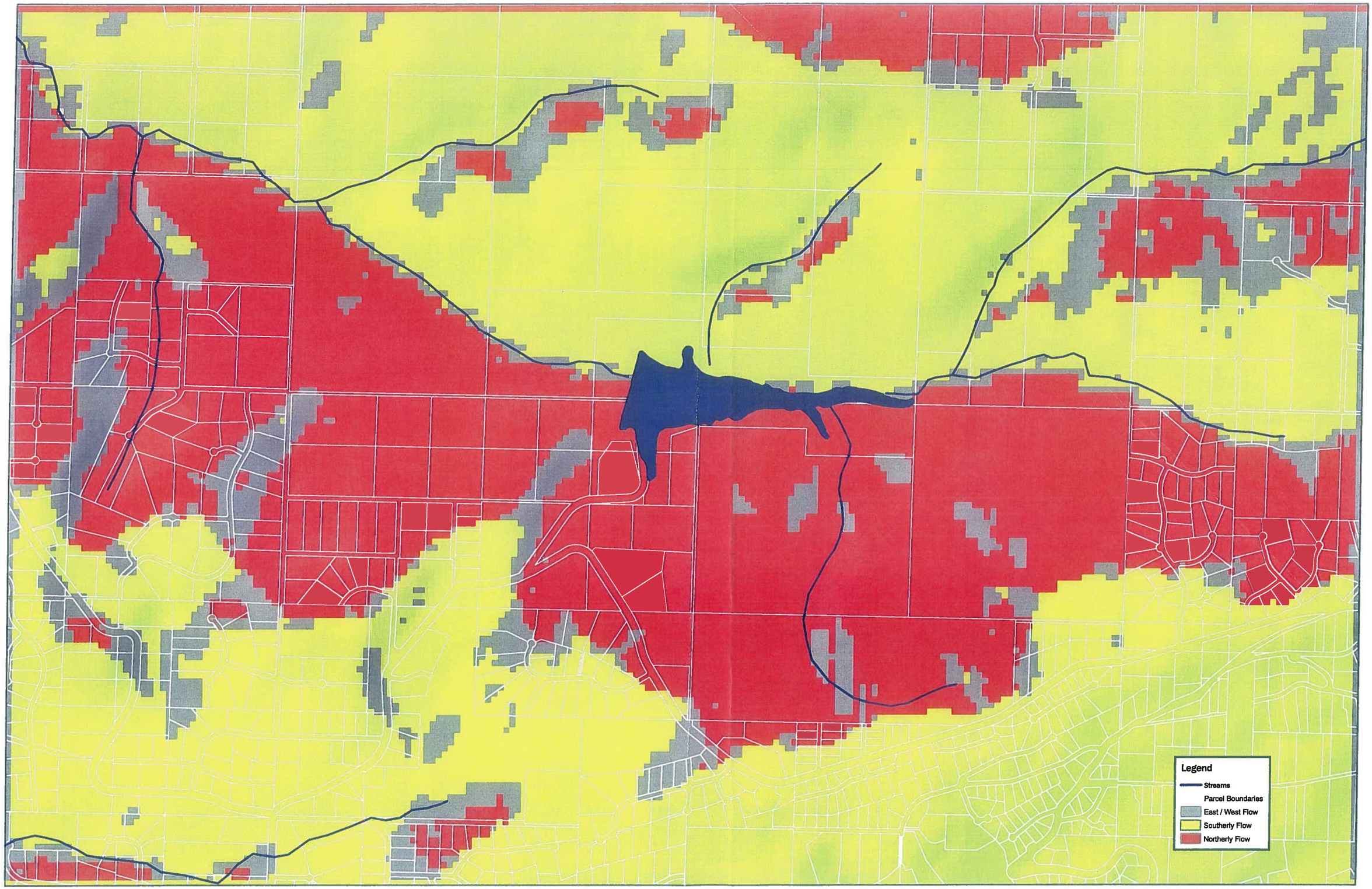
Homer Resevoir: Elevation

Legend
Streams
Parcel Boundaries
Approx. boundary of flow areas
Elevation
(Metres)
High : 409.02
Low : 250

0 250 500 1,000 1,500 2,000
Feet

Homer Resevoir: Flow Area

39



Homer Resevoir: Flow Direction

40

APPENDIX

41

CITY OF HOMER
HOMER, ALASKA

City Manager

RESOLUTION 10-67

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA, ACCEPTING THE REPORT PREPARED BY THE KENAI PENINSULA BOROUGH SPRUCE BARK BEETLE MITIGATION PROGRAM ENTITLED " HOMER RESERVIOR WATERSHED, FOREST CONDITION AND FUEL HAZARD ASSESSMENT", AUTHORIZING CITY PARTICIPATION IN THE PROPOSED FUEL MITIGATION AND FOREST HEALTH RESTORATION PROGRAM, AND EXTENDING THAT AUTHORIZATION TO CITY OWNED LANDS IN THE BAYCREST SKI AREA COMPLEX.

WHEREAS, Providing for public safety and protecting water quality in the Bridge Creek watershed is a top priority for the City of Homer; and

WHEREAS, The City has been working with the State Division of Forestry and the Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program to determine the wildfire danger in the watershed and potential threats to water quality from ash and erosion; and

WHEREAS, The Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program staff produced a report entitled "Homer Reservoir Watershed, Forest Condition and Fuel Hazard Assessment" which concluded that the forest condition is poor, fuel loads are high, fire danger is seriously elevated and will be at elevated levels for decades, wildfire in the area is likely to spread fast, be difficult to fight, kill living trees and saplings, and contribute to erosion and reservoir sedimentation; and

WHEREAS, The report states that a targeted fuel reduction and reforestation program can speed up regeneration and restoration of forest health and protect water quality; and

WHEREAS, The authors of the report made a presentation on a proposed treatment and reforestation plan at the regular City Council meeting on August 9, 2010; and

WHEREAS, The Spruce Bark Beetle Mitigation Program has initiated a similar project on State and Borough lands which are immediately adjacent to City owned land encompassing the Baycrest Ski Trails and has offered to include the City land in the project.

42

NOW, THEREFORE, BE IT RESOLVED that the Homer City Council hereby accepts the report prepared by the Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program entitled " Homer Reservoir Watershed, Forest Condition and Fuel Hazard Assessment".

BE IT FURTHER RESOLVED that the Council authorizes City participation in the proposed fuel mitigation and forest health restoration program presented in the report and at the meeting on August 9, 2010.

BE IT FURTHER RESOLVED that the Council authorizes inclusion of City owned land in the program already initiated on state and borough land in the Baycrest area.

PASSED AND ADOPTED by the Homer City Council this 9th day of August, 2010.

CITY OF HOMER

JAMES C. HORNADAY, MAYOR

ATTEST:

JO JOHNSON, CMC, CITY CLERK

Fiscal Note: N/A

43

Potential erosion and compaction of the soils of the Bridge Creek reservoir area.

There are four major soils mapped in the project area. Mutnala, Kachemak, Spenard, and Coal Creek.

Figure 1, Soil Map of the near-reservoir area

Kachemak and Mutnala soils consist of 3 to 4 inches of organic material over deep ash-influenced loess over glacial till. They are well drained upland soils. Occurring in small swales and depressions near Kachemak and Mutnala soils are small areas of wet mineral and organic soils. Spenard consists of around 9 inches of organic material over ash-influenced loess over glacial till. Spenard is a very poorly drained soil generally found on lower foot and toe slope positions. Coal Creek consists of around 6 inches of organic material over fine textured slope wash over firm glacial till. It is a very poorly drained soil found on edges of drainageways and fens. Some small areas of organic soils occur on the wetter edges of Coal Creek soils. Slopes in the area range from around 4 to 15 percent. Steeper slopes often occur on drainageway sides.

Soil Compaction/Soil Erosion

Soil compaction is a common result of ground-based timber operations, with most soil compaction occurring in the first few passes of a logging vehicle. The primary effect of soil compaction is a reduction in soil pore space. This can result in decreases in water infiltration rate and increased runoff. Increased runoff can result in higher erosion rates. Soil pore space contains the air and water necessary for plant growth. Plants may have difficulty getting rooted and established in compacted soils due to decreases in water and air availability. Decreased plant cover can also lead to increased erosion.

The intact organic mat on these soils blocks direct rainfall impact and helps to disperse surface water runoff. This prevents detachment of soil particles. NRCS estimates soil erosion potential through the use of the K factor. K factor is an index that uses the soil texture, soil structure, and organic matter content to estimate the potential of a soil to be eroded. K factor values range from .01 to .64 with higher values indicating higher susceptibility to erosion. Values for the soils in the area range from .43 to .49 indicating a very significant potential for erosion. The figure below shows the distribution of K

factor for the mineral surface layer of soils in the Bridge Creek area. One of the important functions of the organic mat present on all of these soils is to prevent K factor from being actualized.

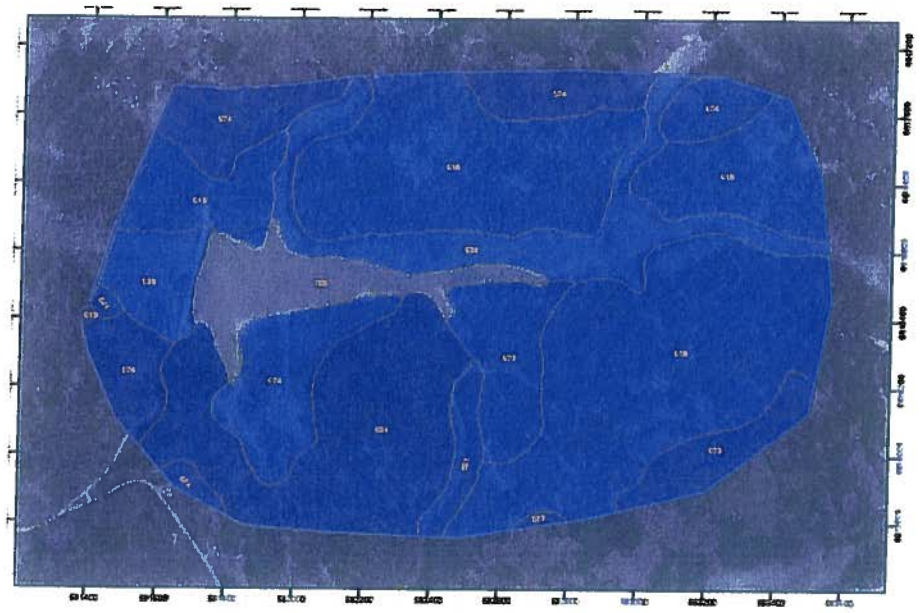
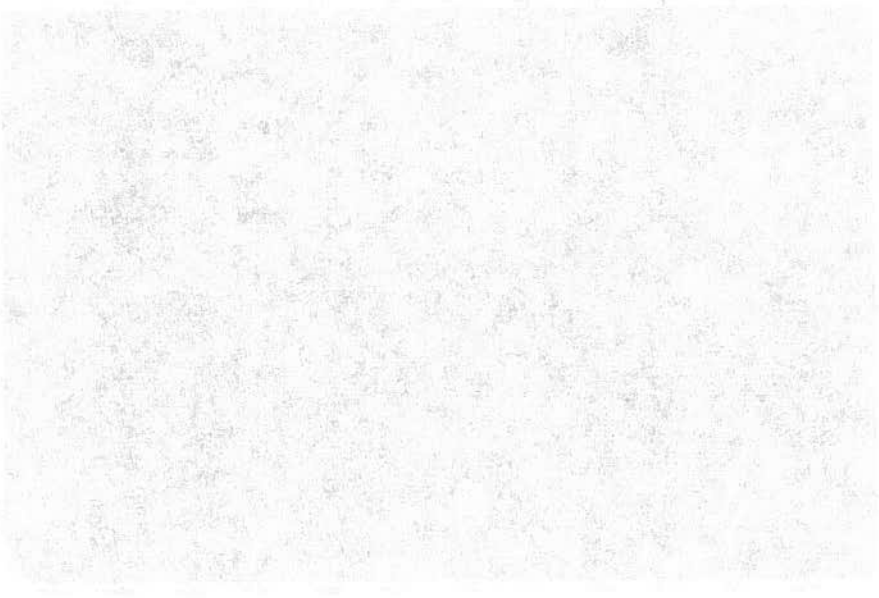


Figure 2. Darker blue indicates higher K factor

Soil erosion is a natural process; it is in fact an important element in the array of soil forming processes that act on the earths' surface.. Soil compaction and ground traffic that disrupts soil structure contribute to increased levels of erosion. The soils of the area generally have low bulk densities; that is, they have structure with significant pore space and are comprised of lightweight particles. The figure below shows susceptibility of the areas soils to a few passes of a light ground contact machine, less than 2 pounds per square inch.

Figure 3. Red is high susceptibility to vehicle traffic, green is low susceptibility, yellow is intermediate

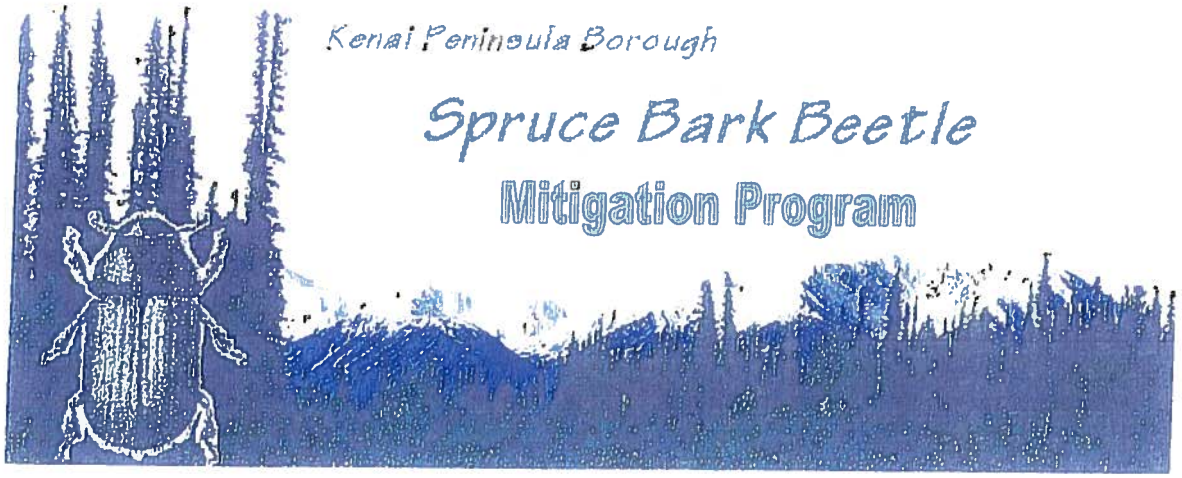


At particular moisture contents, neither too high nor too low, the moisture conditions on most days, these soils have a high potential for compaction. Ashy soils like these also have very low bearing capacity, particularly when wet, due to low particle connectivity and low shear strength. Disruption of soil structure caused by tires penetrating the ground surface will easily lead to deep rutting and pore space connectivity disruption.

Conclusion

Soils of the project area have a rather high potential for erosion. The lofty surface is also subject to compaction. Maintenance of the organic mat is critical to preventing erosion and mitigating compaction.

45



July 1, 2010

TO: Walt Wrede
Homer City Manager

From: Michael Fastabend
SBB Coordinator

Wade Wahrenbrock
SBB Fire and Fuels Specialist

Re: Fuel Mitigation and Forest Health Restoration around Homer City Reservoir

Attached is a report produced by the Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program (SBB) that assesses the forest conditions and fuel hazards surrounding the Bridge Creek public water supply reservoir managed by the City of Homer Alaska. Based upon current tree stocking conditions and the potential for a significant wildland fire event with associated negative impacts, we recommend the City of Homer address both fuel mitigation and forest health restoration in the watershed area.

The SBB Program is poised to assist the City in this mitigation project through full funding of hazardous fuel treatments and subsequent reforestation using funds that the Kenai Peninsula Borough received from the American Recovery and Reinvestment Act (ARRA) of 2009. Additionally SBB staff is prepared to fully assist the City with fuel treatment prescriptions, contract development, contract administration, and field inspection work as desired. It should be noted, however, that the ARRA funds need to be dedicated by September 1, 2010 and project work will need to be completed by the end of 2011.

Principal information derived from field review of the forest area that makes up the watershed around the lake includes:

- Approximately 70%-75% of intermediate and mature size trees were killed around the reservoir during the 1990's beetle epidemic. Tree mortality rates were somewhat less, but still significant, at upper reaches of the watershed.
- Current live forest structure is only about 42% of full tree stocking potential.

- Dead beetle-kill spruce and grass fuels located in the watershed are very susceptible to fire ignition from any heat source and therefore pose a significant fire risk.

SBB conducted analysis of potential fire behavior within the watershed and neighboring forest lands. During moderate weather conditions and certainly during periods of extreme conditions a fire within the watershed will exhibit explosive behavior and rapid movement with 4' or higher flame lengths and rates of fire spread ranging from ¼ to ½ mile per hour. FARSITE model output sheets are attached for your information.

- In event of ignition, fire in this watershed would have high resistance to suppression control. It is very likely a fire would include extensive crown fire involvement and consume most live trees in the final outcome.

Based upon research conducted by the US Forest Service (General Tech Report R10-TP-134), we expect the mass of surface fuels to diminish in volume at the rate of about 1.5% each year.

- An elevated ignition risk and fire hazard around the reservoir area will persist for about 25-35 more years, lessening by a small degree each year.

Literature research of bark beetle epidemics in the "Lower 48" indicate distinctive changes in water hydrology flow occurs because of large scale tree mortality. Reportedly, the increase of flow runoff and changes of soil water storage can also affect sediment introduction into reservoirs.

Finally, as referenced above, forest stocking around the reservoir lake is currently estimated at 42% of full potential. Without a pro-active reforestation effort it is expected that recruitment of new tree seedlings within the watershed will be slow to occur until downed logs reach a sufficient level of decay that makes them receptive to spruce seed germination. This decay class will take about 15 – 25 more years before the downed material is suitable as "nurse logs".

Thank you for your consideration of this public safety/protection of community resources project. SBB staff is available to answer any questions that you may have regarding the attached report. Please let us know how you would like to proceed next with this project.

Sincerely,

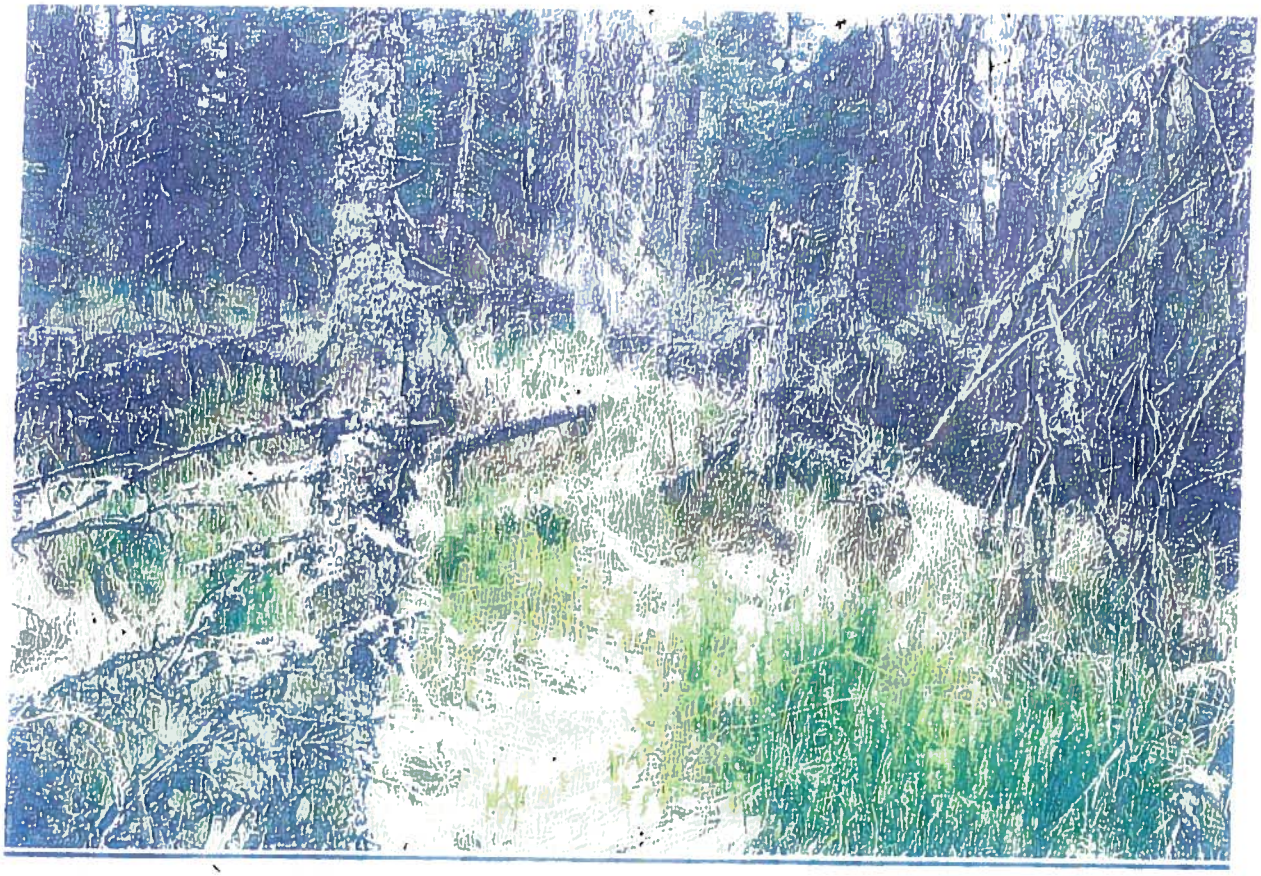
Michael Fastabend

Wade Wahrenbrock

HOMER RESERVOIR WATERSHED

FOREST CONDITION AND FUEL HAZARD ASSESMENT

Conducted by the Kenai Peninsula Borough,
Spruce Bark Beetle Mitigation Program



A FIELD RECONNAISSNCE SUMARY REPORT

Introduction: Based upon a request by the City of Homer, the Kenai Peninsula Borough, Spruce Bark Beetle Mitigation Program has conducted an evaluation of forest health and timber stand conditions around the public water reservoir area located in the Beaver Creek drainage. The major issue at hand is the level of spruce tree mortality within the watershed and how this might affect risk and hazard for wildland fire.

Watershed Area: As a first step in this project, effort was undertaken to define the landscape area which makes up the watershed draining into the reservoir system. Bobbi Lay with the SBB Program accomplished this task using GIS tools and USGS digital elevation model information with 75' contour intervals. First attempts were based on a USGS digital elevation model using GIS system tools. This mapping was later refined with LIDAR products. Figure 1 shows stream drainages that flow into the reservoir.

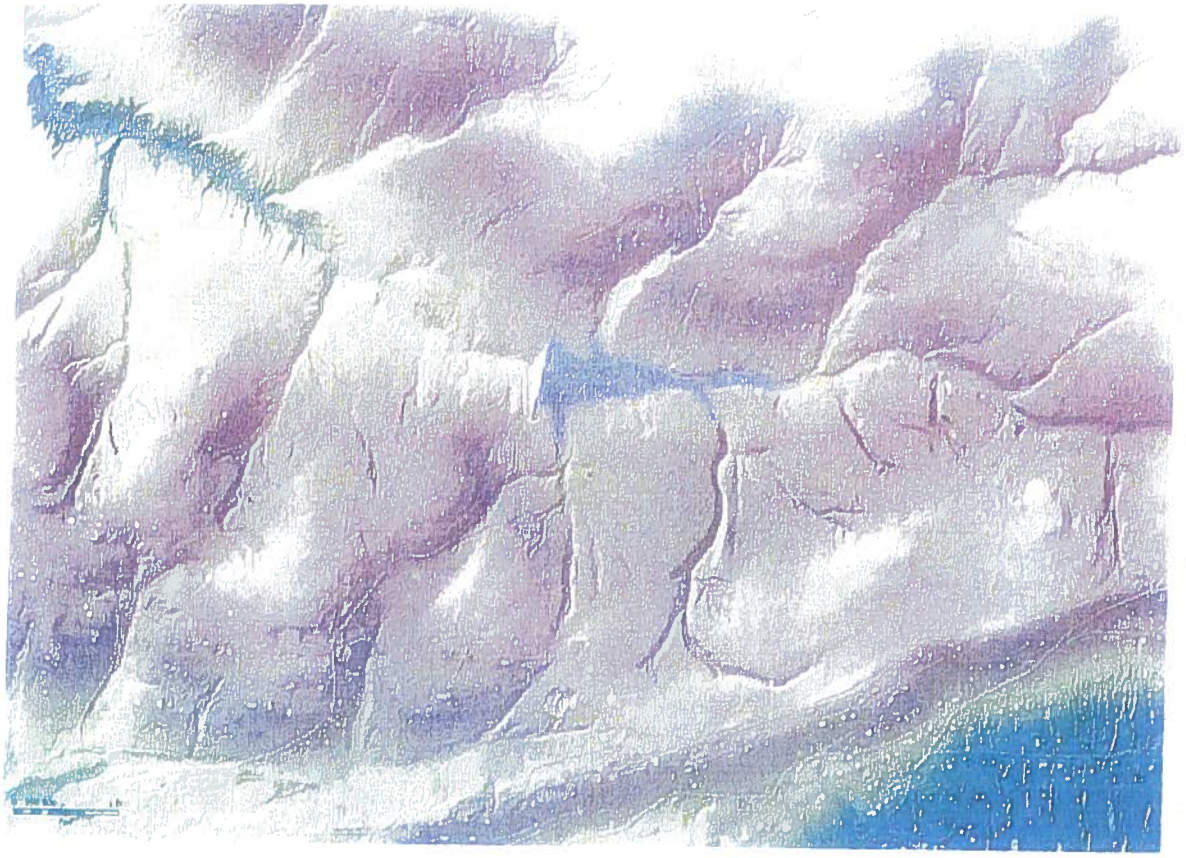


Figure 1: Reservoir Watershed Area

Topography and Soils: The Homer water reservoir is located at an elevation of approximately 925 feet. The hill top areas above the lake range to about 1,250 feet in elevation. The side hills generally run at 5% to 15% slope with some steeper pitches found in the area.

Most of the soils around the lake are composed of well-drained silt loams. There are two areas located on the south side of the lake, however, which have poorly drained soils. Combined, these two poorly drained areas total 75 acres. Any plans that may be developed to mitigate fuel hazards in the watershed will have to take these soils into account to minimize water quality disturbance.

Silvicultural Condition & Stand Stocking: A field reconnoiter was conducted around the reservoir area on June 15 & 16, 2010. The purpose was to evaluate the level of spruce bark beetle mortality in the area, assess the level of stem breakage and decay in dead trees along with review of current conditions of live trees in the forest stands. During this process, several $1/10^{th}$ acre circular plots were sampled to numerate live forest stocking and the proportional volume of tree mortality.

The forest composition within the watershed is almost entirely composed of spruce. There is some evidence of hybridization with white spruce in this watershed but most trees have a stronger characteristic of Sitka spruce tree species.

The forest stand prior to bark beetle influence had an uneven forest age structure. The largest component of tree age class structure was found to be trees in the intermediate (80 -120 yrs) to mature (>120 yrs) age classes. Younger spruce composed roughly 20% of the forest stand tree stem density. There were few seedling-size trees around the area on a per acre basis prior to bark beetle influence.

It appears that the spruce tree age class becomes somewhat younger and the tree height lessens as the forest zone moves up higher in elevation in the watershed. There are also more open areas of brush and grass at higher elevation.

The bark beetle epidemic during the early to mid 1990's generated extensive tree mortality in this watershed. Approximately 70% – 75% of the trees located within the watershed were killed by bark beetles. Generally, a greater level of mortality occurred at lower elevations around the lake with a lesser proportion of spruce impact experienced around the upper slope hillside areas.

Field Sampling Results: Sampling was accomplished by establishing a series of $1/10^{th}$ acre circular plots at representative sites around the reservoir area. The level of sampling intensity was not sufficient to generate meaningful statistical accuracy. Rather, the sampling was intended to provide a broad summation of stand conditions.

Live Spruce by Size Class	Trees / Acre	Stocking Ratio
9" DBH & Larger	10	8%
5" – 9" DBH	33	19%
1" – 5" DBH	18	9%
Seedlings	28	6%
		Total 42%

The live tree size class distribution within the watershed is indicated in the table above. The percentage values for tree stocking density are based upon standards found in the Alaska Forest Resources and Practices Regulations (11 AAC 95.375).

An increment bore was used to extract a core from a dominant or co-dominant tree at each plot location. The larger trees on site after the bark beetle epidemic range from 10" to 12" DBH and 45' to 50' in height. The counted growth rings for live trees revealed an age distribution from 72 years to 104 years old.

Dead Standing Spruce Size Class	Trees / Acre
9" DBH & Larger	40
5" – 9" DBH	19
1" – 5" DBH	10
Total	69

Dead & Down Spruce 70 Trees/Acre

The procedure for deriving the number of dead and down spruce trees was a count of the number of downed trees whose stems originated in the 1/10th acre plot area. In many cases, other downed trees had fallen into the plot circle but these were not tallied for plot numeration.

The large majority of the dead and down spruce were estimated to be in decay class 1 and 2. A small percentage (10% - 20%) of dead and downed trees were in decay class 3. The stems in this latter decay class were fully positioned on the forest floor. A scattering of trees were found in decay class 4 and 5 but these spruce were not associated with the bark beetle epidemic that occurred in the 1990's.

Forest Fuel Volumes and Modeling Assessment: In proportional terms, measured sample plots yielded a distribution of 61 live trees per acre (excluding seedlings) as compared to 139 trees per acre for dead spruce. Almost all spruce larger than 12" DBH were killed by beetles. Larger trees, of course, contain more limb structure and volume in all fuel size class categories.

Photographs of sample plot areas were taken as visual reference to numeric information provided in this report. These photos are found on the front report cover and in Appendix #1.

The loss of forest canopy structure allows a significant increase in direct sunlight to reach the forest floor. The principal plant species to respond to this changed light condition is native blue joint grass (Calamagrostis Candensis). As depicted in the Appendix #1 photos, grass now covers much of the ground in beetle impact areas. Ground cover estimates made during the plot sampling process indicate grass cover ranges from 50% to 90% of surface area. The remaining herbaceous vegetation is composed of many species. About 10% - 15% of the plots had willow species brush. The areas closer to the lake appear to have higher levels of willow cover. This brush layer diminishes further upslope.

For purposes of projecting potential fire behavior and rates of spread, the forest area around the reservoir is most closely represented by a custom forest fuel model developed from analysis of the 2007 Caribou Hills Fire. This is identified as custom model No. 22 which represents a light loading configuration with native blue joint grass along with downed and jack-straw beetle kill spruce. Information about attributes of this custom model or its development is found in Appendix #2.

Fire Risk and Hazard Evaluations: The overall human use patterns around the reservoir lake area have not appreciably changed much since the beetle epidemic occurrence. In terms of fire risk, however, the accumulation of dead spruce fuel component that has emerged as a result of the bark beetle event is of great significance.

The small and moderate size-class dead fuels are sufficiently dry during much of the summer season to quickly ignite from common human heat sources such as matches and cigarettes. As one example, sparks from a grinder while a person was sharpening a tool was sufficient to ignite the 2007 Caribou Hills Fire.

The fire ignition risk from heat sources such as downed power lines and lightening strikes is substantially higher when compared to background levels before the bark beetle impact.

Once ignited, fires that occur in beetle-kill spruce fuels have a high resistance to control by fire fighting resources. Traditional control tactics, such as use of aerial retardant drops, are not as effective in this type of fuel complex. Fire Incident Commanders have to provide more diligence and care to avoid fire entrapment of ground resources and hand crews.

Even though fire suppression agencies, such as the Alaska Division of Forestry, have increased the number and types of firefighting resources available for initial attack of fires in recent times, the frequency of large size fires has actually increased.

As compared to pre-beetle impact periods, the table below reveals a statistically significant increase in the number of large fire events on the Kenai Peninsula.

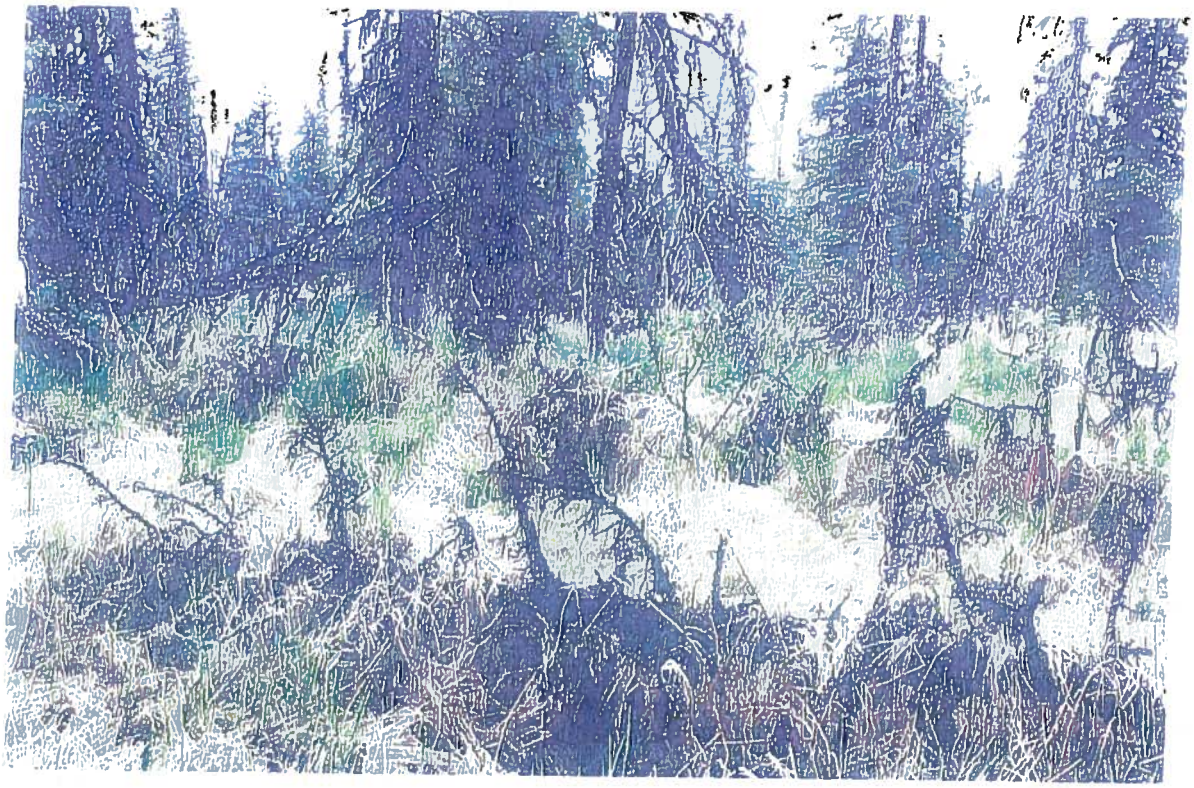
Fire Acre Size	1940 thru 1990	1991 thru 2010
100 – 999 Acres	19	22
1000 Acres & Larger	9	14

As compared to back-ground levels, there are a greater number of days each summer season when environmental conditions and weather patterns are sufficient to enable growth of large size fires in beetle-kill fuel complexes. As example, in the 50 years before beetle attack, a fire in the 100 – 999 acre size class happened on the Kenai Peninsula every 2.6 years. In the last 19 years, that frequency has dropped down to a fire of this size every 0.86 years. As further example, before beetle impact, a 1000+ acre fire happened every 5.6 years. Large problem fires on the Kenai in beetle kill fuel complexes now happen every 1.4 fires.

In summation, the risk of fire ignition in the forest area around the Homer water reservoir area is considerable higher. The hazard of a fire originating within the watershed or moving through the area from another more distant location is substantially higher. As evidenced from other fire events in the past 19 years, should a fire happen in this area, a vast majority of both live and dead fuels will be consumed. Only a small fraction (<5%) of live forest would likely remain after a large fire event.

APPENDIX #1

Below is a sampling of photos taken on June 15 and 16, 2010 depicting forest structure and conditions around the Homer water reservoir area.



APPENDIX #2

2007 CARIBOU HILLS FIRE:

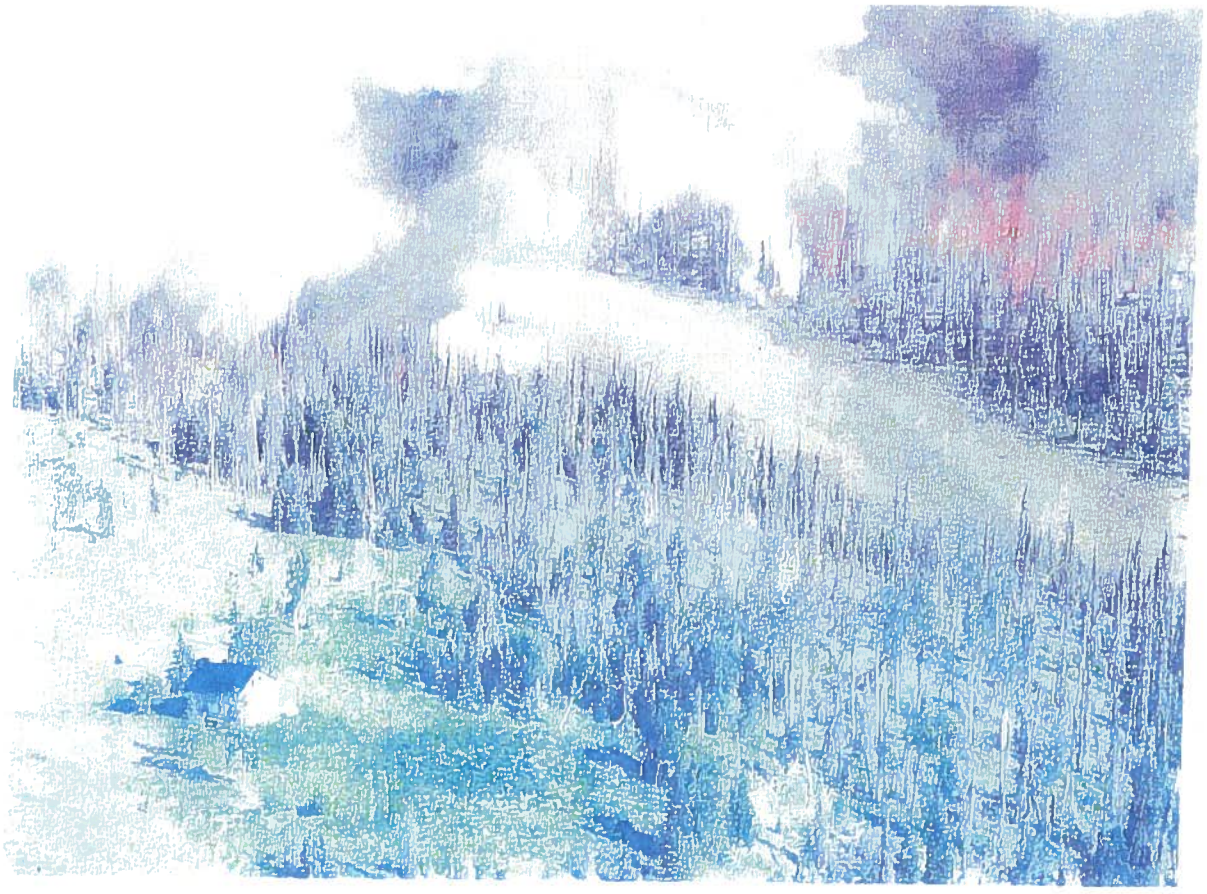
Kenai Peninsula Borough
Spruce Bark Beetle
Mitigation Program

Research Paper

July, 2009

FIRE BEHAVIOR ANALYSIS AND CUSTOM FUEL MODEL DEVELOPMENT FOR THE KENAI PENINSULA

Wade W. Wahrenbrock



Introduction:

Over 1.4 million acres of bark beetle insect activity was recorded (Burnside 2001) on the Kenai Peninsula during the 1990's,. This "high intensity" beetle infestation dramatically altered the composition and structure of spruce forests in affected areas. Ever since the beetle attack episode occurred, dynamic change in the fire regime has been experienced within the disturbance area.

This large-scale forest disturbance has created a unique fuel complex. The current fuel bed composition is not well represented by any of the standard "NFFL" fuel models. Nor is this dead jack-straw fuel configuration replicated by models in the Canadian Fire Behavior Prediction System.

Figure 1. South Fork of Ninilchik River Drainage

The 2007 Caribou Hills Fire burned approximately 55, 438 acres. During part of the fire event, the natural fire growth progression and combustion intensity levels were not

altered by suppression efforts to any significant extent. In affect, the fire overshadowed and fully exceeded fire suppression capability available at that period in time.

This burn event provided a basis for analyzing rates of fire travel across the landscape and intensity levels. FARSITE was used to develop new custom models so as to forecast probable characteristics of future fire episodes in this type of fuel complex.

Figure 2. Anchor River Drainage – East End Road Area

Background:

The spruce bark beetle outbreak on the Kenai Peninsula was unprecedented, not only in its large size, but intensity level of the infestation. In many stands, tree mortality reached 85% to 98% of all spruce over 6" DBH. The bark beetle episode lasted about 10 years at high intensity levels.

For approximately 5 – 8 years after the beetle attack, the landscape was dominated by the red and brown hues of standing dead spruce (Fig. 1). During this period, a variety of fungus species and other organisms began to affect wood fiber after mortality. Over

time, the weakened trees have been subject to stem breakage as decay advances. This evolution of forest structure change is now well progressed on the Kenai Peninsula. Remnant spruce stands are now mostly a jack-straw configuration (Fig 2).

Spruce tree needle loss occurs within two years after beetle attack. The more open canopy layer allows increased direct sunlight to reach the forest floor. The net response is a loss in moss depth and significant increase in fine fuel (1 hr <1/4") volume loading.

The greatest increase in fine fuels is represented by native blue joint grass (calamagrostis candensis). This is the dominant species in most areas. Surface fuels in the 10 hour (1/4" – 1"), 100 hour (1" – 3") and 1000 hour (>3") time lag class have also increased dramatically as stands have unraveled in the past 10 years.

Landscape and Vegetation - Spatial Data:

Following the bark beetle epidemic, staff at the Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program systematically classified vegetation using a photogrammetric interpretation process. The vegetative class polygons were then rendered to GIS format. The protocols for this mapping effort include a total of 434 types of forest and vegetation class combinations.

The original map classifications have been modified in cases where known changes or disturbances have transpired. As example, classifications have been revised to reflect areas that have been logged and the areas consumed by large fires.

The landscape areas that have been mapped for vegetative classification include all of the western Kenai Peninsula from the mountains to Cook Inlet and the Kachemak Bay. A band of area has been mapped on the south side of Kachemak Bay; from the Bradely Lake dam to Nanwalek. A corridor has been mapped through the Chugach Mountains along the Seward and Sterling Highways. As of this draft, preparations are underway to map a new area around Tyonek.

Fuel Model Development:

The event which provided opportunity for developing new custom fuel models was the 2007 Caribou Hills Fire. This fire was initial attacked on June 19, 2007 and had substantial fire size growth through June 24, 2007. The time periods selected for specific analysis and fuel model development include the evening of June 19 and the time period of mid day June 21st through all of June 22nd (Fig. 3).

Weather information for use in FARSITE operations was retrieved from a historic record data source available on the internet (mesowest roman site). Three different weather observation stations were reviewed to evaluate weather attributes. This included

"RAWS" stations identified as Ninilchik, Homer (HO2) and Skilak Guard Station. It was determined that the Ninilchik weather data was the "best fit" for this fire event.

Albeit the Ninilchik weather information was deemed the best source, a revision of wind speed and direction data was used in model development. With analysis, it was determined the length-to-width ratio of the actual fire shape on the dates of interest did not coincide well to the RAWS observations. Rather than wind speed average, peak gust data was used in order to produce the elongated shape (length-width ratio) of the actual burn. Wind direction was also modified (to a lesser extent) in order to derive a fire location in FARSITE operations that replicated the actual burn spread across the landscape.

With weather and topographic information set for use, the other principal variable was vegetation. It is the vegetative characteristics that were tested in various volumes, surface area relationships and other attributes that are derivative for new model development.

To begin the process, fuel loading volumes and other attributes were first derived by means of estimation based upon experience. From this point, a series of FARSITE production "runs" were conducted. With each run output, model attributes such as load volume, fuel bed depth, and surface-to-volume ratio were changed to better replicate the actual burn area and intensity levels that occurred during the actual Caribou Hills Fire.

Other model adjustments made during the development process include revision of canopy characteristics along with the percentage of spot fire ignition probability. FARSITE has the capability to exponentially adjust for rates of spread that can be factored into fire growth run output. The analysis process included testing and revising file adjustment values to gain the desired outputs.

Results:

Through the process of working with FARSITE to replicate propagation of the Caribou Hills Fire, it was determined that three (3) new distinct custom models are needed to reflect real-world conditions and results for fire spread.

The FARSITE fire progression output results were compared to the mapped perimeter of the Caribou Hills Fire. Figure 4 shows the actual Caribou Hills fire perimeter boundary along with the fire intensity outputs generated by FARSITE using the new custom models. Approximately 85% of the FARSITE production is within the identified fire perimeter with the bulk of variation being on the western side. This zone coincides with residential dwellings located around the fire area. Assumption is made that this area did, in fact, receive fire suppression actions at the time that were successful to the decree indicated by the model outputs. Lacking fire suppression intervention, it appears the fire would have burned this additional area.

Figures 5 and 6 also show the fire perimeter boundary location with FARSITE outputs. These two figures provide information with respect to flame lengths that affected the fire area along with rates of fire spread.

An appendix is attached which describes all of the custom fuel model products that the author has produced for Alaskan fire applications. The newest fire models for use with "jackstraw" beetle-kill spruce fuel complexes are labeled as model 21 and model 22. An additional model was generated from this analysis work to replicate post-logging grass fuel beds mixed with residual slash debris.

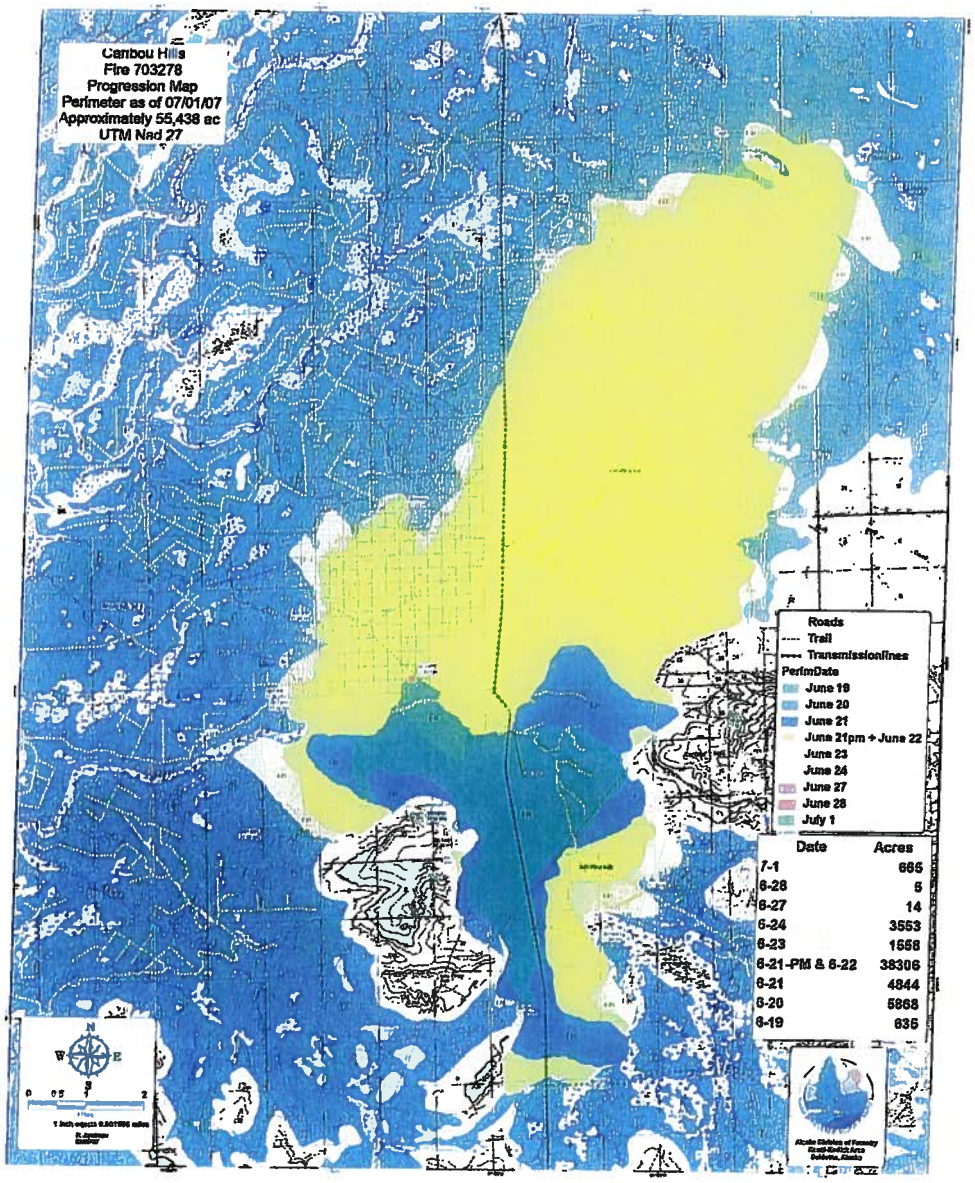
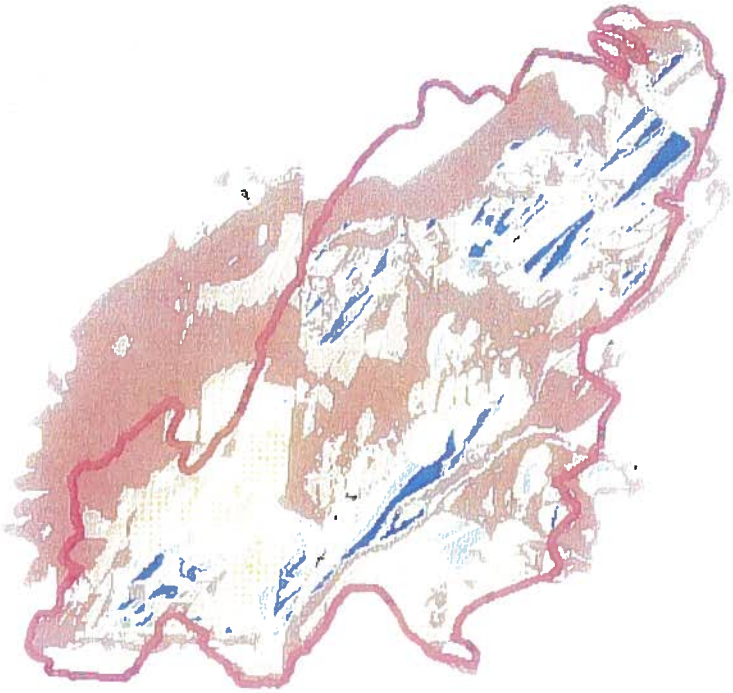


Figure 3. Caribou Hills Fire Chronology Progression Map.

Caribou Hills Fire Analysis
Custom Fuel Model Development

Fire Line Intensity



Legend

Caribou Hills Fire Burn Area June21-22, 1997

Fire Line Intensity (btu/ft)

VALUE

- 0 - 250
- 250 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 3,000

7-23-09

Figure 4. The fire shape derived from FARSITE is compared to the actual Caribou Hills Fire perimeter for the June 21st PM and all of June 22nd burn period.

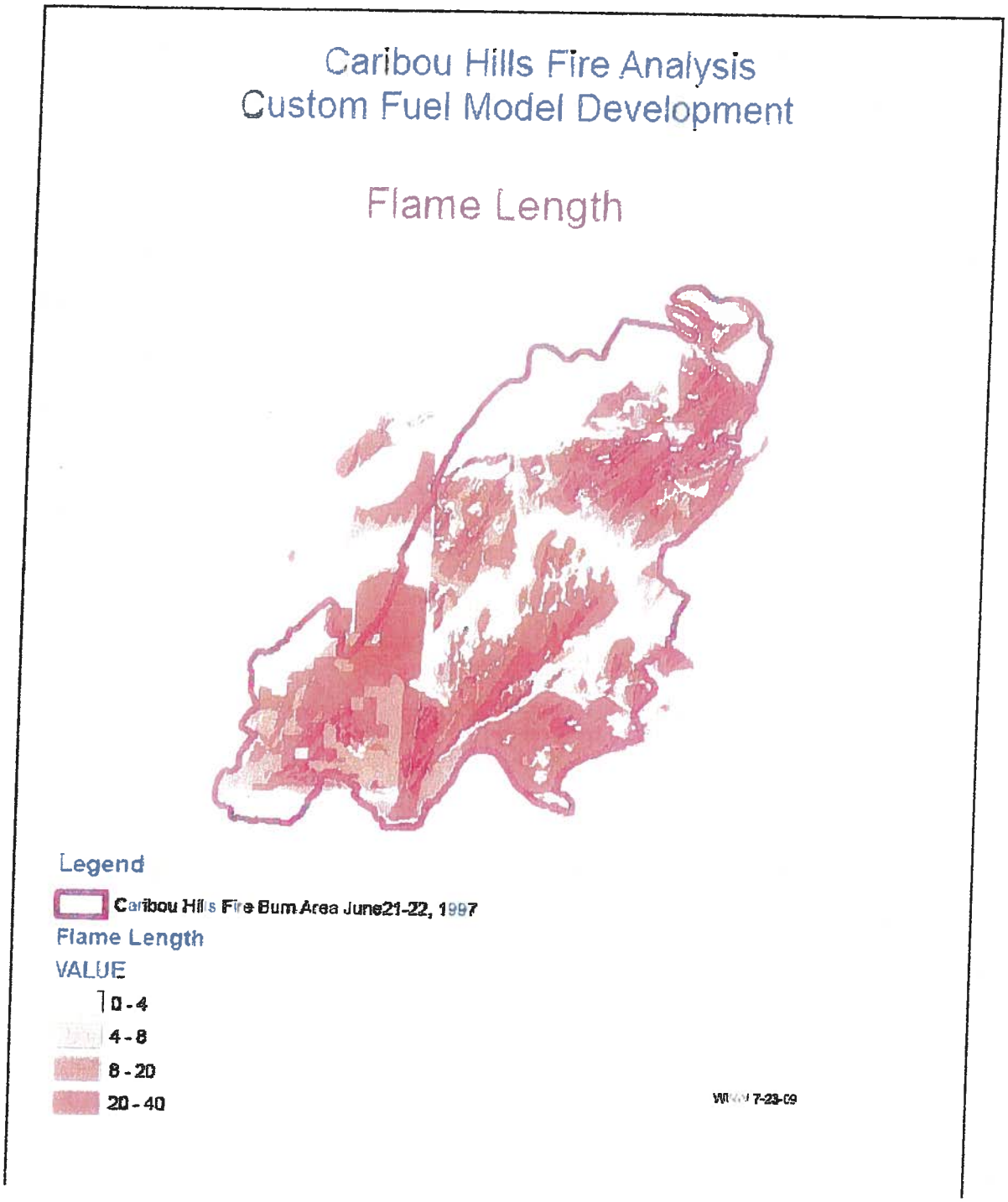


Figure 5. This figure shows the flame lengths generated by FARSITE for theJune 21st PM and all of June 22nd burn period. Flame lengths are derived frompotential heat production of fuel bed along with weather and topographic influences.

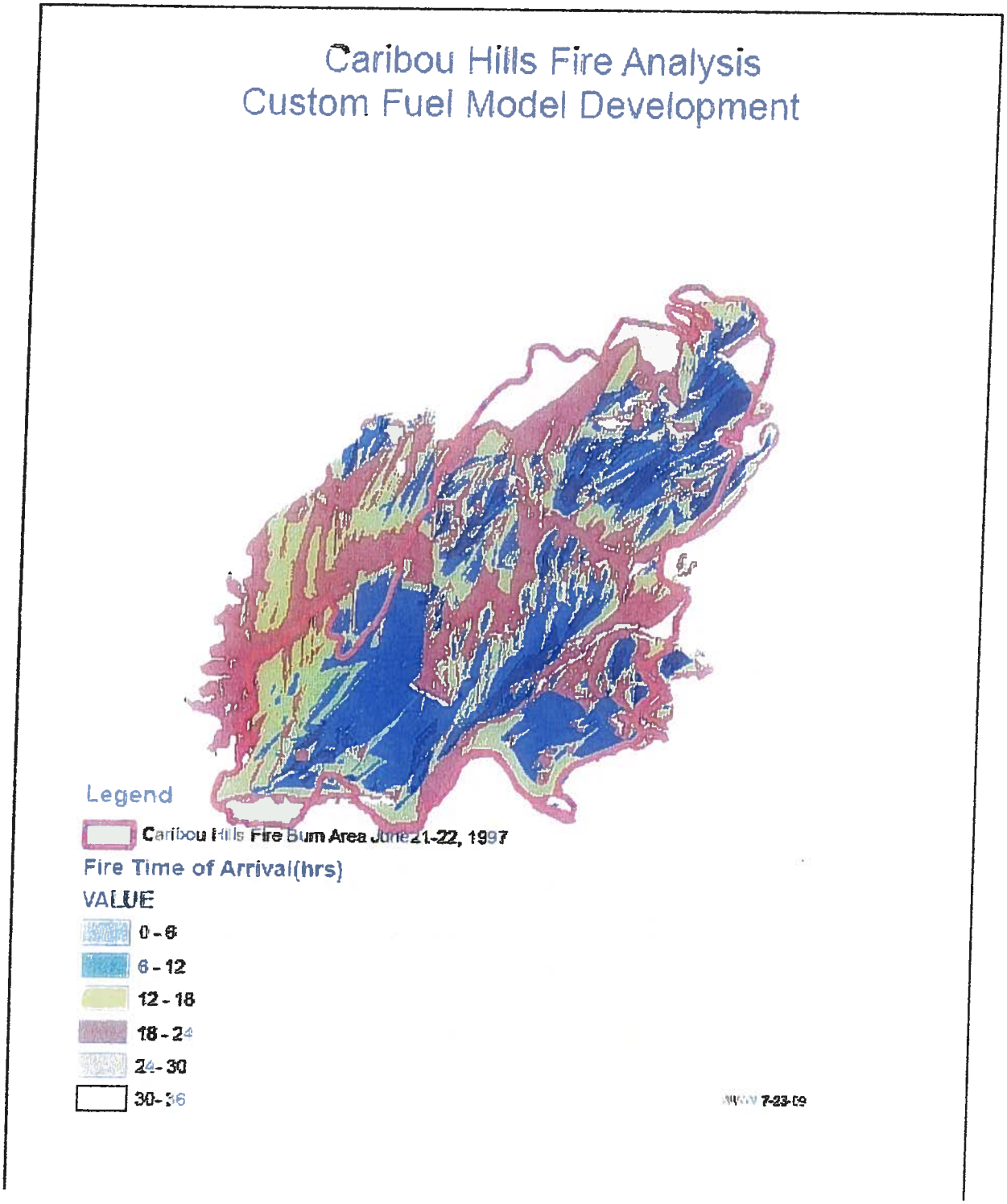


Figure 6. This figure shows the rate of fire spread through vegetation for the period of June 21st PM through all of June 22nd.

APPENDIX A

CUSTOM MODEL DESCRIPTION & DATA SET

This Appendix provides a brief description of each custom fuel model developed by the author for use with Alaska wildland and prescribed fire applications. This includes previously developed fuel models along with the three new custom models (#21, #22 & #23) generated as a result of this analysis work The model attribute information is provided in a file format protocol to facilitate direct "copy & paste" as a Custom Fuel Model input into FARSITE.

Model 15 – Alaska Black Spruce:

This model represents black spruce forest composition where the stand is approximately 40 years or older since past disturbance event. The forest area is upland or relatively dry site and is moderate to fully stocked.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
15	2.500	3.300	1.700	1.100	2.500	static	2900	1400	1400	2.500	20	8000	8000

Model 16 – Standing SBB Closed Canopy

This model represents Sitka, white or lutz spruce forest with moderate to heavy stocking levels. The stand has little hardwood species component. The stand has beetle-kill rates of 60% or greater mortality proportion and is mostly upright vertical stem structure.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
16	3.000	2.500	0.800	1.100	1.200	static	2800	1000	1000	2.000	20	8000	8000

Model 17 – Standing SBB Open Canopy

This model represents Sitka, white or lutz spruce forest with open grown or woodland structure. The spruce is predominantly beetle kill with 60% or greater mortality proportion.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
17	2.000	2.000	0.800	1.100	1.2000	static	2700	1000	1000	2.200	22	8000	8000

Model 18 – Alder and Riparian (wet site) Willow

This model represents brush species such as alder and willow that grows on wet sites and in large patches. The fuel bed has little dead fine fuel component such as grass and may contain open water areas. Depth of the fuel bed is minimal.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
18	0.500	1.000	0.500	0.500	0.500	static	2200	1700	1000	0.200	22	8000	8000

Model 19 – Alpine Tundra & Upland Brush

This model represents vegetation that is typically found in higher elevations above timber line. A variety of prostate plant berry species are found in this area with brush species such as blueberry. Fires in this zone typically burn faster backing into the wind.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
19	0.500	0.000	0.000	0.650	0.000	static	2650	1700	1500	0.230	23	8000	8000

Model 20 – Standing SBB & Hardwood Mix

This model represents upland spruce stands with a significant component of hardwood species such as birch or aspen. The spruce in these stands is predominately dead with about 40% to 70% hardwoods mix.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
20	1.600	1.800	0.800	0.000	0.000	static	2300	1000	1000	1.200	22	8000	8000

Model 21 – Heavy Jack-Straw SBB Spruce

This model represents Sitka, white and lutz spruce stands that are predominately dead. These stands are usually 10 years or more post-beetle attack. Typically 50% or more of the spruce is horizontally arrangement with dead grass fine fuels growing in the downed trees.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
21	4.800	4.900	8.400	1.500	2.200	static	2200	1000	1000	5.200	19	7000	7000

Model 22 – Light Jack-Straw SBB Spruce

This model represents Sitka, white and lutz spruce that is more open grown and lesser stand density than model 21. The spruce component is predominately dead and 10 years or longer since beetle attack. This model can be used with stands that have a moderate (< 40%) proportion of hardwood mix.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
22	3.200	2.400	4.500	1.500	1.800	static	2000	1000	1000	3.300	19	7000	7000

Model 23 – Old Timber Harvest Units with Grass – Regen

This model represents areas that have been logged and have grown back with grass as the primary surface fuel. The areas have a concentration of slash limb debris that was derived through the mechanical harvest process and burn hotter/faster than upland grass patches.

FM#	1HR	10HR	100HR	LiveH	LiveW	FM Type	1HSAV	LivHSAV	LivWSAV	Depth	XtMoist	D-Heat	L-Heat
23	2.300	1.000	0.000	1.050	2.230	static	1600	1600	1000	3.100	19	8000	8000

APPENDEX B

FARSITE DATA INPUT VALUES

Adjustment File Attributes

Model No.	Value
1	1.000000
2	1.000000
3	1.00000
4	1.000000
5	1.000000
6	1.000000
7	1.000000
8	1.000000
9	1.000000
10	1.000000
11	1.000000
12	1.000000
13	1.000000
14	1.000000
15	1.000000
16	1.100000
17	1.100000
18	1.000000
19	0.900000
20	1.000000
21	1.250000
22	1.350000
23	1.350000

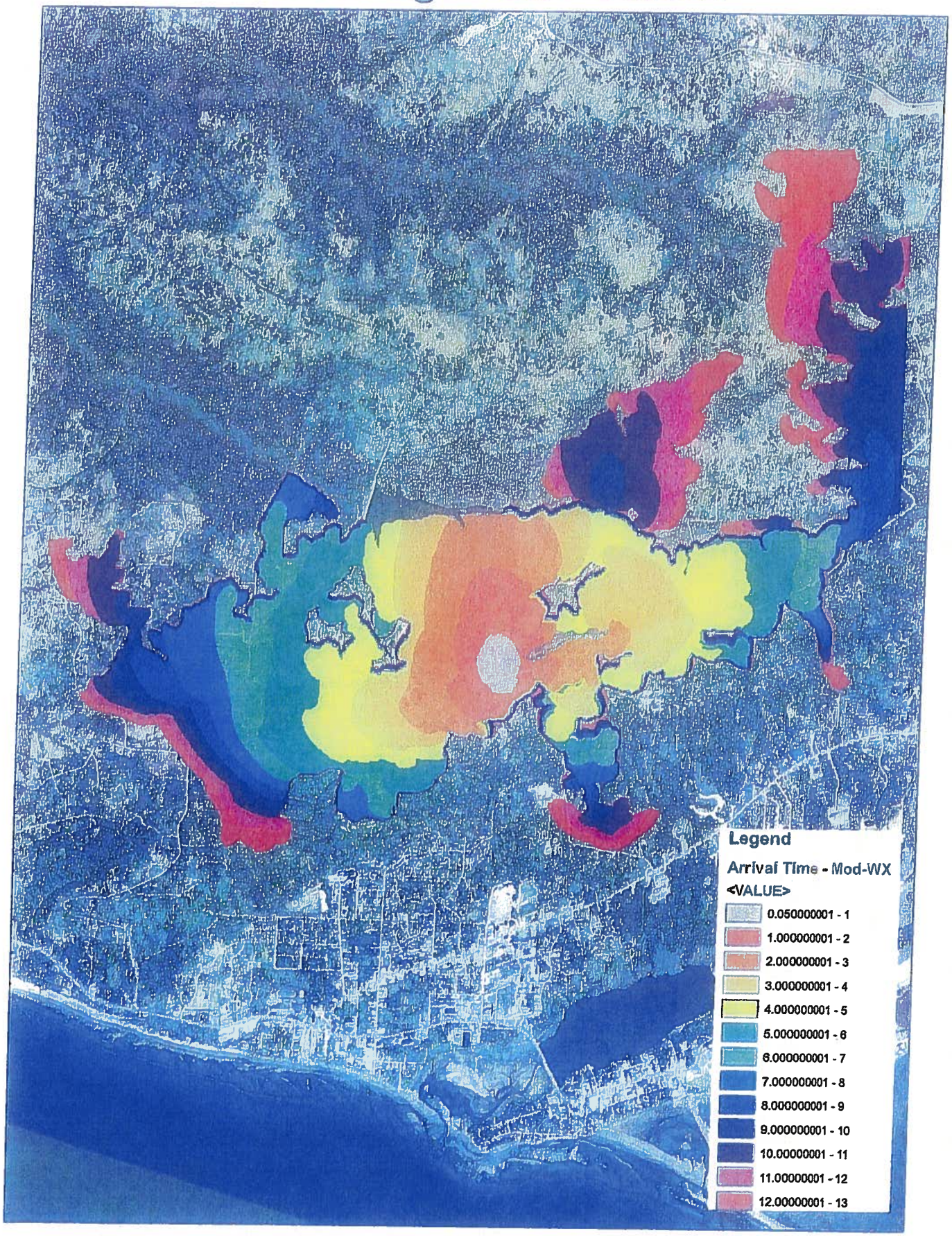
Canopy Characteristics Attributes

Item	Value
Tree Height	66 Feet
Crown Base	1.2 Feet
Bulk Density	0.0106 lb/ft3
Foliar MC	50%
Diameter	11 Inch
Tolerance	Medium
Species	Englemann Spruce

Fire Behavior Options

Item	Value
Enable Crownfire	Yes
Link Density&Cover	Yes
Ember Torch Trees	Yes
Enable Spot Fire	Yes
Ignite Freq.	9%
NWNS Backing	No

Fire Arrival Time
Mod/High Wx Pattern

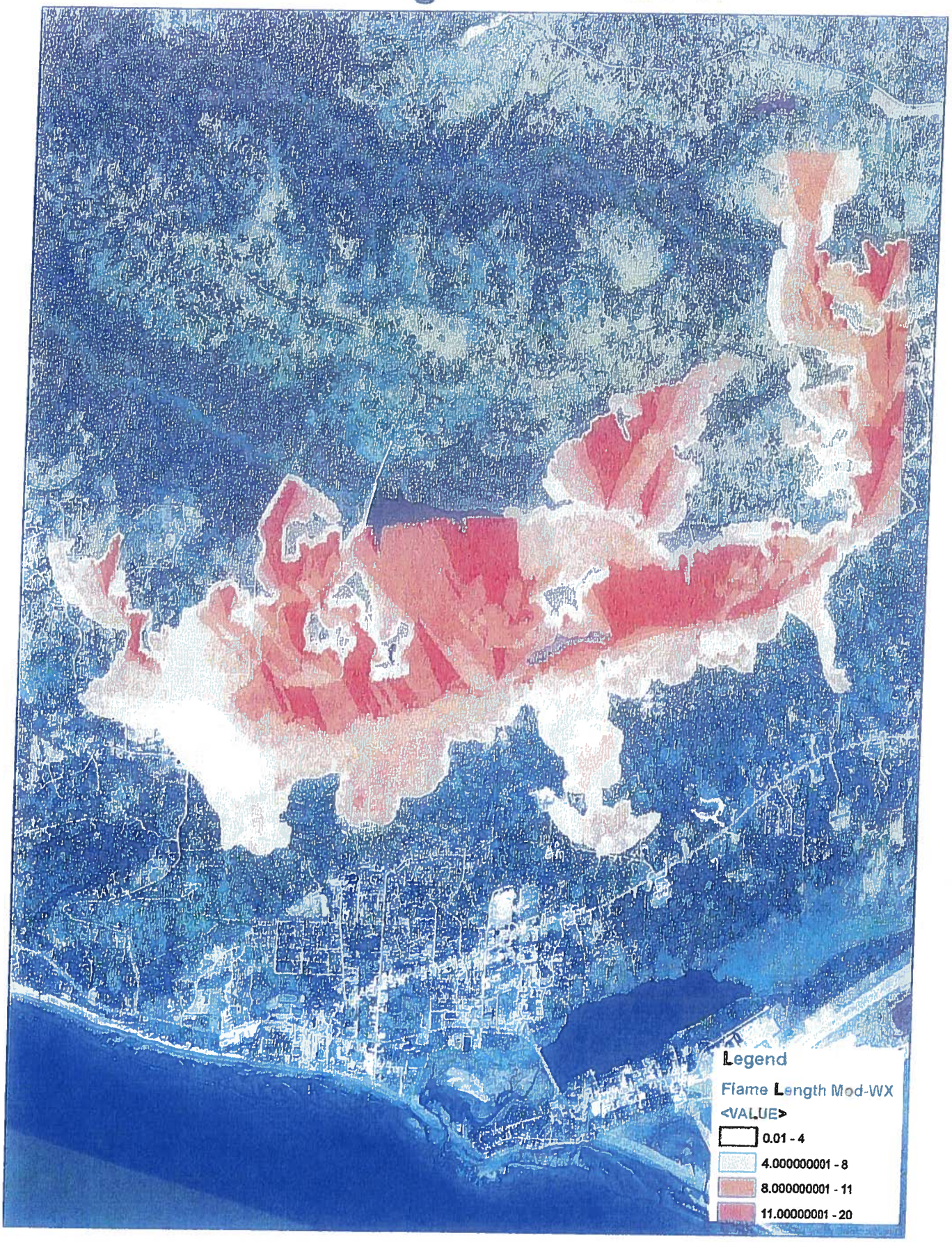


0 0.25 0.5 1 1.5 Miles

N W E S

113

Fire Flame Length
Mod/High Wx Pattern

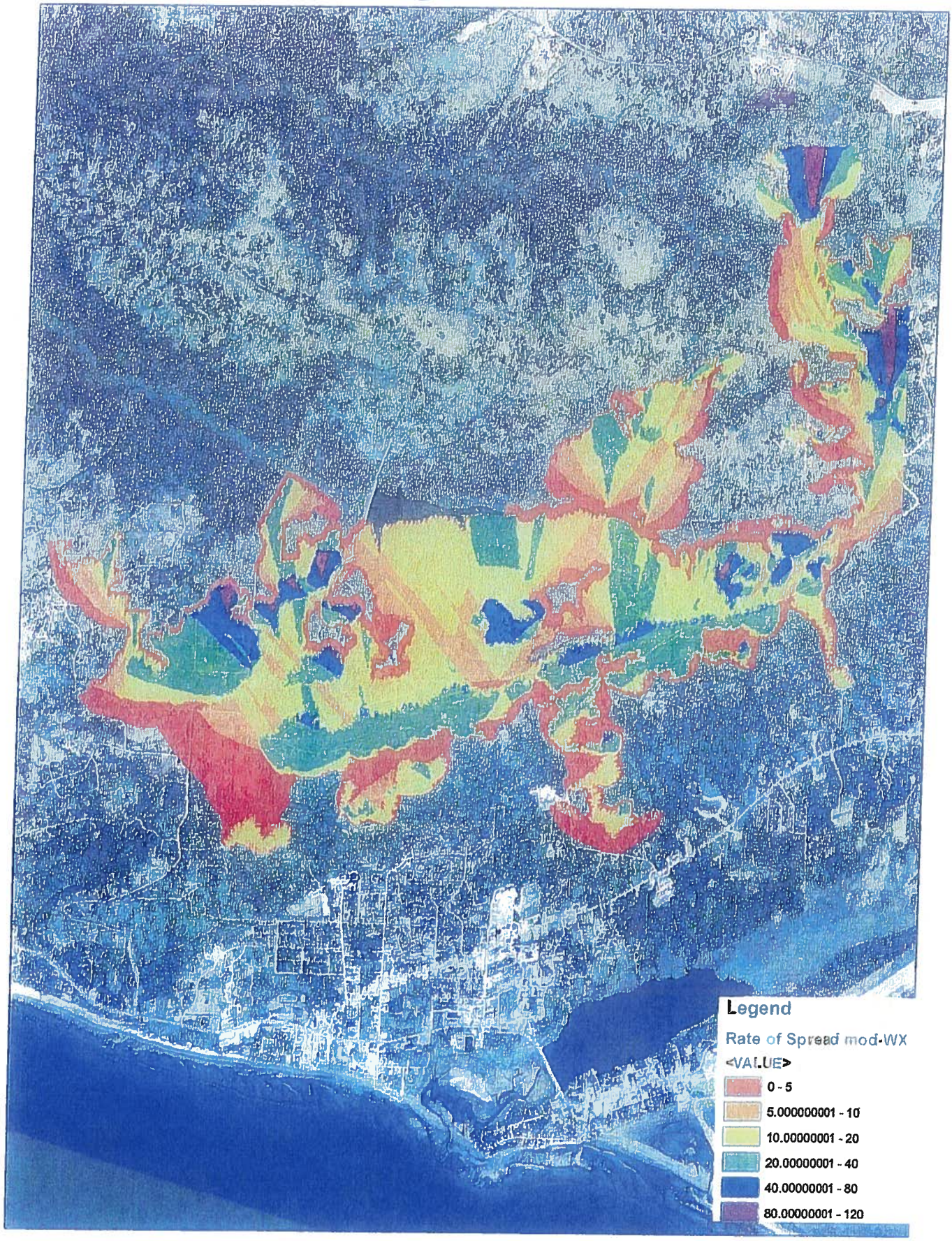


0 0.25 0.5 1 1.5 Miles

N W E S

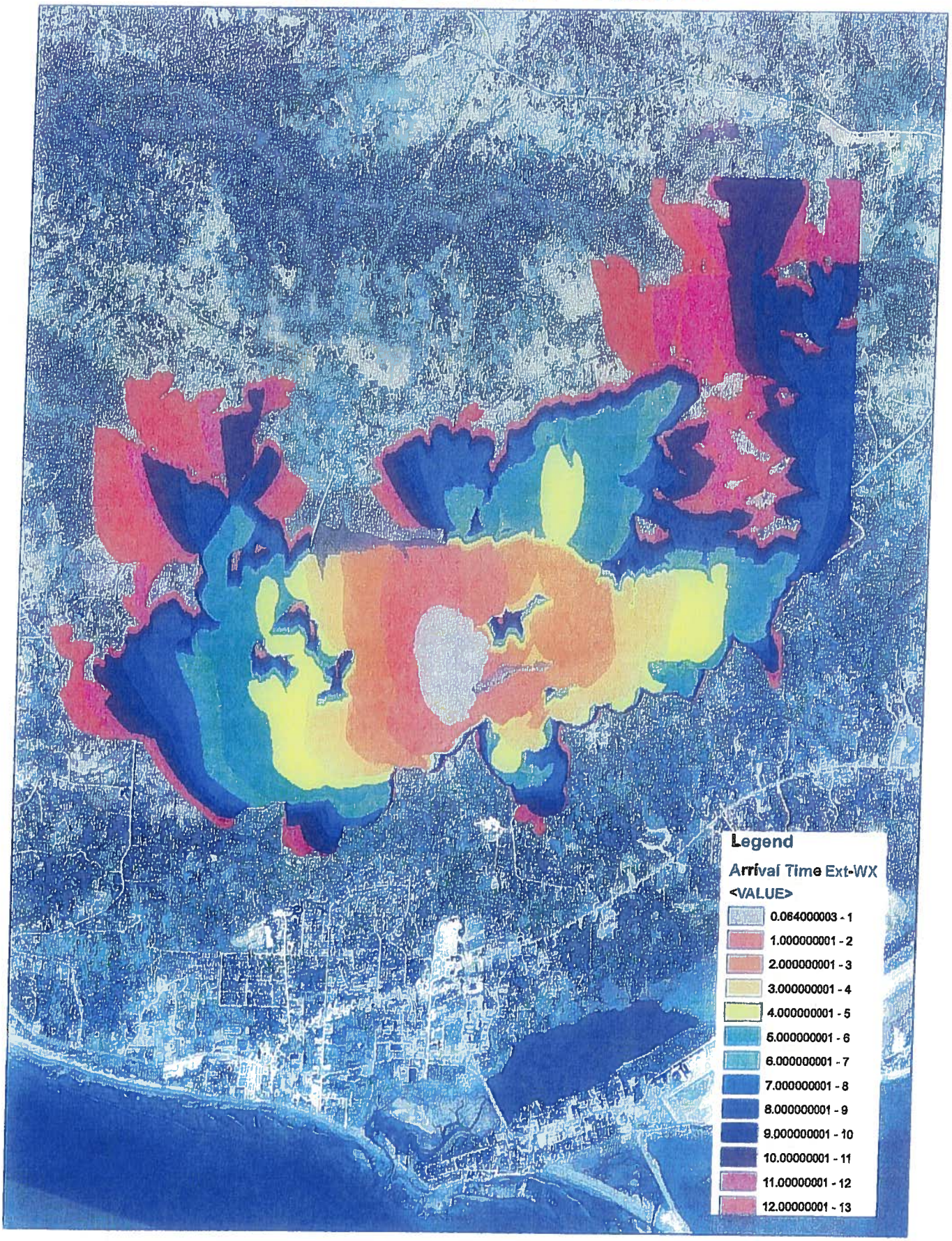
115

Fire Rate of Spread
Mod/High Wx Pattern



117

Fire Arrival Time
Extreme Wx Pattern

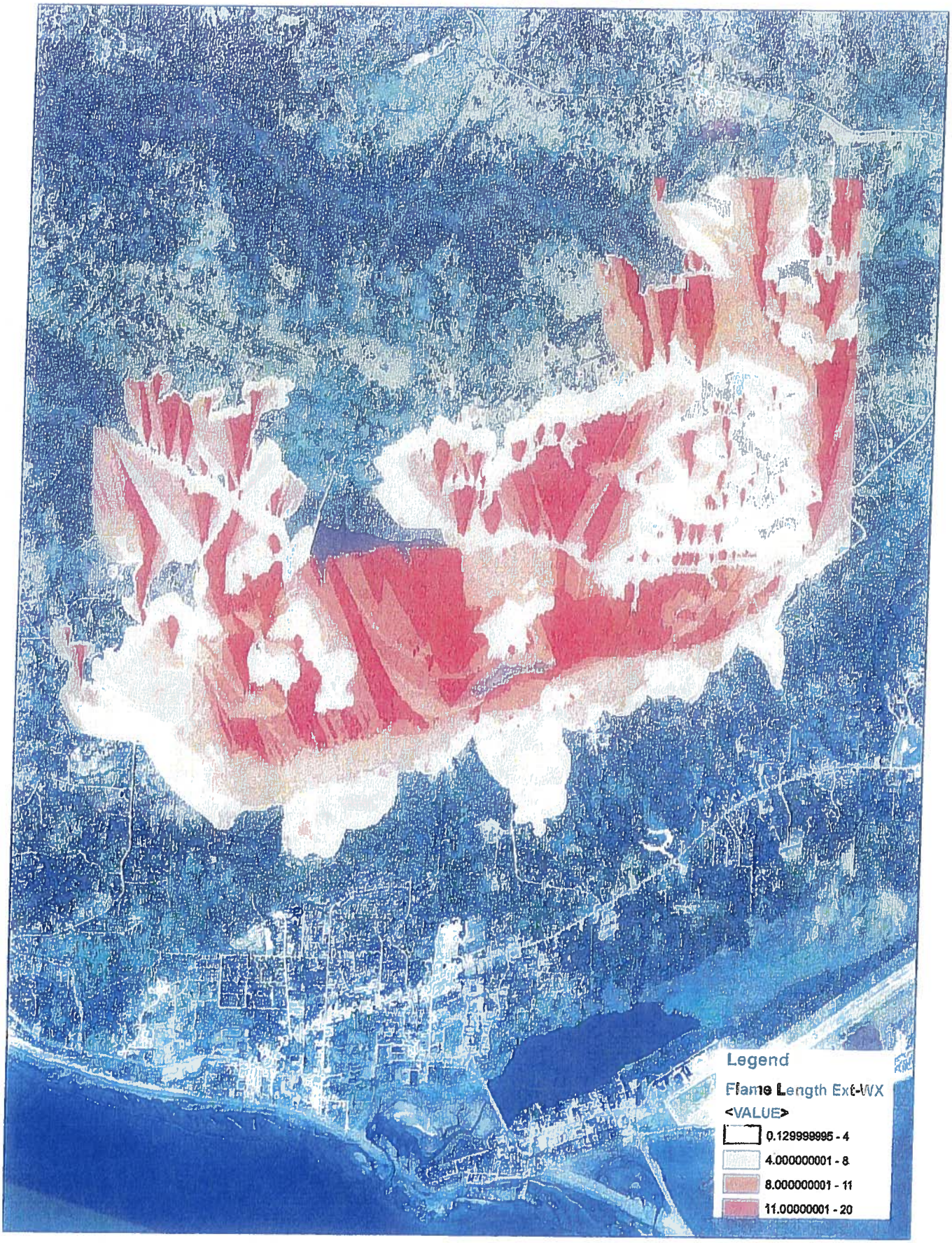


0 0.25 0.5 1 1.5 Miles

N W E S

119

Fire Flame Length
Extreme Wx Pattern

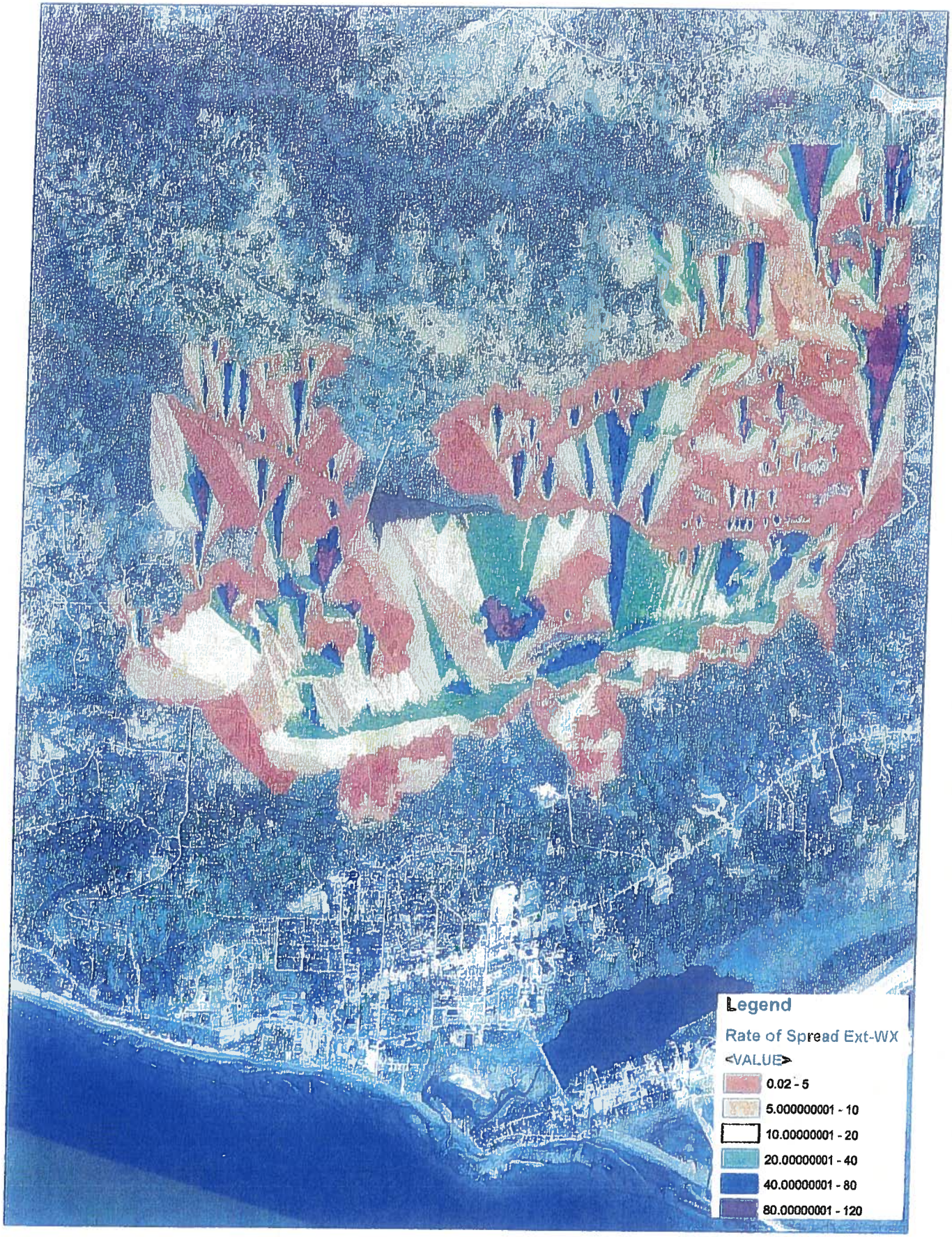


0 0.25 0.5 1 1.5
Miles

N
W E
S

121

Fire Rate of Spread
Extreme Wx Pattern



0 0.25 0.5 1 1.5 Miles

N W E S

123

Homer
Volunteer
Fire
Department

604 east pioneer avenue
homer, alaska 99603
907/235-3155
fax 907/235-3157
fire@ci.homer.ak.us

Memo

RECEIVED
JAN 7 2011
CITY OF HOMER
PLANNING/ZONING

To: Walt Wrede, City Manager

From: Robert Painter, Fire Chief

CC:

Date: January 6, 2011

Re: Bridge Creek Watershed Mitigation Project

Walt,

The fire department completely endorses the mitigation plan as presented by the Spruce Bark Beetle Mitigation Program. The plan, though limited in scope, would work to ease some of the potential danger of a catastrophic wildfire near the only water source for the City of Homer, while protecting water quality and aid in the return of native vegetation (if seedlings are replanted).

Having been in Homer almost twenty years I have seen firsthand the difficulties in fighting wildfires in areas with significant beetle killed timber (standing and fallen). As this entire area is classified as either "Critical or Full Protection" the Division of Forestry would have no alternative other than actively fighting a wildfire in the area. As it is almost impossible to safely put ground based firefighters in these areas there would be little alternative than to use heavy machinery, helicopter water drops and aerial tankers with fire retardant to suppress a fire in the project area.

The risk of causing more soil damage (especially if completed in the winter as proposed) through careful culling of the already dead trees versus the potential damage caused by wildfire is slight. Allowing the dead trees to complete their cycle of being blown down by high winds or age only compound the problem of fighting a successful ground attack that much more difficult. The plan to fell, limb and buck-up the trunks into smaller sections will not only aid in the quicker decomposition of the tree but make it much easier to navigate the terrain if/when firefighters have to go into the area to fight a fire. Trees that fall "naturally" have limited contact with the ground (slowing decomposition) and seriously hinder travel through an area. Though not ideal, it is somewhat easier to step over a log on the ground than it is to climb over one 18-24 inches off the ground (as when they are held up by their limbs). With careful oversight I believe that this project can be effective in reducing our risk of wildfire and significantly reducing the chance of sedimentation reaching the reservoir, which is a better course of action than waiting for the wildfire with unknown consequences.

1

CITY OF HOMER
PUBLIC WORKS DEPARTMENT

Carey S. Meyer, P.E. - Director
3575 Heath Street
Homer, Alaska 99603

Telephone: (907)235-3170
Fax: (907)235-3145
EMAIL : cmeyer@ci.homer.ak.us

January 3, 2011

Walt Wrede – City Manager
City of Homer
491 E. Pioneer Avenue
Homer, AK 99603

RE: Bridge Creek Watershed
Fuel Mitigation and Forest Health Restoration
Erosion/Sedimentation Control Plan

Mr. Wrede;

The activities associated with the above referenced project are not anticipated to disturb the existing ground cover. Work will be performed within 500 feet of Bridge Creek Reservoir and within 100 feet from known streams or tributaries; therefore in accordance with Homer City Code 21.40.080, an erosion and sedimentation control plan is presented below:

Erosion and Sediment Control Plan
Bridge Creek Watershed
Fuel Mitigation and Forest Health Restoration Project

The Erosion and Sediment Control Plan shall ensure compliance with the following requirements:

1. A drainage system shall be provided to direct all runoff from impervious coverage or the disturbed ground either into an engineered drainage system or into a natural drainage, but no runoff shall be discharged untreated directly into the Bridge Creek Reservoir, or any stream or watercourse tributary to Bridge Creek Reservoir.

This project does not create any impervious surfaces or disturb ground cover. The work has been designed to have no impact on runoff. There will be no change to the natural runoff and no untreated runoff discharges will be directed to the Reservoir, or any stream or watercourse tributary to Bridge Creek Reservoir.

2. Where open-ditch construction is used to handle drainage within the tract, a minimum of 30 feet shall be provided between any structures and the top of the bank of the defined channel of the drainage ditch.

There is no open ditch construction associated with this project. No permanent structures of any kind will be constructed as part of this project. Brush/trees will be laid down on the snow cover to prevent erosion at stream crossings (at one or two locations). Logs may be placed in streams and on

the banks if needed to increase the separation between equipment and the streambed. At project completion, all logs, brush and trees used in streams and on access trails will be removed.

3. When a closed system is used to handle drainage within the tract, all structures shall be a minimum of ten feet from the closed system.

No closed system drainage structures will be constructed as part of this project.

4. Natural vegetation shall remain undisturbed except as necessary to construct improvements and to eliminate hazardous conditions, in which case it must be replanted with approved materials including ground cover, shrubs and trees. Native vegetation is preferred for replanting operations, and will be used where practicable.

The project has been designed to eliminate any disturbance of natural vegetation. All work will occur during the winter months; all equipment and labor will be isolated from the ground by snow cover. Hand clearing will be employed to minimize the need for equipment movement across the surface of the ground in steeper areas and in the immediate vicinity of the Reservoir (as discussed in the operation standards).

Vegetation will be replanted using native spruce trees (as discussed in the operation standards).

5. Grading must not alter the natural contours of the terrain except as necessary for building sites or to correct unsafe conditions. The locations of buildings, roads and rights-of-way must be planned to follow and conform to existing contours as nearly as possible.

This project will not alter the natural contours of the terrain, not create any building sites, and not attempt to correct any unsafe conditions (other than reduce the risk of fire within the watershed). No roads or rights-of-way will be constructed.

6. Upon completion of earthwork, all exposed slopes, and all cleared, filled, and disturbed soils shall immediately be given sufficient protection by appropriate means, such as landscaping, planting, and maintenance of vegetative cover, or temporary protective measures to prevent erosion.

No earthwork will be completed and no soils will be disturbed as part of this project. Temporary water bars will be constructed along access routes where slope is greater than 6% for more than 200 feet to minimize the potential for erosion (as described in the operation standards).

7. All exposed, cleared, filled and disturbed soils shall be revegetated within the current growing season, unless required to be revegetated sooner by other provisions of this title or other law.

Cleared areas will be revegetated with spruce seedlings during the subsequent growing season as recommended by the U.S. Forest Service as described in the operation standards.

8. Drainage, erosion, siltation, slope failure and other adverse effects may be prevented or controlled by means other than vegetation, if approved by the Planning Commission.

No other means of preventing or controlling erosion (other than those described herein) are anticipated.

9. Development activities shall not adversely impact other properties or watershed water quality by causing adverse alteration of surface water drainage, increased turbidity above natural conditions, surface water ponding, slope failure, erosion, siltation, intentional or inadvertent fill, root damage to neighboring trees, or other adverse physical impacts. The Erosion and Sediment Control Plan shall address this requirement, and the property owner and developer shall take such steps, including installation of culverts or buffers, or other methods, as necessary to comply with this requirement. (Ord. 08-29, 2008).

No activities normally associated with "development" will be implemented as part of this project. As previously described in this erosion and sediment control plan and in the operation standards, fuel reduction activities within the watershed have been designed to limit, to the greatest extent possible, adverse impacts to other properties or watershed ground or surface water quality. The fuel reduction project will not adversely alter surface water drainage, increase turbidity above natural conditions, or create surface water ponding. The project will not encourage slope failure, erosion, or siltation. The fuel reduction activities will not involve the placement of intentional or inadvertent fill, cause root damage to neighboring trees, or other adverse physical impacts.

Yours Very Truly;

CITY OF HOMER

Carey Meyer

Carey Meyer, P.E.
Public Works Director

NRCS Natural Resources Conservation Service

Forester recommendations

Forest Stand Improvement

Conservation Practice Job Sheet AK-666

Definition

The manipulation of species composition, stand structure, and stocking by cutting or killing of selected trees and understory vegetation.

Purposes

To increase the quality and quantity of forest products, e.g. sawtimber, veneer, wood fiber, poles, pilings, birch syrup, naval stores, nuts and fruits.

- To harvest forest products
- To initiate forest stand regeneration
- To reduce the potential of damage from wildfire, pests, and moisture stress
- To restore natural plant communities
- To achieve a desired understory plant community
- To Improve water conservation and yield
- To achieve a desired level of crop tree stocking and density
- To increase carbon storage in selected crop trees
- For renewable energy production.

Where Used

All forest land where improvement of forest resources is needed.

Forest Land Management System

Forest Stand Improvement is a practice that is part of an overall conservation management system for forest lands or lands that have established seedlings/trees that need managing. The practice is used to manipulate an existing stand of trees to achieve a desirable composition; to control un-wanted vegetation that is competing with the desired tree or shrub species; to harvest and extract trees; and to achieve a stand structure for desired regeneration. A post-treatment assessment is usually needed to determine if desired conditions were achieved and if future treatment is needed.

Plans and Specifications

Plans and specifications will be developed in each field or management unit where the practice will be applied. Depending upon the practice purpose the document will contain the tree specie being managed for, site index, current trees per acre, desired trees per acre, number of trees per acre to be removed; plant specie being controlled or removed; and treatment method. When harvesting trees the document will include the harvest method, logging system, road conditions/needs, skid trail and slash treatment needs.

It shall be the responsibility of the client to obtain all necessary permits and/or rights, and to comply with the Alaska Forest Resources and Practices Act and Regulation, (http://www.dnr.state.ak.us/forestry/pdfs/07JuneForestResourcesPracticesAct.pdf), and local ordinances and laws pertaining to the application of this practice.

For chemical treatments, the landowner will provide the following:

- Dates of application,
- Rate of application,
- Chemical name,
- Any special techniques, timing, or other factors that need to be considered to ensure a safe and effective application.

Resource Management Systems

This practice may be used in conjunction with other forestry practices to plan a resource management system which will address all of the resource concerns inventoried. Along with practices Access Road (560), Forest Roads and Skidtrails (655), Critical Area Planting (342), Tree and Shrub Pruning (660), Use Exclusion (472), Upland Wildlife Habitat Management (645), and Pest Management (595); this practice would address all of the inventoried resource concerns on a particular forest unit.

Wildlife

Forest Stand Improvement can provide excellent opportunities to improve or enhance habitat for selected species. Brush piles created from stand enhancement activities can create temporary habitat and food supplies for a variety of wildlife species. Refer to Upland Wildlife Habitat Management (645), for other enhancement opportunities. Maintaining an adequate riparian forest buffer is also an important considerations when enhancing and maintaining habitat (see Riparian Forest Buffer (391)).

Operation, Maintenance, and Safety

Periodic inspections during treatment activities are necessary to ensure that objectives are achieved and resource damage is minimized. Follow-up and ongoing management activities will be needed to obtain desired results.

Use Soil-Forestland interpretations to plan a systematic cutting and reforestation program and to determine the hazards and limitations that may be encountered. Restrict equipment use to periods when the soils are relatively dry or frozen. Insure the safety of on-site personnel by following all pertinent local, state and federal requirements.

Falling and Bucking – Remove harvested products form the site in a manner that will not damage remaining trees. Stumps will not be higher than one foot. Fell trees away from all fence lines, drainages, perennial streams, lakes and ponds.

Skidding – (see Forest Harvest Trails and Landings (655)).

Landings – (see Forest Harvest Trails and Landings (655)).

Natural Resources Conservation Service
FOREST STAND IMPROVEMENT

Land user: City of Homer **Field:** Bridge Creek Watershed Water Supply

Assisted by: Mitchell Michaud **Date:** 11/3/10

Land use: (forest ☐) (wildlife ☐) (grazing ☐) (Other_Public Water supply x)

Purpose (check all that apply)			
Harvest forest products	☐	Improve water conservation and yield	x
Reduce wildfire hazard	x	Achieve a desired level of crop tree stocking and density	☐
Improve forest health, reducing damage from pests or moisture stress	☐	Restore natural plant communities	☐
Initiate forest stand regeneration	☐	Achieve a desired understory plant community	x
Increase carbon storage in selected trees	☐	Renewable energy production	☐
To improve wildlife habitat	☐	Improve aesthetic, recreation, and open space values	☐

Table 1: Field Conditions

Soil Mapping Units	Restrictions/Special Considerations for Soil Types:
See soil maps	Erosive and potential short term compaction concerns

THINNING OR HARVESTING

All forest activities shall comply with Alaska Forest Resources Practices Act.

Treatment Description (specify if these trees will be removed or left): Felling of all dead trees with a retention of 3 dead trees per acre to mitigate wildlife impacts, Dead Trees will be mechanically or manually felled with emphasis on protecting existing live understory trees and directional felling to allow soil-bole contact, minimize cross logs/stacking and reduce runoff by orientation along the contour

Trees to Manage:				Other:
	x White spruce	☐ Quaking aspen	☐ Wes. hemlock	Allowing for natural regeneration potential for supplemental planting
	x Paper birch	☐ Alaska cedar (yellow)	x Alder sp.	
	☐ Tamarack	☐ Sitka spruce	x Willow sp.	

Tree Species	Site Index/Basal Age	Tree Species	Site Index/Basal Age
N/A	/	N/A	/
N/A	/	N/A	/

Forest Harvest System:			
	☐ Precommercial Thinning	☐ Seed Tree	☐ Patch Cut
	☐ Commercial Thinning	☐ Shelter Wood	☐ Retention
	X Clear Cut	☐ Coppice	☐ Selection

Natural Resources Conservation Service, Alaska
FOREST STAND IMPROVEMENT (Harvesting/Thinning)

Release Technique:	☐ Chemical Release	☐ Hand Release-Heavy (›1000 stem reduction)	☐ Mechanical Release - Crushing
	☒ Hand Release - Light (‹ 200 stem reduction)	☒ Mechanical Release - overstory removal	☐ Mechanical Release - Shearblading
	☐ Hand Release - Medium (1000-200 stem reduction)	☐ Mechanical Release - Grinding/Maceration	☐ other-

HARVESTING/THINNING REQUIREMENTS: Estimates only

Current Number Trees Per Acre or Basal Area per Ac.	Desired Number Trees Per Acre or Basal Area per Ac.	Number of Trees Per Acre or Basal Area to Remove
200 t/ac dead standing	3-6 t/ac dead standing	NA

Desired Average Spacing (ft.):	Current Average Spacing (ft.):

Individual tree removal guide and additional information: Removal of all dead standing trees,except 3-6 trees per acre for wildlife considerations. All trees felled will be left on site. Felled, limbed and segmented to allow for bole/soil contact. Felling will favor protection of live trees/Seedlings/poles and saplings, followed by avoidance of stacking and lastly felling on the contour to reduce surface runoff and retention of snow.

Harvest Method:	☒ Ground - Track/Rubber tired equipment		
	☐ Ground - no equipment		
	☐ Cable - Partially suspended		
	☐ Cable - Fully suspended		
Slash Disposal Needed	☒ YES	☐ NO	
IF YES - Complete Forest Slash Treatment Specification 384			
Will Skid Trails be Used	☐ Yes	☒ No	**Access trails developed but no skidding of wood products**
Skid Trail Layout Needed	☒ Yes	☐ No	If Yes, See Forest Trails & Landings (655)
New Landings Needed	☐ Yes	☒ No	

Additional Requirements/Information: Stump Height requirements typically stated in harvests will be lifted for this operation to allow for habitat structures and to allow operation to proceed quickly and efficiently.
Slash treatment will be completed as described in the accompanying Standard Specification and Job sheets.
Trails will be completed as described in the accompanying Standard and Specification and Job sheet.

Natural Resources Conservation Service, Alaska
FOREST STAND IMPROVEMENT (Harvesting/Thinning)

Forest Stand Improvement - Job Sketch

Insert Toolkit plan map or sketch the field, showing any sensitive areas and required setback zones. Inside each sketched field, enter total field acres and net application acres. Other relevant information, such as complementary practices or adjacent field or tract conditions may be included.

Scale 1"=_____ ft. (NA indicates sketch not to scale.)

See Kenai Borough Operational Map							

Additional specifications and notes:

Operation is intended to reduce wildlife risk, though no treatment removes all fire risk the over story removal will have a benefit to reducing this risk but will have a short term higher risk of wildlife that should be reduced to back ground levels within a 1 year of treatment..

Timing of Operation _ This operation should occur on Frozen or Snow covered ground. Ideal situation is to have 6 to 18 inches of snow with extreme cold. Below 10 degrees F is ideal. Avoid operations During or after periods of heavy rain.

Water Quality Protection: Each piece of equipment that is operating on this area should have a basic spill response kit (small containment fixture, absorbants) and at the job site a Site Spill Kit which includes (absorbants, larger containment vessels, land and water containment booms/fencing.

Natural Resources Conservation Service, Alaska
FOREST STAND IMPROVEMENT (Harvesting/Thinning)

DESIGN APPROVAL:

PRACTICE CODE NO.	PRACTICE	CONTROLLING FACTOR	UNITS
666	Forest Stand Improvement	Acres	Acres

Design Approved by: /s/__Mitch Michaud_____ Date: ___11/3/2010_____

Job Title: _____NRCS State Resource Forester, SAF Certified Forester # 2709.

CLIENTS ACKNOWLEDGEMENT STATEMENT:

The Client acknowledges that:

a. **They have received a copy of the specification and understand the contents and requirements and agree to install as designed.**

b. **It shall be the responsibility of the client to obtain all necessary permits and/or rights, and to comply with all ordinances and laws (Alaska Forest Resources Practices Act and Regulations) pertaining to the application of this practice.**

c. **That no changes will be made in the installation with prior concurrence from NRCS and also agree to maintain the installation for 10 years.**

Client: /s/_____ Date: _____

CERTIFICATION:

I have completed a review of the information provided by the client and certify this practice has been applied.

Certification by: /s/_____ Date: _____

Job title: _____

The Natural Resources Conservation Service provides leadership in a partnership effort to help people Conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FOREST SLASH TREATMENT

(Ac.)

CODE 384

DEFINITION

Treating woody plant residues created during forestry, agroforestry and horticultural activities to achieve management objectives.

PURPOSE

- Reduce hazardous fuels
- Reduce the risk of harmful insects and disease
- Protect/maintain air quality by reducing the risk of wildfire
- Improve access to forage for grazing and browsing animals
- Enhance aesthetics
- Reduce the risk of harm to humans and livestock
- Improve the soil organic matter
- Improve the site for natural or artificial regeneration.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on areas with quantities of woody slash and debris requiring treatment.

CRITERIA

General Criteria Applicable to All Purposes

Slash treatment and the condition and extent of residual slash shall be planned and the method selected based on purpose(s).

Slash treatment methods (i.e. burning, chipping, lop and scatter, removal, crushing) will achieve landowner objectives while adequately protecting land and water resources.

Care shall be taken to minimize injury to or function of the residual plant communities.

Timing of treatment shall coincide with intended purpose(s) and minimize impact on other resources.

Any burning activities shall comply with the Prescribed Burning practice (338).

Slash and debris left on the site after treatment will not present an unacceptable fire, safety, environmental, or pest hazard. Such remaining material will not interfere with the intended purpose or other management activities.

Additional Criteria Applicable to Reduce Hazardous Fuels

Reduce the amount of fuels to an acceptable level by controlling height, size, amount and distribution.

Additional Criteria to Reduce the Risk of Harmful Insects and Disease

Degree, intensity and timing of treatment shall take full advantage of harmful insect or disease characteristics to enhance the effectiveness of control.

Comply with Pest Management - 595

Additional Criteria to Protect/Maintain Air Quality by Reducing the Risk of Wildfire

Activities will be consistent with established regulations and guidelines for PM10 and PM 2.5 emissions, ozone precursors (NOx and VOCs), as well as smoke and fugitive dust, and state and local permit requirements.

When feasible, use chipping, shredding, bio-fuel composting, or other technique in lieu of

burning.

Additional Criteria to Improve Access to Forage for Grazing and Browsing Animals

Slash shall be piled or removed sufficiently to allow access to forage by the site's livestock and to maximize forage growth.

Additional Criteria to Enhance Aesthetics

Slash that is scattered or piled and left on the site will be further treated to meet client objectives and any state or local requirements for aesthetics and visual resources.

Additional Criteria to Reduce the Risk of Harm to Humans and Livestock

Slash that is scattered or piled and left on the site will be further treated to meet client objectives and any state or local requirements for safe use of the area.

Additional Criteria to Improve Soil Organic Matter

Slash will be of a size and closeness to soil to accelerate in decomposition.

Additional Criteria to Improve the Site for Natural or Artificial Regeneration

Slash will be treated to complement treatments specified in Tree/Shrub Site Preparation - 490.

CONSIDERATIONS

When determining method and timing of slash treatment consider air quality regulations, burning requirements, available resources, ability to use woody biomass and regeneration needs.

Consider retaining 10 to 20 pieces of slash greater than 9 inches in diameter over each acre as a source of downed logs for specific plant, insect and animal habitat.

Consider wildlife needs when performing and timing treatment.

Consider the beneficial and other effects on cultural resources, and threatened and endangered species, natural areas, and wetlands.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes and narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Monitor populations and the potential of damage to site resources by harmful pests and take controlling actions as necessary. Comply with Pest Management - 595.

Access by vehicles or people will be controlled during treatment for safety. Comply with Use Exclusion - 472.

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE GENERAL SPECIFICATIONS

FOREST SLASH TREATMENT

(Ac.)

Code 384

General Specifications for All Uses

Slash may be removed, utilized, or treated. Utilization can be for firewood, building materials, process chips, landscaping materials, and other uses that remove, reduce, or change the condition of the material at or from the site. Treatment can be accomplished by crushing, chipping, cutting, burning or by any means that accomplishes the desired residual effect and does not negatively affect or impact the intended use or condition of the land.

Slash and all downed woody material not utilized or removed will not exceed 4.5 feet in height, unless called for as part of a wildlife prescription.

The ground cover of coarse woody debris/slash (3 inches or greater) will not exceed 50% of the total surface area being treated. Scattering of material is allowable to meet this specification.

Slash will be treated or removed where it occurs 100 feet upstream of culverts if the slash could potentially block water flow through the culvert.

Specifications to Reduce Hazardous Fuels

1. Ninety percent (90%) of materials greater than 3 inches in diameter left on site will be in contact with the ground, (duff, organic mat mineral soil or in standing water). Contact with the ground is defined as having contact with ground at least every 8 feet along the length of the stick, stem, branch, pole or log.

2. Ninety percent (90%) of material less than 3 inches in diameter will be left at a maximum of 2 feet above the ground.

Specifications to Reduce the Risk of Harmful Insects and Disease

All material greater than 4 inches in diameter will meet the specifications for reduction of hazardous fuels or will be debarked or treated to prevent the spread of insects and disease as part of a Pest Management Plan as described in Pest Management Standard 595.

Specifications to Improve Access to Forage for Grazing and Browsing Animals (Includes wildlife)

Slash shall be piled or removed sufficiently to allow access to forage by the site's livestock and wildlife to facilitate forage growth. Ground surface occupied by coarse woody debris will be well distributed and not exceed one-quarter (25%) of the total surface area. All other woody debris will be scattered and treated so that 50% of the area is suitable for plant growth and accessible to animals for forage and grazing.

Specifications to Enhance Aesthetics

Slash that is treated, scattered or piled and left on the site will be further treated to meet client objectives and any state or local requirements for aesthetics and visual resources.

Specifications to Reduce the Risk of Harm to Humans and Livestock

Material not in piles or windrows will not exceed 2 feet in height and all end cuts will be perpendicular to the stem or branch.

Additional Criteria to Improve Soil Organic Matter

Slash will be of a size and closeness to the soil to accelerate decomposition. The minimum treatment will be the same as the specification for the reduction of hazardous fuels.

Additional Criteria to Improve the Site for Natural or Artificial Regeneration

Slash will be treated to complement treatments specified in Tree/Shrub Site Preparation - 490.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service Alaska State Office, or download it from the electronic Field Office Technical Guide for Alaska

NRCS, Alaska

December 2007

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FOREST STAND IMPROVEMENT

(Ac.)

CODE 666

DEFINITION

The manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation.

PURPOSE

- To increase the quantity and quality of forest products, e.g., sawtimber, veneer, wood fiber, poles, pilings, maple syrup, naval stores, nuts and fruits.
- To harvest forest products.
- To initiate forest stand regeneration.
- To reduce the potential of damage from wildfire, pests, and moisture stress.
- To restore natural plant communities.
- To achieve a desired understory plant community.
- To improve aesthetic, recreation, and open space values.
- To improve wildlife habitat.
- To improve water conservation and yield.
- To achieve a desired level of crop tree stocking and density.
- To increase carbon storage in selected crop trees.
- For renewable energy production

CONDITIONS WHERE PRACTICE APPLIES

All forest land where improvement of forest resources is needed.

CRITERIA

General Criteria Applicable to All Purposes

The harvest-regeneration strategy will be identified for all planned forest improvement harvesting:

- Uneven-aged management systems (single-tree selection, group selection, coppice selection)
- Even-aged management (clear-cut, seed-tree, shelterwood, coppice)

The extent or size of treatment area shall achieve the intended purpose.

Preferred tree and understory species are identified and retained to achieve all planned purposes.

Spacing, density, size class, number and amounts of trees and understory species to be retained will follow established guidelines for the intended purposes.

Stocking guidelines shall contain stocking in terms of basal area, spacing or trees per acre by species and size class distribution.

The method, felling direction and timing of tree cutting for harvesting shall facilitate efficient and safe tree removal and protect sensitive areas such as vernal pools, riparian zones, cultural resources and structures.

Forest stand improvement activities shall be performed to minimize soil erosion, compaction, rutting, damage to remaining vegetation and hydrologic conditions.

Slash and debris left on the site after treatment will not present an unacceptable fire, safety, environmental, or pest hazard. Such remaining

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

NRCS, ALASKA

April, 2005

material will not interfere with the intended purpose or other management activities.

Burning of slash and other debris on-site should follow the Prescribed Burning practice standard 338.

Comply with applicable federal, state and local laws and regulations during the installation, operation and maintenance of this practice, including the Alaska Forest Resources and Practices Act and Regulations.

For optimal carbon sequestration, select plants that have higher rates of sequestration and are adapted to the site to assure strong health and vigor. Maintain appropriate stocking rate for the site.

CONSIDERATIONS

Silvicultural objectives and harvest-regeneration strategies may change over time and may be limited by prior management.

Successful regeneration of desirable species is usually dependent upon timely application of forest stand improvement and other practices, e.g., prescribed burning, site preparation, tree and shrub establishment, prescribed grazing and use exclusion.

The extent, timing, size of treatment area, or the intensity of the practice should be adjusted to minimize cumulative effects (onsite and offsite), e.g., hydrologic and stream alteration, habitat fragmentation, nutrient cycling, biodiversity and visual resources.

Potential landowner and operator liability should be assessed before forest stand improvement activities begin.

The practice should be timed to minimize disturbance of seasonal wildlife activities.

Consider wildlife food and cover needs when making modifications to forest composition and tree spacing.

Consider retention of selected dead and dying trees, including down material, to enhance wildlife habitat values.

Landowners should secure a written contract with any service provider that specifically describes the extent of activity, duration of activity, responsibilities of each party and amount and timing of payments for services provided

Consider environmental concerns such as threatened and endangered species and natural areas.

Slash, debris and other vegetation (biomass) removed during stand improvement may be used to produce energy. Management alternatives should consider the amount of energy required to produce and convert the biomass into energy with the amount produced by the biomass.

When using trees and shrubs to offset greenhouse gas emissions through carbon sequestration, prediction of carbon sequestration rates should be made using current, approved carbon sequestration modeling technology.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes and narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Periodic inspections during treatment activities are necessary to ensure that objectives are achieved and resource damage is minimized. Follow-up and ongoing management activities will be needed to obtain desired results.

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE SPECIFICATION

FOREST STAND IMPROVEMENT

(Ac.)

CODE 666

Specifications that apply to all treatments:

All forest harvests and stem removal treatments (thinning) will be prescribed and applied under the following conditions:

1. Land being maintained in forest, wildlife or natural area will include documentation that defines/ identifies:
   a. The silvicultural system being followed.
   b. Short and long term goals and/ or expectations
   c. The treatment/regeneration process being prescribed.
   d. Planned subsequent treatments and regeneration activities that will follow.
2. Harvest/thinning areas 10 acres and greater will have a reforestation or regeneration plan as part of the silvicultural prescription.
3. Harvest/thinning areas 40 acres and greater a minimum of 3 snag trees per acre will be retained as well as 3 live cull trees per acre where they are available for retention.
4. Harvest/thinning areas greater than 40 acres will not have greater than 14% roads, landings or disturbed areas not retained in forest cover.
5. All harvest/thinning will meet the Alaska Forest Resources Practices Act (FRPA) provisions and will meet silvicultural prescriptions specifications.
6. Forest conditions necessary to maintain habitat features will be retained where T&E, state designated rare or declining wildlife species are recognized likely or present on the site. Treatment specifications will identify all necessary parameters to address this resource concern.
7. Forest harvest trails, roads and landings will be designed to NRCS Standards and Specifications and meet AK-FRPA provisions.

Specifications that apply to thinning:

Thinning for this specification is defined as the removal of trees within a stand for the purpose of shifting growth potential to remaining trees.

Commercial / Precommercial

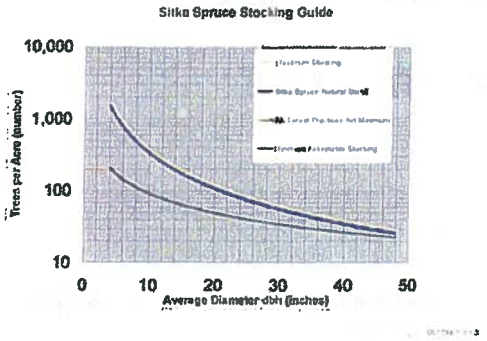
Thinning will categorized as being either commercial or precommercial. The definition of commercial is where a treatment will result in net financial return. Marketability may be based on size, volume or quality of the material removed and local market conditions. Precommercial and commercial thinning will only be prescribed and applied under the following conditions.

1. Stand is fully or over stocked based on Alaska Forest Stand Stocking Guides. (Fully stocked is defined as within 20% of the maximum stocking for that size (dbh) forest), and.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service State Office, or visit the electronic Field Office Technical Guide.

NRCS, Alaska

January, 2009



2. Stand size and structure is being modified to:
   a. regulate age distribution to fit the selected silvicultural system
   b. change species composition as part of landowner objective or as a precursor to a future silvicultural treatment
   c. improve stand quality, reduce insect and disease risk, and reduce hazardous fuels where there is both a high risk of wildland fire and a threat to life and property
   d. remove forest products where stocking is nearing the fully stock level and there is a demand for products or an opportunity for economic gain

2. Stand will not be thinned below minimum stocking levels without an acceptable silvicultural justification. (e.g. Shifting from a birch dominated forest to a spruce forest in anticipation of a seed tree harvest in the future)

Types of thinning

Cleaning- removal of unwanted species or lesser quality stems

Thinning from below – removal of suppressed, intermediate or co dominate trees, leaving a stand of dominate stems.

Thinning from above – removal of dominate or co-dominate trees leaving the understory as the principal or dominate strata in the forest community.

Specifications that apply to harvest

The removal of trees from a stand where the final stocking rate will be below the minimum stocking level as found in the Alaska forest stocking guide for the residual trees left on site, and the intent is to establish conditions to regenerate the forest through one of the following silvicultural systems.

Silvicultural System (Harvests System) Harvest Specifications

Salvage Harvest – Hazardous Fuel Harvest

The removal of 80% or more of all trees in the main canopy as a means to reduce the natural or economic risk associated with a forest stand that is dead or dying.

All salvage harvest will be prescribed and applied under the following conditions.

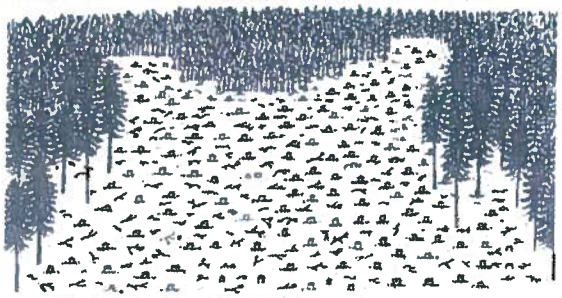
1. Threat will be documented.

2. Restocking/reforestation alternatives will be developed with the landowner.

3. Harvest conducted 5 years after death of seed trees will not use the forest soil seed bank as a reforestation source in white spruce stands and 1 year in birch stands.

4. Salvage harvest areas will not be greater than 100 acres without wildlife travel corridors or leave strips.

Clear Cut- (Liquidation, Regeneration harvest, removing all overstory, mid-story and/or understory trees to release advanced regeneration or spur the germination of a seed source.)



All "Clearcuts" will be prescribed and applied under the following conditions.

1. Clearcut areas will not exceed 100 acres without wildlife travel corridors or leave strips left in place for white spruce stands.

2. Clearcut areas will not exceed 50 acres in size for White Birch stands without wildlife travel corridors or leave strips left in place. If forest regeneration is achieved by planting then 100 acres will be the maximum with corridors or leave strips.

3. On the landscape level (1000 +ac.) clearcuts of less than 20 years in age will not exceed 50% of total area.

4. All clearcuts will either have adequate pre- and post harvest regeneration to constitute a fully stocked stand or it will be accompanied with a restocking prescription.

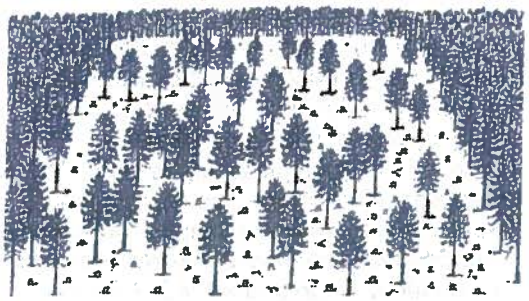
Patch Cuts or Strip Cuts – Clearcutting strips, patches or gaps to take advantage neighboring seed trees and sheltering conditions from neighboring stands

White Spruce - Strips or patches will be between 200 and 400 feet wide and 2 to 10 years between removals of adjoining strips.

White Birch - Strips or patches will be no wider than 100 feet with adjoining strips removed in two years to provide conditions that favor birch over spruce in the removed areas. Leave strips remaining beyond 2 years, shall be between 350 and 700 feet in width, to provide climatic conditions that favor white birch.

Longer retention periods benefit wildlife more than shorter periods and should be employed when managing for wildlife as primary or secondary objective.

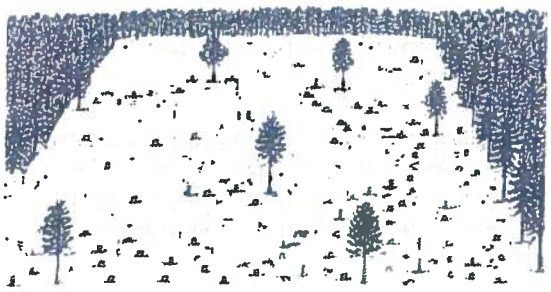
Shelterwood Regeneration System (removal of a portion of the overstory in order to create climatic conditions that favor species regeneration and early development)



White Birch Stands- Remove up to 60 percent of the overstory leaving 4 to 5 Birch seed trees per acre. This method is used to regenerate birch stands where intolerant species such as cottonwood and aspen are a competitor and there is a desire to have birch become the primary cohort of the stand. This method is not to be used where spruce is a competitor.

White Spruce Stands - Remove 1/3 to ½ the basal area. More will place the stand at risk for environmental damage. Remove the remaining stems/trees after regeneration is established. Time is not a factor in removing residuals since spruce has a moderate tolerance to shade a young ages.

Seed Tree Regeneration System (removing all but a few trees per acre to serve as a seed source for restocking of the area.)



White Birch stands – Leave 3 to 4 trees per acre that are well distributed. Birch seed trees should never be further than 700 feet from the area in need of natural seeding. Distance may be increased or decrease based on location of seed tree source, wind patterns, slope and elevation (See Retention System below).

NRCS, Alaska
January, 2009

White Spruce stands – Spruce trees are typically not wind tolerant when left isolated individually or in very small groups. This technique is to be avoided in most cases. Larger groups of trees can be left as a seed source. Groups of trees will be based on local wind and soil conditions but will often need to exceed the height canopy as a minimum diameter. Distance from live spruce seed source trees will not exceed 400 feet from the area in need of natural seeding. Distance may be increased or decrease based on location of seed tree source, wind patterns, slope and elevation (See Retention System below).

Retention System: Retaining individual trees, patches, groups of trees for long periods of time. (Often times one commercial harvest cycle)

Minimum size of the retained areas will be 1.5 times the canopy height in both width and length.

Distance between retained areas will follow the 400 foot spruce or the 700 foot birch distances for seed trees. Unless a viable soil seed bank is available for spruce.

Retention Systems can by hybridized with other systems, where the characteristics of the forest species allow for retention. e.g., Seed Tree Retention. This would be where seed trees are left in place and never removed.

Coppice System: Harvesting all or a portion of the trees in a forest with the intent of regenerating the forest by root suckers, and stump sprouts.

This system is applicable to Aspen, Cottonwood and somewhat to Birch species. (Birch will stump sprout but quality and survivability of developing stems maybe in question if lumber is desired)

Coppice harvests will take place in the fall, winter and spring months.

Harvest will not occur from the time of bud break to early September.

Harvest will remove more than 60% of the forest overstory in order to favor rapid development of Aspen and Cottonwood.

Remove less than 60% of the forest overstory in order to favor Birch stump sprouts. (not the best method to regenerate Birch)

Selection System (uneven aged management) Removing some of the trees in a forest, where the goal is a varyingly aged forest. This system allows for continuous removal of trees without a defined harvest rotation.

This system is only applicable in Alaska for white spruce and possibly Western Hemlock under special management conditions. This allows periodic removal on a 20 to 30 year cycle.

Size distribution target for uneven age Spruce management in interior Alaska.

DBH Inches	# of tree per ac.	Basal Area sq ft.per ac.
1	122	1
2	96	2
3	74	4
4	57	5
5	44	6
6	33	7
7	26	7
8	20	7
9	16	7
10	12	6
11	9	6
12	7	6
13	5	5
14	4	4
15	3	4
16	2	3
Total	530	80

NRCS, Alaska

January, 2009

Average dbh = 4 inches

This tree distribution is established and developed over a number of selective harvests.

Operation and Maintenance

The Forest Stand Improvement Job sheet will be utilized in documenting specifications

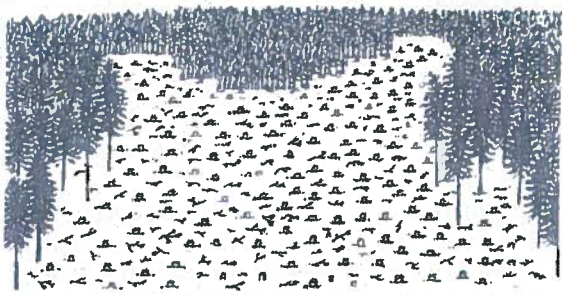
Specific areas of treatment will be documented on a map with treatment years. Each year's treatment will be identified as a separate treatment area or event.

Periodic review of the forest stand conditions will occur through out the life of the practice, (10 years).

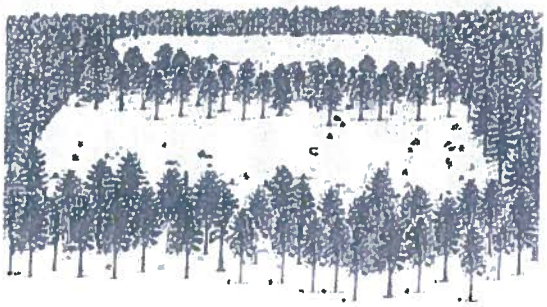
Winds throw insect and disease presence, tree mortality and regeneration establishment will be evaluated.

Appendix A Silvicultural Systems

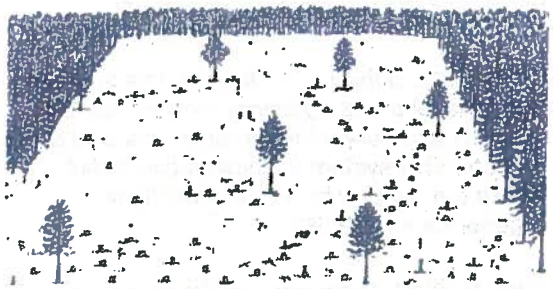
Clear cut: This system is characterized as the removal of all of the overstory trees for either the release of the understory or to allow natural regeneration or reforestation to occur. Critical to this system is the ability of the forest to regenerate by presence of a viable seed source either present in the forest floor or available from adjoining stands of trees, existing advanced regeneration or from tree planting. This system results in an even aged forest most often composed of shade intolerant and shade moderate species. Clear cut is system that is generally applied to areas greater than 5 acres



Variations to the clear cut are **strip cuts** and **block cuts**. These versions of clear cuts are progressive or successive clear cuts that occur over a short period of time. Strip or Blocks of trees are left in place to: meet seeding, wildlife or esthetic requirements. Eventually all the leave strips or blocks are harvested. The blocks or strips can be harvested shortly after adjoining areas making them part of a large management unit with insignificant age differences. The strips and blocks can also be managed as different management units. Strips or blocks left in this variation have the same management goals as the harvest areas.



Seed Tree: This system is essentially the same as a clear cut but selected trees are chose to remain as a source of seed. This selection can be used to direct regeneration to a particular species or phenotype. The trees can be removed or left standing after regeneration objectives are met.



Variation of this system is the **Seed Tree Reserve**. This system leaves groups of trees or uncut areas that are used as a seed source and for other considerations such as wildlife or water quality. The term reserve implies that these areas are being left for the entire rotation of the adjoining harvested areas. During the following rotation these can be again reserved, harvested and replaced by a different group of trees to serve as the next reserve group/area.

NRCS, Alaska
January, 2009

Shelter wood: As implied by the name, this system utilizes residual trees as a protective shelter for developing regeneration as well as a source for seed. series of harvest, sometimes as many as 5 entries to t forest are used to manipulate the composition of the regenerating trees. These harvests may include: Preparatory harvest that removes unwanted species c phenotypes; regeneration harvest that prepares the sc and light conditions for regeneration to occur; followec by one or more removal harvest to remove the seedin and shelter overstory trees. maintenance activities.

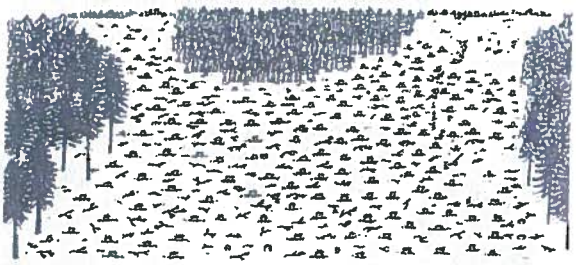
etention: This harvest system is based on hat is left or retained after the harvest is mpleted. The goal of this system is the rvest of trees while maintaining the structure the forest for varied reasons, mostly related to aintaining late successional habitat. Areas rvested rarely exceed more than twice the ee height and typically there is a 1 to 1 ratio of harvest to unharvested areas. These retained areas are maintained for the entire crop rotation.

This system results in an even aged homogenous forest that be have further maintenance operation conducted during its development

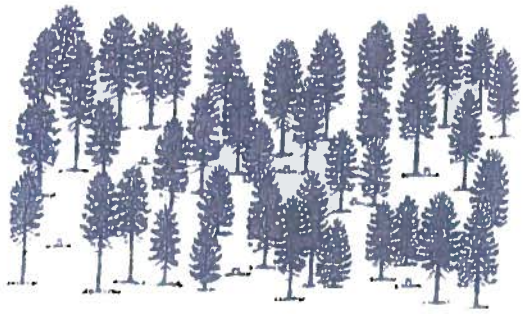
As the trees develop, grow in size, the danger of damaging the regeneration. Residual trees are always present and this should be consider in the timing of the entries into the forest

Coppice: Similar to a clear cut this system is the removal of the overstory canopy with the intent to regenerate the forest by root and stump sprouts. This system is employed in forest where the species have the capacity to regenerate vegetativly.

Patch Cut: Again very similar to clear cut, this system creates harvest units of less than 4 acres and maintain other unharvested patches of similar sizes. The end result is a mosaic of 2 or more patches of forest of distinct age groups, all of which are managed identically except for the periods of harvest and periodic stand



Selection: Of all the systems discussed this is the only type of management that maintains forest tree communities in an uneven age state. Previous systems result in trees of similar age or groups of similar age. Selection system result in a true all age forest and is common in areas where shade tolerant species are desired. Harvests occur at times when trees meet the desired objectives and regeneration occurs continually.



This is the most complex of systems to manage for since older larger trees require greater growing space while small trees are more numerous in number but require either removal by natural selection or by harvest to maintain maximum growth and yield. This type of forest often produces the maximum number of benefits with continual extraction of forest products at a high cost per unit extracted. This is typically used where the products harvested are of high value or the benefits of uneven age management are greater than the harvest benefits.

References

Silvicultural Guide for Paper Birch in the Northeast (revised) L.O. Safford, Research Paper NE-535, 1983, publication #5086

Uchytil Ronald J. 1991, Betula Papyrifera, fire Effects Information Systems, USDA Forest Service, Rocky Mountain Research Station Fire Science Laboratory; http://fs.fed.us/database/feis/ April 1. 2008

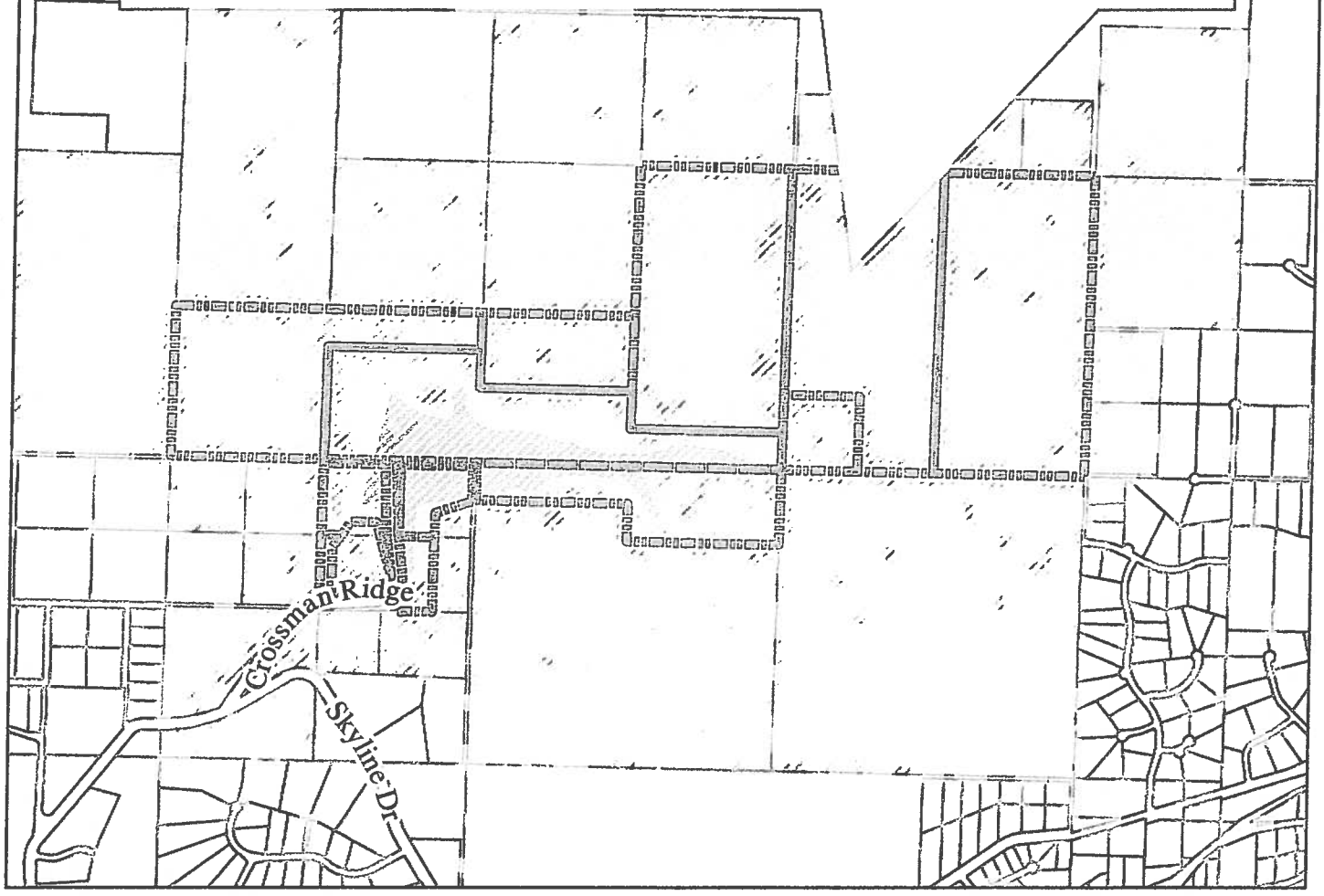
A Silvicultural Guide for Spruce-Fir in the Northeast, Robert M. Frank & John c. Bjorkbom, USDA Forest Service General Technical Report NE-6, 1973.

The Selection System of Siviculture in Spruce-Fir Stands – Procedures, Early Results and comparisons with Unmanaged Stands. Forest Service Research Paper NE-425.

NRCS, Alaska
January, 2009

Vicinity Map

Request for reducing the fire hazard on 14 lots. The proposal entails a combination of mechanized and hand falling and limb removal of dead trees. No trees will be removed from the properties. Request for logging to occur within required stream and reservoir buffer areas.



Shaded lots are within 300 feet and property owners notified.

City of Homer
Planning and Zoning Department
January 3, 2011

Request for Conditional Use Permit
2011-01

Legend

Subject Lots

Parcels w/in 300 feet

Reservoir

Disclaimer:
It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.

PUBLIC NOTICE

Public notice is hereby given that the City of Homer will hold a public hearing by the Homer Advisory Planning Commission on Wednesday, January 19, 2011 at 7:00 p.m. at Homer City Hall, 491 East Pioneer Avenue, Homer, Alaska on the following matters:

A Request for a Conditional Use Permit (CUP) for timber activities and for activities within the stream and reservoir buffers at the following locations:

T 6S R 13W SEC 5 SEWARD MERIDIAN HM NE1/4 SW1/4 & N1/2 SE1/4 SW1/4 & N1/2 S1/2 SE1/4 SW1/4,
T 6S R 13W SEC 5 SEWARD MERIDIAN HM N1/2 SW1/4 SW1/4 OF SEC 5
T 6S R 13W SEC 6 SEWARD MERIDIAN HM N1/2 N1/2 SE1/4 SE1/4 & SW1/4 SE1/4 OF SEC 6
T 6S R 13W SEC 5 SEWARD MERIDIAN HM E1/2 SE1/4
T 6S R 13W SEC 5 & 6 SEWARD MERIDIAN HM S1/2 S1/2 SE1/4 SW1/4 & S1/2 SW1/4 SW1/4 OF SEC 5 & S1/2 SE1/4 SE1/4 & S1/2 N1/2 SE1/4 SE1/4 OF SEC 6
T 6S R 13W SEC 5 SEWARD MERIDIAN HM SW1/4 SW1/4 SE1/4
T 6S R 13W SEC 5 SEWARD MERIDIAN HM NW1/4 SE1/4 & E1/2 SW1/4 SE1/4 & NW1/4 SW1/4 SE1/4
T 6S R 13W SEC 8 SEWARD MERIDIAN HM N1/2 N1/2 NW1/4 NW1/4 & N1/2 NE1/4 NW1/4
T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 2 PORTION THEREOF
T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 13 A PORTION THEREOF
T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 1 PORTION THEREOF
T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 2 THAT PORTION THEREOF LYING EAST OF DIAMOND RIDGE ROAD
T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 14 THE W1/2 THEREOF
T 6S R 13W SEC 7 SEWARD MERIDIAN HM 0711238 DIAMOND RIDGE ESTATES SUB LOT 13 A PORTION THEREOF

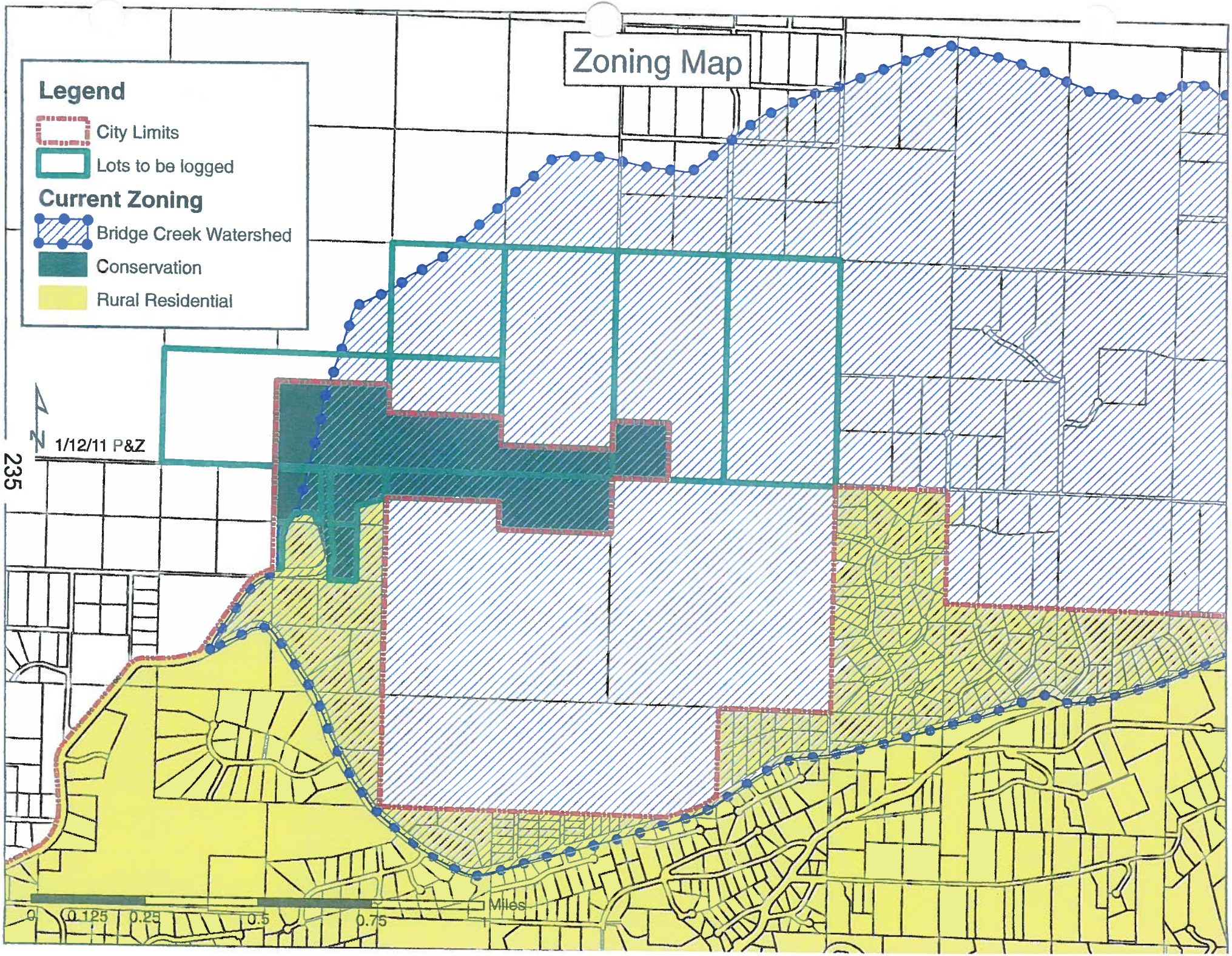
Anyone wishing to present testimony concerning these matters may do so at the meeting or by submitting a written statement to the Homer Advisory Planning Commission, 491 East Pioneer Avenue, Homer, Alaska 99603, by 4:00 p.m. on the day of the meeting.

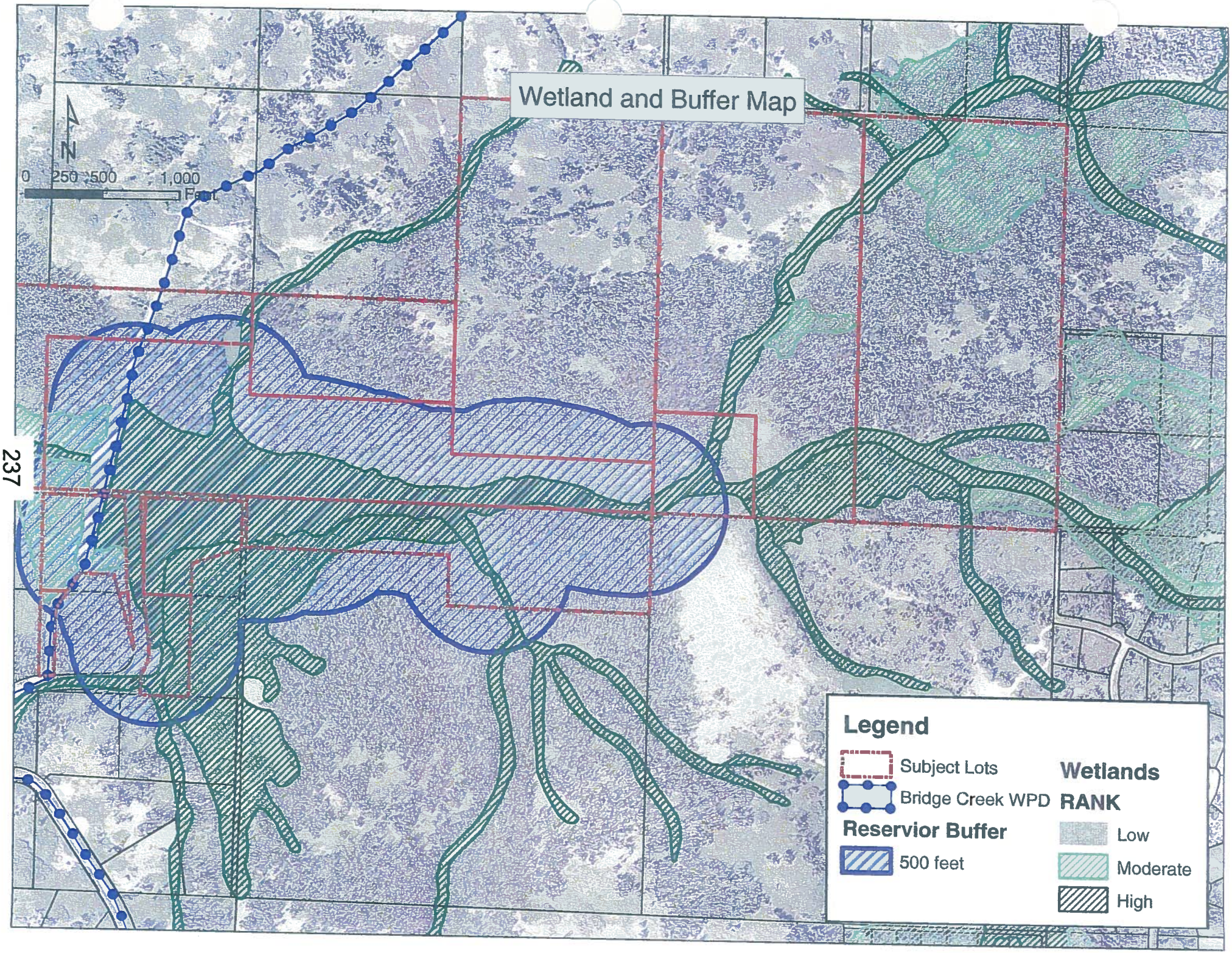
For additional information, please contact Julie Engebretsen in the City Planning and Zoning Office at 235-8121, ext. 2237.

NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 300 FEET OF PROPERTY.
****

PLEASE PUBLISH ONCE

ACCOUNT 100.130.5227


Zoning Map
Legend
City Limits
Lots to be logged
Current Zoning
Bridge Creek Watershed
Conservation
Rural Residential
N
1/12/11 P&Z
235
0
0.125
0.25
0.5
0.75
Miles


Wetland and Buffer Map
N
0 250 500 1,000
Feet
Legend
Subject Lots
Bridge Creek WPD
Reservior Buffer
500 feet
Wetlands
RANK
Low
Moderate
High

Feller Buncher

Feller Buncher – Grapples and Sawblade

From Roberta Highland

RECEIVED
JAN - 7 2011
CITY OF HOMER
PLANNING/ZONING

HOMER SPIT COMPREHENSIVE PLAN
1/5/11
PROPOSED AMENDMENTS

1. Page 1, Last Paragraph: "The Homer Spit Comprehensive Plan was excluded from the overall city comprehensive plan update which began in 2006."
Add: "However, the overall city comprehensive plan provides direction to the Spit Plan and identifies important community values."

2. Page 3, Bullet at the bottom of first column: Clarify wording to better express the prevailing public opinion.
Add: "Concern about future expansion of residential developments."

3. Page 3, Second Bullet Top of Page, Change: "There is a desire for more overslope development …"
to : "While there is a desire for more overslope development by some, there is also a concern about expanding overslope development without conducting adequate market analysis to determine its potential impact on existing commercial enterprises both on the spit and in the downtown area."

4. Page 6, Third paragraph, Last sentence: Clarify that tidal lands are valuable for conservation purposes.
Delete the following text:
"Note that many tidal lands that make up portions of parcels within the acreage are unusable"
Substitute:
"Note that while many tidal lands making up portions of parcels within the acreage are unusable for development, such lands are valuable for many conservation and economic purposes including tourism, fishing, clamming and recreational activities."

5. Page 6,
Insert a footnote under the Homer Spit Land Usage Summary chart:
"Acreage includes tidal lands."

6. Pages 7-8: It is difficult to see the detail in these maps due to the scale. Change maps on pages 7&8 to large pull-out similar to those on p.43&44. Include Heritage Place campground on page 7 map.

7. Page 11, First partial paragraph, last sentence: **Change**: "The City of Homer Climate Action Plan is an excellent resource."
To: "The City of Homer Climate Action Plan (HCAP) is an excellent resource and is, hereby, incorporated by reference into the Homer Spit Plan (HSP). In order to fully implement this change, the HCAP should be attached as an appendix to the HSP. "

8. Page 14. The Map does not have "5" and "6" in sequential order. Should be "5a, 5b, 5c" and then "6"? Also, should be "12a, 12b" and then "13", "14"?

8a. Page 15: Where is lot "2","3" and "5". Renumber as needed.

9. Page 18, Third paragraph at end: **Add**: "Investment in public open space/parks will enhance the values of the spit by adding another reason to engage people with the spit and will contribute to the tourism economy and vitality of the spit. A 'Spit Plaza' can become a vibrant gathering place that would combine art, public information, and demonstrations that would unify the Spit as focus of activity. The use of Port and Harbor funds may be limited for park lands but there are many other sources of funds for park/plaza development."

10. Page 18, After third paragraph: **Add new paragraph:** "To avoid the congested commercial core of the Spit an alternative to consider is extending the bicycle/pedestrian trail to the harbor to connect with a way-finding trail from the deep water ferry dock along the overslope which would then follow the overslope all the way to Fish Dock road where it would connect with a trail to the city-lease RV Park and another branch to the End of Road Park with another branch skirting the Fish Factory to access the park at Coal Point. This would also access the proposed transportation terminal at the present Harbormaster office site and encourage RV park pedestrians to walk to the shopping area thereby reducing parking congestion there."

11. Page 19, Top left corner: **Change photo to Seafarer's Memorial**.

12. Page 19, Top right corner, Coal Point Park: Replace entire paragraph with "Although access to the park is challenging, it does provide a nice location…"

13. Page 21, Last sentence Change to read: "Port funds can be used, to purchase Port land which benefits the Port and the City as a whole. The Spit, therefore, provides an economic benefit to the City of Homer and local taxpayers who do not have to pay taxes to improve the Spit."

14. Page 22, Top right: **Change Item 1.4 to read**: "All development should recognize, value, and complement the unique and significant natural resources; and the importance of the open space character and aesthetic values of the Homer Spit."

15. Page 24, Second paragraph under 1.B
Delete: "As more commercial opportunities are desired, the overslope area at the harbor basin offers excellent opportunities for commercial growth…"
Change to: "Expansion of commercial development on the Spit will be based on a market analysis of how existing commercial enterprises meet the market need, the economic impact to the vitality of existing businesses and how to enhance existing commercial usage through design standards, landscaping, pedestrian movement, parking improvements, and height restrictions. In addition to the above considerations, in determining the location of expansion, every effort will be made to reduce environmental impacts and to reduce filling or destruction of critical habitat, tidelands and other sensitive areas."

16. Page 24, Last paragraph, Fifth line, Change: "These opportunities are available in particular on the West and East sides of the harbor basin, which could accommodate 40,000 square feet of new overslope development."

To: "These opportunities are available in particular in the overslope area on the West and East sides of the harbor basin, which, subject to applicable environmental regulations and the city's commitment to reduce impacts to the environment and aesthetic values, could accommodate 40,000 square feet of new overslope development.

17. Page 25, Second Para. Under 1C, Fourth line: **Replace**: "While there may be community concern…"
With: "There is public concern over new residential development based on a desire to avoid damage to aesthetic and the other unique values of the Spit that can occur from such development."

17a. Page 25, Top right column, Second line down, Change: "A residential option may be considered as part of the planning process."
To: "Residential development on the Spit will be considered incidental as part of seasonal tourism rentals; it is not the desire of the City to establish a residential community on the Spit, to increase the supply of condominiums, or resort lodging. These lodgings are already established and developed in the city proper and surrounding area."

18. Page 25, Fourth Line down, Change: "A clear policy is needed and appropriate regulations created and enforced to meet public health and safety concerns."
To new paragraph: "A clear policy is needed and appropriate regulations created and enforced to meet public health and safety concerns. At some point consideration must be given to the possibility, however remote, of an emergency evacuation of the spit due to a tsunami. The number of people present at any one time may have to be limited to accomplish this. Since this has yet to be done, it may be premature to plan for more development, which would lead to more people present and subject to emergency removal. An emergency evacuation plan and it's implementation also need to be addressed. These tasks need to be completed before any more development is considered."

19. Page 26, First paragraph: **Add sentence at end of first paragraph**: "However, as explained on page 18, there are challenges to this concept in regards to the Port and Harbor Enterprises Fund."

20. Page 27, Right column under "Mariner Park Improvements", Last sentence: "Several improvements have been identified in the Capital Improvement Plan (CIP)."
Add: The CIP will not include any provision for expansion of Mariner's Park into Mariner Lagoon by fill material or placement of boardwalks, trails, or underpasses."

21. Page 28, Top left Column, First partial paragraph last sentence : Clarify how the following affects land use and dredge and fill decisions on the Spit. "The City is working with ACOE (the Army Corps of Engineers) on a long term dredge spoils plan."
Add: "The criteria for location and disposal of such spoils includes….The development of the dredge spoils plan will be part of a public involvement process that will assess environmental impacts and designation of land use for the Spit or elsewhere outside of the Spit."

22. Page 28, under "Lease and Renewal," Add a bullet:

"How does the lease meet the standards of the Homer Climate Action Plan and sustainable principles of a clean environment, reduction of wastes, effective and innovative use of local resources, and contributes to a green infrastructure for water and energy conservation?"

23. Page 28, under "Lease and Renewal,"Add a bullet:
"The campground lease area terminus of the spit provides an important transitional open space buffer to mitigate the blocked views resulting from the existing condominium development. The campground lease will be retained to preserve these important open space values. In the event, the campground are not retained, the land will, otherwise be retained as open space with no permanent structures."

24. Page 31, Under 3B, Last sentence, Change: "However, walking, running, beachcombing, and bird and mammal watching are all activities that can be enhanced for all season use."
To: "However, walking, running, beachcombing, and bird and mammal watching are all activities that can be enjoyed in any season."

25. Page 34, First Strategy: Substitute: "Identify appropriate residential uses on the Spit."
With: "Restrict residential uses to limited seasonal tourism rentals within the primary commercial core. No new residential, condominium, or lodge development is planned and any considerations for such uses will not be allowed on the entire west side and southern terminus of the Spit." The open space between the areas already developed is too valuable to the viewshed to be filled in with more buildings; no more additions to the number of people on the spit should be considered until evacuation plans are finalized."

26. Page 34, First Objective, Third Strategy, Substitute: "Consider a 25 ft building height limit, with a CUP process for building up to 35 feet."
With: "Consider a 25 ft building height limit, with a CUP process for building up to 35 feet. Building height limits along the entire west side and southern terminus of the Spit shall be restricted to 25 feet with no CUP provision."

27. Page 34, Third Objective change word "Fix" to "Address."

28. Page 36, Goal 1.4, Second Strategy from top of page:
Delete: "Proponents of bulkheads, groins, breakwaters or ...."
Substitute: "Bulkheads, groins, breakwaters or other devices shall not be allowed on the west side of the Spit." "Proponents of such devices for the east side and southern terminus of the Spit shall demonstrate that there is no net loss of inter-tidal habitat or detrimental effect on sediment transport to Mud Bay or Mariner Lagoon."

29. Page 36, Goal 1.6, Third strategy: "Conservation of the Mud Bay area of the Spit."
Add: and Mariner Lagoon and other biologically important inter-tidal areas of the Spit." No fill material will be allowed within Mud Bay or Mariner Lagoon or other important inter-tidal areas of the Spit."

30. Page 36, Goal 1.6. Add fifth strategy: "Collaborate with the scientific and native communities including the Kachemak Bay Marine Ecosystem Research Group and Native

Villages to exchange scientific knowledge and information essential to protecting the unique resources of the Spit."

31. Page 37, Goal 2.1, Second objective, Add three strategies:
"Encourage eco-tourism practices and services associated with cruise ship opportunities."
"Establish a citizen's task force to work with the Planning and Zoning Commission to identify cruise ship impacts (positive and negative) and how to plan for and manage those impacts. Seek input from the experience of other communities that have experienced cruise ship development."
"work with local non-profit entities, businesses and the public to support environmentally responsive harbor management including addressing: invasive species, establishing a no discharge zone for cruise and other shipping, permanent mooring buoys, a tanker watch and heightened zone of protection standards."

32. Page 40, Goal 3.1, Seventh strategy from top of page,
After: "Host economic development forum and determine opportunities for value added growth."
Add: "The forum will focus on a comparison of cost and development impacts of incentives for commercial development of the Spit against the incentives for revitalizing the downtown city core, creating a historic district for 'Old Town Homer' and creating a unifying design that features the arts and architecture of Homer along Pioneer Avenue."

33. Page 40, Goal 3.1 Add eighth strategy: "Consider hiring a design firm with expertise in landscape architecture, architectural design standards, and land use as a component of designed open space. Focus on development nodes on the Spit, Old Town and Pioneer Avenue with strategies on how to integrate public space and commercial space through art, landscaping, signage and structural design elements."

34. Page 40: Goal 4.1, First objective, Add the following six strategies:
"Address compliance with watershed conservation standards including section 313 and dredge and fill standards under section 401 of the Clean Water Act."
"Analyze actions that the City can make to manage the Natural Environment to benefit fish and wildlife and the public as provided by the Coastal Zone Management Act of 1972."
"Analyze how Ocean Acidification may potentially impact the Spit and a strategy for addressing such impacts. This may include a recommendation that all waters around the Spit be listed as Water Quality-Limited Segments under section 303 (d) of the Clean Water Act due to impairment for pH due to absorption of anthropogenic carbon dioxide pollution."
"Collaborate with the scientific and native communities including the Kachemak Bay Marine Ecosystem Research Group and Native Villages to exchange scientific knowledge and information essential to protecting the unique resources of the Spit."
"Consistent with Section 1B of President Obama's Directive of June 12, 2009 which created the Ocean Policy Task Force and which states that 'The framework should also address specific recommendations to improve coordination and collaboration among Federal, State, Tribal, and local authorities, including regional governance structures.'"
"The main guiding principle will be to not over-develop the Spit. Design development to effectively respond to tsunami events, storm events, flooding, and evacuation plans. Design with open space to allow maximum capability to deliver services in response to harbor vessel, vehicle

or structure fires, oil spills, traffic and pedestrian safety, and provide Universal Access (ADA) to development nodes."

35. Page 41, Objective at top of page:
"Purchase or obtain conservation easements on private lands on the east side of the Spit,..."
Add:
and those private lands south of the sea wall as mitigation for the sea wall development."

36. Page 41, Goal 4.2, First objective:
Change "Support and implement the Alaska Clean Harbor Pledge."
To: "Support and actively implement the Alaska Clean Harbor Pledge.and Clean Harbor Initiative."

37. Page 41, Goal 4.2
Add a Objective and two Strategy:
Objective: "Encourage and provide incentives for Port development that emphasizes green infrastructure, green technologies, environmentally clean industries, and use of local resources."
Strategy: "Identify marine related industries that support sustainable practices. Do not designate the Port of Homer as a transshipment port for major industrial products or hazardous waste, an industrial warehouse for large scale mining, or as a staging area for oil and gas development."
"Such activities are not compatible with the recreational or environmental spirit of the spit plan and would eventually degrade the environment and lead to an industrial type complex that would be distasteful to tourists and local."

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone (907) 235-8121
Fax (907) 235-3118
E-mail Planning@ci.homer.ak.us
Web Site www.ci.homer.ak.us

STAFF REPORT PL 10-111

TO: Homer Advisory Planning Commission
THROUGH: Rick Abboud, City Planner
FROM: Julie Engebretsen
MEETING: December 1, 2010, Jan. 5, 2011
SUBJECT: Spit Comp Plan Public Hearing

Requested action: Conduct a public hearing. Consider submitted comments, public testimony and amend the plan. Schedule a second public hearing for January 5th, 2011.

GENERAL INFORMATION
There are a few places in the plan the Commission may want to amend. Staff has some below, with suggested language. If the Commission approves them, the language will be inserted in the City Council draft of the plan.

Comments from the Parks and Recreation Advisory Commission are attached to this staff report, and some of the recommendations are included below.

If there are any errors on the maps or other places that you see, this is the meeting to say so! Staff comments in the November 17th staff report (SR 10-109) under "wrap up" still apply.

If you have any other last comments, ideas or things you think are missing, Please bring them up at this meeting, or provide them to staff by Monday, December 13th so they may be included in the January 5th meeting packet.

Suggested Amendments

1. Mariner Park
A recurring comment has been no more filling at Mariner Park – i.e. do not expand the footprint of the park into the lagoon. The Commission could add the following sentence under Mariner Park Improvements on page 27: "Strong public sentiment was voiced against any further expansion of the park by placing fill material in Mariner Lagoon."

2. Tsunami Warning Sirens – from Parks and Recreation Commission Comments
Page 10, at the end of the second paragraph, add a sentence" "Signage may also be added at public locations to educate the public about tsunamis and what the sirens mean."

3. Page 43, Map 3 Future Land Use Map: remove the "future use needs consideration" from the property next to the Hockey Rink. The plan at one time talked about opportunity areas with more

residential uses. This language has been cut from the plan, and no longer talks about something other than Marine Industrial Development in this area.

4. Missing objective under goal 1.6
There is a missing objective and strategy on page 36 that was in previous drafts. This object was inadvertently cut off in the layout table under Goal 1.6: Objective "Protect the scenic, natural and aesthetic resources of the Spit." Strategies: "Encourage the build-up of driftwood on Spit Beaches. Use native landscape elements in public design projects (beach grass, driftwood)."

The following is from Dotti Harness-Foster, Planning Technician:
5. Land Use and Community section of the Implementation Table:
Pg 36, Goal 1.6 Objective.

> Comment: Public input has indicated a need to acknowledge conflicts between motorized and non-motorized users on the Spit.
>
> Add a strategy: Minimize conflicts between motorized and non motorized users on the Spit. Safety and noise do not mix with a picnic, walk on the beach. Install signage to education ATV uses about responsible ATV use.

6. Natural Environment section of the Implementation Table:
Pg 41, Goal 4.1, second Objective.

> Comment: Include both sides of the spit in the goal to obtain private lands.
>
> "Purchase or obtain conservation easements on private lands on ~~the east side of~~ the Spit, such as between north of the hockey rink and the base of the Spit."

7. Pg 42, Goal 4.4 Objective.

> Comment: Use a more positive tone.
>
> Change "Dead boat removal" to "Remove derelict vessels"

STAFF COMMENTS/RECOMMENDATIONS:

Planning Commission conduct a public hearing, review comments and suggested amendments. Amend the plan. Schedule a final public hearing for January 5th, 2011 and forward to the City Council.

ATTACHMENTS

1. Draft ordinance
2. Parks and Recreation Advisory Commission comments

CITY OF HOMER
HOMER, ALASKA

Planning

ORDINANCE 11-

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING THE 2008 HOMER COMPREHENSIVE PLAN TO INCORPORATE THE HOMER SPIT PLAN AND RECOMMENDING APPROVAL OF THE AMENDMENT BY THE KENAI PENINSULA BOROUGH.

WHEREAS, The Kenai Peninsula Borough as a second class borough shall provide for planning on an areawide basis in accordance with AS 29.40; and

WHEREAS, As provided in Kenai Peninsula Borough Code 21.01.025, cities in the Borough requesting extensive comprehensive plan amendments may recommend to the Kenai Peninsula Borough Planning Commission a change to the city comprehensive plan; and

WHEREAS, The City of Homer has prepared an extensive amendment to the 2008 Comprehensive Plan in the form of the Homer Spit Plan; and

WHEREAS, A comprehensive plan is a public declaration of policy statements, goals, standards and maps for guiding the physical, social and economic development, both private and public, of the City; and

WHEREAS, The Homer Spit Plan will guide development on the Homer Spit; and

WHEREAS, The Homer Advisory Planning Commission and other City commissions and bodies have reviewed and/or conducted public hearings regarding the Homer Spit Plan; and

WHEREAS, The Homer City Council, based upon the recommendation of the Homer Advisory Planning Commission, recommends that the Kenai Peninsula Borough Planning Commission and Assembly amend the 2008 Homer Comprehensive Plan to incorporate the Homer Spit Plan.

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. The 2008 Homer Comprehensive Plan is hereby amended to incorporate the Homer Spit Plan, which shall supersede the Homer Spit Plan section of the 1999 Homer Comprehensive Plan Update.

Section 2. Subsection (b) of Homer City Code 21.02.010, Comprehensive Plan—Adoption, is amended to read as follows:

b. The following documents, as initially approved and subsequently amended, are

adopted by reference as comprising the Homer Comprehensive Plan.

1. Homer Comprehensive Plan (2008)
2. Homer Non-Motorized Transportation and Trail Plan (2004)
3. Homer Area Transportation Plan (2005)
4. Homer Town Center Development Plan (2006)
5. **Homer Spit Plan (2010)**

Section 3. The City hereby recommends that the Kenai Peninsula Borough Planning Commission and Assembly amend the 2008 Homer Comprehensive Plan by incorporating the Homer Spit Plan as an extensive comprehensive plan amendment under Kenai Peninsula Borough Code 21.01.025, and as an element of the Official Borough Comprehensive Plan within the City of Homer planning area of the Borough.

Section 4. Sections 1 and 2 of this ordinance shall take effect upon the Kenai Peninsula Borough Assembly amending the 2008 Homer Comprehensive Plan to incorporate the Homer Spit Plan. The remainder of this ordinance shall take effect upon its adoption by the Homer City Council.

Section 5. Section 2 of this ordinance is of a permanent and general character and shall be included in the city code. The remainder of this ordinance is not of a permanent nature and is a non code ordinance.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this _____ day of _____ 2011.

CITY OF HOMER

_____
JAMES C. HORNADAY, MAYOR

ATTEST:

_____
JO JOHNSON, CMC, CITY CLERK

[**Bold and underlined added.** ~~Deleted language stricken through.~~]

YES:
NO:
ABSTAIN:
ABSENT:

First Reading:
Public Hearing:
Second Reading:
Effective Date:

Reviewed and approved as to form:

_____	_____
Walt E. Wrede, City Manager	Thomas F. Klinkner, City Attorney
Date: _____	Date: _____

[Bold and underlined added. ~~Deleted language stricken through.~~]

City of Homer
Planning & Zoning
491 East Pioneer Avenue
Homer, Alaska 99603-7645

Telephone *(907) 235-8121*
Fax *(907) 235-3118*
E-mail *Planning@ci.homer.ak.us*
Web Site *www.ci.homer.ak.us*

TO: Homer Advisory Planning Commission
THROUGH: Julie Engebretsen, Planning Technician
FROM: Parks and Recreation Advisory Commission
MEETING: December 1, 2010, January 5, 2011, January 19, 2011
SUBJECT: Spit Comprehensive Plan Recommendations

The Parks and Recreation Advisory Commission discussed the September 28th, 2010 draft Homer Spit Comprehensive Plan at a special meeting on October 25th, and again at their regular meeting on November 17th. These are their comments on the plan.

1. Recreation is a prime reason people come to the Spit.
2. The plan does not place enough emphasis on the importance of parks, recreation and open space on the Spit
3. Keep open space; it tends to get lost over time
4. Improve camping and recreation facilities to draw visitors
5. Camping is an important activity that generates revenue for the General Fund ($175,819 in 2010 for all city campgrounds)
6. Add signage about tsunamis to provide public education, possibly in campgrounds or other central locations. Explain what and where the sirens are and what they mean
7. Crossing Homer Spit Road between the Spit Trail and Mariner Park is dangerous. Pave the full shoulder between Mariner Village and Mariner Park to create a bike path on the western side of the Homer Spit Road. Move the entrance of Mariner Park north about 500 feet, so it is away from the curve and there is better visibility. Extend the 35 mph speed zone to the new entrance of Mariner Park; maybe a crosswalk would be possible and signage notifying drivers of pedestrians in the area. Then increase the speed limit further out the spit.
8. Restrooms at Mariner Park are a priority; could be vault style or fully plumbed
9. Move harbormaster office to the far side of the harbor and use the former area as a plaza
10. Campsites and facilities support visitors who enjoy the environment
11. Consider an interim campground on the east side of the harbor near the chip pad
12. Spit looks unloved; lots of junk is left/abandoned. Clean up abandoned stuff.
13. Have a trail along the harbor; move the parking lot logs back a few feet to create it.
14. Increase the visitor experience along the harbor boardwalk with points of interest; signage, art walk, waypoints. Build a 'walking experience' that is intriguing, not a puddle jumping exercise
15. Build an extension of the Homer Spit Trail along Fish Dock Road to access Coal Point Park, and then travel along the harbor entrance to the End of the Road Park.

MANAGERS REPORT
January 10, 2011

TO: MAYOR HORNADAY / HOMER CITY COUNCIL

FROM: WALT WREDE

UPDATES / FOLLOW-UP

1. Proposed Ocean Drive Improvements: The Economic Development Commission has requested that I contact DOT/PF about safety improvements on Ocean Drive. Concern was expressed about summer time traffic and the number of pedestrians, especially when the Farmers Market is open. The problem is anticipated to become worse this year because all of the cruise ships are scheduled to be in port on Saturdays. The Commission suggested creating a turning lane on Ocean Drive and temporarily moving the bike lane to either Bay Avenue or to Lakeshore Drive. At the last meeting, I informed the EDC that I thought it would be best to first bring this recommendation/request to the attention of the Council and that the Council could either authorize me to contact DOT/PF on behalf of the City or refer this issue to other entities that might have an interest such as the Planning Commission or the Transportation Committee.
2. Lobbyist: The RFP for lobbyist services is on the street. The deadline for proposals is January 13th. If all goes well, we plan to have approval of a lobbyist contract on the agenda for the meeting on January 24. In the meantime, there are two issues that need to be discussed. The first is that I would like to quickly put together a small review team to review and score the proposals. Are any Council members willing to serve on that committee? Most of the work would take place the week of January 17th. The second issue is the scope of work. This was not discussed in great detail during the budget amendment process. There was a lot of talk about amending the fisheries business tax statute, but not much else. So, before we interview candidates and draft a contract, it would be good to more clearly define the scope of work.
3. New Lease Agreement: Tom Klinkner is working on amending the City's standard ground lease. He is doing this for several reasons. First, he thinks the document can be updated and edited to make it shorter and more current (reflecting recent changes in the lease policies, insurance requirements, etc), while still maintaining the necessary protections for the City. He is also attempting to incorporate some of the EDC recommendations where appropriate and beneficial. The Council recently approved new leases for Snug Harbor and Brad Faulkner. We plan to use the new lease in those negotiations. Please let me know if and how the Council wants to be involved with the amendment of the standard lease.
4. Gas Distribution Task Force: The Task Force is up and running. The second meeting will be on Monday, January 10, at 12 Noon. The focus so far has been on the grant requirement that Homer come up with a plan that provides for distribution of gas infrastructure within the city limits. So far, this has included an internal review of the City utility ordinances to see if they need to be amended

and an initial analysis of funding options and build-out scenarios. Enstar representatives will be at the meeting to discuss build-out plans and Enstar's tariff with respect to main line extensions.

5. The New Budget: The Finance Department is working hard to prepare the new final budget for public dissemination. The budget will incorporate all of the amendments approved by the City Council. The department is also changing the format somewhat and adding new sections to make the document more informative and easier to read and locate information. For example, the Water and Sewer Fund will have a new presentation since it is no longer an enterprise fund. There are also new stand alone sections for the Permanent Fund and for Staffing information. Capital projects are arranged in a different way to make them easier to find. Regina can explain all of the changes to you at the meeting if requested.
6. TORA Agreements: Good News. We have made some progress and we are now beginning the process of negotiating Transfer of Responsibility Agreements (TORA) with DOT/PF for the Spit Trail extension and the Deep Water Dock Expansion feasibility study. This is the first step in getting these projects moving and we hope to have draft agreements ready this month. The TORA that is pending is the one on Spit Parking. This one is almost ready for final approval but has been suspended in part for budgetary reasons. I would like to discuss whether the Council still wants to move forward with this given budget cuts and concerns about taking on new responsibilities.
7. Conditional Use Permit / Bridge Creek Fire Mitigation Project: A Conditional Use Permit application has been submitted and the Planning Commission is scheduled to take this matter up at its regular meeting on January 19th. A copy of the application narrative is attached for your information (not the full application). This project may generate public discussion and debate. Please let me know if you have any questions or wish to discuss this in more detail.
8. Enstar / Gasline Grant Follow-Up: The grant agreement has been amended to incorporate the sub-grant agreement between the City and Enstar. This clarifies and directly addresses the Council's concerns about issues like ownership, operation, maintenance, and liability. Also, questions about the applicability of Davis Bacon provisions have been answered by the Department of Labor. This resolves all remaining issues. Contracts have been executed, Enstar has submitted its first invoice, and the paperwork is being prepared for reimbursement by the state.
9. Joint Workshop Request / Planning Commission: The Planning Commission has requested a joint workshop later this winter to discuss code enforcement, especially on the Homer Spit. The Planning staff is being hammered on all sides about enforcement. Many in the community, including I believe, the Commission itself, are concerned that the City is not doing enough, or being assertive enough, about code enforcement, particularly on the Spit. On the other hand, a sizable portion of the community believes that the City is being too aggressive and that code enforcement and maybe even portions of the code itself should be rolled back. Enforcement on the Spit has proven to be very difficult for a wide variety of reasons and would be very expensive to ramp up. There is a lot more background

that could be provided but this is the gist of it. The Commission and the staff would like some input and guidance from the Council on this matter.

10. Spit Dredged Materials Disposal: I recently reported that the City was working with the Corps of Engineers to find a long term solution to the disposal of dredged materials. The Corps has inquired why the City had prohibited these materials from leaving the Spit. Bryan has been doing research on the history of this and has shared it with the Port and Harbor Commission. It is my understanding that the Commission recently recommended that these materials be allowed to leave the spit if it was necessary. So, you may see an ordinance to accomplish that coming to you soon. I suspect there will be a lot more discussion about this at that time.
11. Energy Efficiency / Capital Improvements: This agenda contains an ordinance that would appropriate funds for capital improvements that increase energy efficiency in City buildings and facilities. A cost center spreadsheet is attached. As you can see, the cost to complete recommended projects that have a good payback period exceeds the amount of money contained in the grant and the Revolving Energy Fund. The ordinance and spreadsheet make suggestions about how these projects might all be funded and how the costs would be allocated. This should be a good starting point for discussion. The Council may or may not want to do all of these projects at once and it may have different ideas about how they should be funded. Using enterprise fund depreciation reserves might generate debate, especially since we have not been putting money into those accounts. There are other questions about repayment of the REF as well if enterprise funds are used (maybe the enterprise funds should be reimbursed instead). We look forward to this discussion.

ATTACHMENTS

1. January Employee Anniversaries
2. Project Narrative / Bridge Creek Fire Mitigation Project