

# Kenai Peninsula Borough

Flood Plain Task Force  
April 1, 2009  
6:00 PM



photo by: Chris Becker

Seward City Hall, Upstairs Conference Room  
410 Adams Street., Seward

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March 18, 2009 Minutes

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FEMA Levee & Mapping NFIP

Levee Accreditation

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# Kenai Peninsula Borough

## Flood Plain Task Force

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April 1, 2009 - 6:00 p.m.

Regular Meeting

Seward City Hall, 401 Adams Street, Seward

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Ron Long  
Assembly Member

Charlie Pierce  
Assembly Member

Kevin Lyon  
Capital Projects

Dan Mahalak  
Capital Projects

Jane Gabler  
Kenai River Center

Holly Montague  
Legal Department

Scott Walden  
Office of Emergency  
Services

Todd Peterson  
Planning Commission

Sue McClure  
Planning Commission

Max Best  
Planning Department

Ron Wille  
Road Service Area  
Board

Bill Williamson  
Seward Bear Creek  
Flood Service Area

Randy Stauffer  
Seward Bear Creek  
Flood Service Area

Jim McCracken  
Public Representative

Robert Hicks  
Public Representative

Matt Gray  
Public Representative

Christy Terry  
City of Seward  
Planning Department

Staff:

Shellie Morgan  
Deputy Clerk

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# Kenai Peninsula Borough

## Flood Plain Task Force

### Meeting Summary

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March 18, 2009 - 6:00 p.m.

Regular Meeting

Seward City Hall, 401 Adams Street, Seward

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#### **CALL TO ORDER**

A regular meeting of the Flood Plain Task Force was held on March 18, 2009, in the Upstairs Conference Room of Seward City Hall, Seward, Alaska. Chair Long called the meeting to order at 6:00 p.m.

There were present:

Ron Long, Chair  
Charlie Pierce, Vice Chair  
Colette Thompson  
Bill Williamson  
Randy Stauffer  
Ron Wille  
Todd Petersen  
Sue McClure  
Scott Walden

Kevin Lyon  
Dan Mahalak  
Mary Toll  
Jane Gabler  
Jim McCracken  
Matt Gray  
Christy Terry  
Bob Hicks

Also in attendance was:

Shellie Morgan, Deputy Clerk

**WELCOME AND INTRODUCTIONS** - None.

**PUBLIC COMMENT** - None.

**OPTIONS OF NOTIFICATION** - Warnings Printed on Plats.

Chair Long stated the task force would be reviewing potential options for notifying the public.

Ms. Toll recommended an amendment to Ordinance 2009-09, to include adding a new section to read "20.20.270 Areas of Historical Flooding." She said the new section would require plats within a Historical Flooding Zone to be identified by recording a note on the plat and prior to any development the owner would be responsible for contacting the necessary agencies for current regulations.

Chair Long stated that the proposed change from Ms. Toll would only affect new plats.

Mr. Walden suggested working with the Borough's General Information Service Department to include an option on the parcel viewer that would show historical flooding patterns on a parcel.

Ms. Toll stated that a link directly from the Kenai River Center Floodplain web-page to the parcel viewer would be a good tool for informing the public.

Chair Long agreed that the parcel viewer option would be a good tool; however, questioned if would that be the correct way to get the information out? Ms. Toll said parcel viewer and notes on the plats were used in conjunction, they could be effective.

Mr. Hicks believed most second and third buyers of a property would not view the plat; however, they do view the deed, and if it were noted on the deed, the note may be more likely to be seen.

Mr. McCracken noted the time sensitive nature and added, what was in the flood plain today may not be in it five years from now. He said recording the information on a deed or as a plat restriction, created a permanent record.

Ms. Thompson said Mr. McCracken brought up a good point; however, suggested wording that identified when and what happened to the property, would be giving people more information than just a warning that the property was within a flood plain area.

Mr. Wille asked if it would be possible to put a note on the plat or deed that said, "for current information regarding the flood zone, contact the Kenai River Center." He said specific flood data would then not be recorded on the plat, it would just be a note that informed the developer or purchaser that they should look into the subject.

Chair Long said using both options was something to consider, for instance, putting the historic flood data on a plat and a note saying, "refer to the Kenai River Center for current information."

Mr. Hicks asked Ms. Thompson if a note could legally be recorded on a deed.

Ms. Thompson said, there were requirements in State Statue regarding what had to be on a deed; however, the liability issue had to be addressed.

Chair Long said Ms. Terry's idea of recording a separate document stating this property was reported to have flooded in past years would address the liability issue.

Ms. Thompson agreed that would be better wording and would site the source, as long as there was reasonable certainty that prior flooding had occurred.

Mr. Peterson said in his opinion information on the deed should not be specific; however, he did agree with recording an informational statement on the plat as suggested by Ms. Toll.

Mr. Stauffer said he had seen plats notes that addressed the suitability of the land for septic systems, those are not definite statements, the wording was, "this land may or may not be suitable for a septic system due to the terrain."

Chair Long said the point is to get the people to start thinking about the flood issues, the common complaint in the past had been, "no one warned me" or "there was no information that this area had flooded or was likely to flood."

Mr. Walden said last fall property owners had come in with their original purchase paperwork, and it had very fine print on it saying, "this area had been subject to flooding in the past," and that was the only notice the purchaser had received.

Chair Long stated that the font size on plat warnings had been brought up at the previous meeting. Ms. Toll showed an example on standard paper, which was what most people print; however, when you review the actual plat the font was readable.

Ms. Toll used a printed plat to show the FIRM zones, she noted that they were not exact, they were an approximation, and that was all that would be required in an area of historical flooding. She said they would not be surveyed, it would be based on an approximate location.

Mr. Hicks stated at some point a person would submit a subdivision plat in which some portion may have a history of flooding and other portions had not, a definition of what historical flooding meant would be needed.

Vice Chair Pierce asked why Mr. Hicks felt the definition had to be so specific? Mr. Hicks said he was concerned about making it too difficult for developers, and also concerned about including areas that may not be in a flood area. He was also concerned about the possibility of the Borough being involved in litigation due to vague determinations on past floods. He said if Ordinance 2009-09 did not have a description of historical flooding, there would be many disputes by developers.

Chair Long asked Ms. Gabler, if a developer came in stated his property had been placed within the flood zone area; however, the developer thought he was outside of the flood zone area, how would that be dealt with? Ms. Gabler said the developer would go to FEMA and request a Letter of Map Revision (LOMAR) and get a surveyor on location, complete the forms, and submit evidence to convince FEMA the property was outside of the flood plain.

Mr. Hicks asked if the process Ms. Gabler had described was only within the A zones. Ms. Gabler said yes.

Mr. Hicks asked if the task force would be addressing more than the A zones. He said if we were drawing new boundaries how were we going to address the issue when someone disputed the fact that they were placed in a historic flood area. He stated that going to FEMA for a LOMAR would not work within the Borough classified Historic Flood Zones.

Chair Long stated that Ordinance 2009-09 did state that if there was a belief that the maps were in-accurate or that they were drawn in error, the option to make a case on the best available evidence was available to the owner, it did not have to be based on science, it could be supported by an affidavit from a neighbor.

Ms. Toll asked what methods were used to notify property owners that they were in a historic flood area. Ms. Gabler stated that annual notices went out each year.

Chair Long stated a definition of a special flood hazard area was needed, and felt damp or wet did not constitute a special flood hazard area; however, if there was documented evidence of significant damages there would be nothing to dispute.

Mr. Peterson asked if the new FEMA maps coming out would include the entire Seward Valley. Mr. Lyon stated there was a potential new standard that would not recognize non-certified levies. He said the levies in the valley were not certified, and were not certifiable. If that standard was adopted, the entire Seward Valley would be non-applicable. When the new standards were brought forward and the public was allowed speak to the subject they may be modified.

Chair Long stated the question remaining was not when the FEMA maps would arrive, but if they were coming at all. He said one thing he had heard was, because of the limited budget, FEMA would not be mapping areas with alluvial fans.

Mr. McCracken stated another issue to consider was the additional work load that was already being added to Borough staff, and implementation of changes would increase the work load.

Chair Long stated once the task force came up with specific action to be taken, borough staffing would then be addressed. He said a reasonable permitting process would have to be considered.

Chair Long asked Ms. Gabler to explain what she believed the additional staff responsibilities would be if Ordinance 2009-09 were enacted. Ms. Gabler stated it was difficult to anticipate the request; however, one permit could require multiple days for processing.

Chair Long asked Ms. Gabler how many permit applications were processed annually within the mapped zone. Ms. Gabler stated it was around 20; however, it was not an easy 20, a person could spend hours talking to the people involved, the situations in the area and the additional agencies involved, complicated the process.

Chair Long said he believed Ordinance 2009-09 would produce roughly an additional eight permits in the next year.

Mr. Williamson asked how many agencies were involved in getting the permits? Ms. Gabler said the Kenai River Center for the flood plain, Corps of Engineers, Fish and Game, Coastal Zone Management, and the Department of Natural Resources.

Mr. Williamson stated any of the agencies listed by Ms. Gabler, had the ability to delay the permitting process.

Vice Chair Pierce stated he would like to see the process be kept simple; however, the notification needed to take place. He said via plat or deed the purpose would be to ensure people were warned of the risks. He said a start would be drafting language that would cover the buyers interests, Borough interests, and maybe even the sellers interests as well.

Mr. McCracken stated that the State of Alaska required by Statute a disclosure on improved and un-improved properties, the seller was required to complete a seven page disclosure form. He said the form was generally handled by the Realtor; however, it was still required in a private transaction.

Mr. Walden stated the purchase documents from the Clear Creek area had a one line notice on them stating, "area may have flooded in the past."

Mr. Stauffer said he felt that the multiple sales of one property would result in the possibility of one owner selling without a warning, because during the period of ownership the property never flooded.

(06:40:44)

### **OPTIONS OF NOTIFICATION** - Warnings Printed on Maps, Signs posted on Roads.

Chair Long stated a clarification of warning types included on maps needed to be made, and asked would it be something like what was discussed in the plat issue. He also noted the type of message on the signs would need to be decided.

Mr. Wille said there had been a lot of resistance in the past to signs being posted that read, "Borough Maintenance Ends Here." He said when new roads were constructed, it was the developers responsibility to put up signage.

Mr. Hicks stated it had to be consider, that the signs may become targets.

Mr. Peterson stated you would not want to place a sign on a forty-acre subdivision stating, "this area had been subject to historical flooding," because some sections may not have been flooded. He said it would have to be language similar to what was discussed for the deeds.

Mr. McCracken asked who was objecting to posting of signs. Mr. Wille said objections had been voiced by the public at Road Board meetings, and it stemmed from the issue of people shooting the signs, or the sign getting knocked down. The people want to know who will be responsible for putting it back up.

Mr. Stauffer stated in a conference he attended on flooding last year, road signs were suggested as methods of notification; however, they were not talking about rural areas, they were talking about city areas, marking on buildings stating, "water level had been here in such and such flood."

Chair Long said whenever road signs come up, for whatever reason there was resistance, and suggested the road sign option be removed from further discussion.

The Task Force unanimously agreed to remove the road sign notification option.

Chair Long clarified his intent to notifying the public of the flood hazards, it was not an attempt to stop development, it was an attempt to inform the public so they could develop responsibly in consideration of the potential hazards.

(06:47:59)

### **DEVELOPMENT RESTRICTIONS** - Covenants.

Mr. McCracken stated that a covenant would only be as good as the enforcement, he said many of the communities in the area had covenants; however, no Home Owners Aassociation; therefore, no enforcement of the covenants.

Chair Long stated that the covenant of his neighborhood read as if it were the most pristine community, right down to grooming of lawns; however, that was not the present reality, so it seemed a bit out of the realm at this point to consider covenants as an option.

The Task Force agreed to no longer pursue the covenant options.



**DEVELOPMENT RESTRICTIONS - Building Codes.**

Chair Long stated the building code, which was available in the mapped area, was sometimes fairly specific on base floor construction techniques, breakaway walls, and several hazard mitigation strategies. He said some options the Task Force may want to look at was revising the codes within the FIRM map and outside.

Mr. Williamson said most development was done through bank financing, a possibility would be adding a section requiring notification to the Kenai River Center (KRC) before building. He said there had been a few instances where he had asked builders if they got a permit, and the reply was, "what permit?"

Vice Chair Pierce believed the Borough did not need to be responsible for creating a new department for enforcing the permitting process. He said that this was not something to be achieved through a building code, it needed to be done through the planning codes. He said a disclaimer on every plat stating "buyer beware" would be sufficient in notifying the purchaser that it was their responsibility to inform themselves of the flood plain history, and responsible development of the land.

Mr. Stauffer stated that if this Task Force took this type of action it would not affect construction that already existed, only future construction.

Chair Long referred to pages 38, 39 and 40 of the packet, which indicated what was in place as a building code for development within the FIRM mapped areas. He said enforcement was done on the honor system, he did not want the Borough to be in a position of having a compliance officer to enforce the code. He said if we give them the information and standards and they continue to ignore it, putting their life savings and structure at risk, that would be their choice.

Mr. McCracken stated that currently people were building where they wanted, and there was nothing in current code to prevent them from doing so.

Chair Long stated if that was the choice people were making, they were probably un-insurable.

Ms. Thompson stated the Borough did have a code compliance officer, and in the flood plain code there was a provision that stated violation of the chapter were infractions and were subject to civil fines. She said the issue was catching people who were not in compliance, then giving them notice of non-compliance, allowing time for them to comply, and if they did not, a fine was assessed, and enforced. She said it was not a simple process.

Chair Long stated if someone was not in compliance and their insurer or lender found out, it would cause further difficulties for the property owner.

Ms. Thompson said the property owner would not be covered by FEMA if they were found to be out of compliance.

Vice Chair Pierce offered an example: If a builder did not comply with the standards, and the development was then damaged by a flood event. What would the responsibilities of the Borough be? What liability had the Borough exposed themselves to by not enforcing the existing code? Where would the Borough stand regarding compensation to the developer for damages?

Ms. Thompson said she did not see any protection, except the disclaimer of liability in Ordinance 2009-09; however, in State Statutes the municipality would be immune from actions taken on property it did not own. She said it still did not prevent someone from suing.

Vice Chair Pierce asked the Task Force consider what type of liability was being created by putting these restrictions in the Borough Code and then not enforcing them. Would the language weaken the Borough's position. He said why put this in any document, when the ability to enforce it was limited.

Mr. Hicks stated the Borough's level of responsibility needed to be considered, a local community participating in the FEMA insurance program, one clear responsibility listed was that the local community would enforce its building requirements, it was not just enough to issue a permit, then walk away and not take an action to enforce. He said FEMA could come in and force the Borough to come up with some type of enforcement program. He said once you move to areas outside of the FIRM mapped areas, the Borough was then free to make the enforcement decisions, FEMA had no requirements; however, you could get community rating points by imposing the same type of building code provisions outside of those areas.

Chair Long stated FEMA did require the best technology available to determine the hazard outside of the mapped areas.

Ms. Toll asked if structures in the flood plain were not in compliance, could a letter of non-compliance be recorded so that it would show up in a title search.

Ms. Thompson said it was not something stated in the code; however, the code could be changed. She said once something was recorded it was there forever, there would have to be steps taken for notification once it was brought back in to compliance.

Ms. Gabler said there was something through the FEMA program that allowed the type of notification Ms. Toll mentioned, and was being done in Fairbanks. She said it was working; however, it was very serious once you started the process.

Chair Long stated one reason that we had not gone through an entire enforcement action, was due to the Borough staff, rather than prosecution the preferred course of action had been correction, working with the developers, encouraging them to do the right thing. He said there would be an occasional person who thought they did not have to comply and one day the Borough might have to take civil action.

Mr. Gray asked if the Borough were not enforcing the code as expected by FEMA, could FEMA then take action? Mr. Long said there was a process in place with FEMA, first the Borough would be put on probation, and given a specific period of time to comply with regulations, and if compliance was not met in the time allowed the homeowners within the Borough would no longer be eligible for flood insurance.

Ms. Gabler stated that FEMA did come to the community to perform a Community Assistant Visit (CAV) they drove around the area taking pictures, once they had completed their inspection of the area they would bring pictures back to the Kenai River Center, stating that some look illegal and ask for a history on the property. She said that was when the work began for the Borough, the Borough identified the age of the structure, sometimes had to require elevation certifications, sometimes they were high enough and sometimes they were not. She said at times we have had to require people construct openings in their foundations.

Mr. Stauffer noted there was a possibility that someday FEMA would grow tired of spending so much time and money in the Seward area, and request the local government to correct the problems, and FEMA would then pull all assistance from the community. He said by creating the task force, and working toward a solution, showed the Borough was willing to work to fix the problems.

Mr. Walden stated the Borough did not have the ability or the authority to enforce building codes as a second class borough. He said regarding enforcement all the Borough could do was judge if the structures had been built to elevation levels that the Borough had deemed appropriate. He said once the permit was issued, the Borough's involvement was over. He stated in reviewing the National Flood Insurance Plan (NFIP) the Borough had to have strong building codes; however, it also implied that the builder or owner was responsible for meeting those requirements, it did not place the burden on the Borough to enforce them.

Chair Long stated that some of the NFIP rules did place the burden onto the owner, especially for rebuilds after an incident, and if the standards were not met, an individual would be charged a higher premium at \$25.00 per \$100.00 of coverage.

Mr. Walden stated that FEMA and Home Land Security had been responsive in regards to damage assessments, reimbursements and helping with mitigation projects. He said the flood plain code, needed to be updated.

Mr. McCracken asked how the new regulations from FEMA regarding levies would affect areas down stream or above the levy. Mr. Stauffer said the new regulations apply only to non -certified levies.

Chair Long asked if there were any certified levies in the area. Mr. Stauffer said no.

Mr. Stauffer stated that along with the new standards for levies, FEMA would also be going back to verify if previously certified levies were being inspected on a normal schedule, and if repairs had been done after a flood. He said if the standards were not being followed, the communities needed to hire an engineer to inspect and certify the levies again.

Mr. Walden asked if the person or organization who built the levy affected the certification status of a levy. Mr. Lyon said no.

Chair Long asked where in the process was FEMA in enacting the new regulations? He stated at some point it would be open to public comment. He stated that there had to be other communities with the same concerns.

Mr. Williamson said that he would be attending a FEMA conference in June and he would be obtaining more information on the new regulations.

(07:23:54)

### **DEVELOPMENT RESTRICTIONS - Roads and Subdivision Codes.**

Chair Long stated a portion of the Borough code that addressed flood plains was adopted as a response to a FEMA declaration, and it did not go through a process that merged it with the roads and subdivision codes. He said there were sections where the two worked well together and other sections where they did not. He felt the task force should be working toward finding the areas where the code did not work together and correct them, with the help from the Planning and Roads Departments.

Mr. Wille referred the road constructions standards on pages 21 - 31, he said one of the challenges faced by the Roads Department was the road constructions standards were written to be applied to all roads within the Borough, he said there was a huge variety in the geology within the Borough. He said the standards were written to say this was how you do it, and if you vary in any way an engineer was required.

Chair Long stated he was looking for a solution to the reoccurring problem of building a road to meet the standards, which caused flooding to the personal property surrounding the road. He said the other reoccurring problem was private development building the property up to meet the standards, being the cause of flooding to the roads. He said this needed to be addressed, and an appropriate strategy needed to be developed.

Mr. Williamson said several roads in the area became flood ways when the water hits a certain level, which works in favor of the property owners; however, not for the Borough, because the roads are now the lowest point. He said the ditch lines could not be kept up and maintained to handle the amount of water going through.

Chair Long stated one thing to consider was public infrastructure, in a declaration, was eligible for recovery, private was eligible for a loan. He said it needed to be determined who would apply for assistance and had the best chance of recovery in a declaration.

Mr. Williamson stated people had asked why roads were not constructed at a lower level to allow the floods to run through it. Mr. Lyon stated making the road a river would become a hazard and restrict emergency access.

Mr. Stauffer stated many subdivisions in the area had only one access road accessing it, the roads could not be used to direct the water flow.

Mr. Stauffer stated that an additional option could be to require two ways in and out of a subdivision, one being used as a dike and the other used as a flood way to carry the water away from properties.

Mr. Hicks stated that aside from FEMA and Borough Code, Riparian Rights, stated no person could build up their property in a way that diverts water onto other property, that was a trespass.

Mr. Wille stated that the Borough did not generally build roads, it did regularly rebuild them. He said all of the standards that were created were enforced on a developer building the roads, and further regulations had to be done in a reasonable manner, so that the developer could continue make profits on future developments.

Mr. Williamson said that in the Seward area when roads started to be developed at the new standards, there would be a visible change in the water patterns.

Mr. Wille said the further development of Camelot Excalibur Road had been postponed for another year to allow for a drainage plan to be developed.

Mr. Long asked Mr. Wille if it was part of the process to form a drainage plan when developing a road. Mr. Wille stated that they did account for normal drainage; however, they did not plan for a flood event.

Mr. Long stated the task force may want to consider looking at something beyond what is normally considered in a drainage plan for roads. Mr. Wille said if it was in a flood plain area then something further should be addressed, and that would most likely trigger the need for an engineer.

Mr. Peterson said he believed a developer would want to speak with an engineer prior to development to assure there would not be any liability issues at a later date.

Ms. Terry asked who was issuing right of way construction permits. Mr. Wille said the Borough Roads Department.

Chair Long stated problems usually stemmed from the out of pocket developers carrying the note, telling the purchaser if they buy the lot and pay the developer a monthly fee, the Borough would maintain the road. He said after the lot was purchased the buyer finds out there was never an agreement for the Borough to maintain the road, and the permitting process was never done.

Mr. Wille stated there were also cases when a developer placed a driveway down the center of a large parcel, then came back three years later to plat and subdivide the entire parcel, at this point the developer would not need to meet any road standards because the road already existed. He stated this was an issue that needed to be addressed by the task force.

(07:45:51)

**FLOOD DEBRIS** - Classification by DNR.

Mr. Lyon stated gravel was still classified by the Department of Natural Resources (DNR) as a mineral that had a value of \$3.25 per yard, he stated the Borough had an appeal filed with DNR; however, no reply has been received as of yet. He said a more viable option would be having the water ways classified as non-navigable streams. He said this would effect Salmon Creek, Resurrection River, 4th of July, and Sawmill.

Mr. Wille asked if there had been any follow up on having the various Service Area Boards draft Resolution that would support the repeal of DNR's fee. Mr. Mahalak stated he felt it would be more productive to put the efforts into navigability.

Chair Long stated that it was determined in the past that in order to change the fee, would require a legislative fix. He said a legislator who supported the action was finally located, and would address the royalty charged by DNR.

The Task Force agreed to further pursue both navigability and gravel classification.

Ms. Thompson asked if reference to debris, was it a reference to the state language or federal language. Mr. Long stated it was reference to FEMA policy.

Mr. Walden said in the FEMA Disaster Assistance Policy described where the Federal Agencies were responsible for removal of such debris, he said it goes on to state what was available for disaster recovery funding and reimbursement for emergency response. He said one section left him to believe that the Borough would be reimbursed for removing the debris during the height of a flood, and no cost would be incurred to DNR on behalf of the Borough. He said if we approached with a change to the language rather than a dollar amount removal, it would likely receive a better reception.

Mr. Walden stated if it was a threat to lives, public health and safety, or it needed to be removed to ensure the economic recovery of a community it was most likely going to be considered debris.

#### **FLOOD DEBRIS** - Proper Removal.

Mr. Mahalak stated proper removal would be something that followed the best management practices and followed engineering standard codes, he said another way to look at it would be to follow methodologies and procedures outlined in peer reviewed research.

Mr. Hicks stated in deciding proper removal, the effect on other properties had to be considered, he said any man made change that affected other properties opened up exposure to liabilities.

Chair Long stated that in-stream work was probably the highest risk activity.

Mr. Williamson noted that a statement in one of the permits issued by the Kenai River Center was, "if you remove it from the flood way, you can not put it back in the flood way elsewhere."

Mr. Stauffer suggested making a waterway wide enough for gravel deposits, and remain under Borough ownership, and letting nature take its course.

Chair Long stated a buyout option was a subject for further discussion, the land was already owned by someone, either individual, corporate, or government, and buyout options should be consider. He said a buyout process was embarked upon in the Old Mill Subdivision, and at the last meeting it was announced that the National Resource Conservation Service (NCRS) had funding available that did not require Borough participation; however, it allowed for land owners who set aside their land in an easement to be compensated for it.

Mr. McCracken stated that Borough owned land that was above the flood zone would be a viable option in trades.

Ms. Toll stated the Borough owned 1,100 acre parcel near Seward; however, there was access issues.

Mr. Lyon further described the access issues regarding the Borough owned land in the community. He stated the only way to access the land was through a rock face, it would require a chair lift for access, he said once on top it was a solid rock surface which would limit access to water, not to mention the restrictions on septic systems.

Chair Long stated the Borough could look at swapping land with Mental Health or the State to have land available for swapping with owners of flood plain lands who wished to develop.

Mr. Peterson stated if the Borough did have a parcel of land to develop, the people in the real flood plain areas, could be made an offer, where the Borough stated the purchase price of your land was the value of the land you are leaving, he said that might entice a large portion of the people to move to dry land.

Chair Long stated that he agreed with Mr. Peterson, and it was unfair to regulate people by saying you can't live here, you can't build here, and by the way you have to move, without offering an alternative.

Mr. Peterson said at the price the Borough was paying for the land in the Old Mill Subdivision, they could have gone out and purchased private land and set up a subdivision.

Mr. Hicks noted that the bed load problem would continue as long as the area was surrounded by mountains. He said he questioned whether channel maintenance was a viable option.

Mr. Wille stated the project done within the City with a diversion tunnel was a temporary fix; however, for the last 70 years it has solved the problem of town flooding; it was not perfect, and could cause problems at another time.

Mr. Lyon noted that when you interrupt nature's natural patterns there was usually a consequence. He stated there were other issues generated by rerouting the water flow.

Mr. Hicks stated he felt the better approach would be taking flood plain land out of development, and providing people with alternate options where they could develop.

Chair Long stated it would be difficult to fund bed load removal; however, ways may need to be found to use nature itself as a flushing system.

Mr. McCracken stated the City had some very desirable high ground available, he said once access was created to some of this land, further development would be easy.

Mr. Wille said he attended a conference regarding climate change and how it was effecting western Alaska. He said the flooding in the Seward area had not been part of the conversation; however, it was an affect of climate change.

Chair Long stated that FEMA did not currently recognize events that could not be tied to rainfall.

Mr. Wille said one item brought up during the conference was enactment of cap and trade on emissions, and it was a distinct possibility at this time that the Borough could participate in some of the global issues that were occurring.

Mr. Gray said this could tie in with the stimulus and emergency funding.

(08:36:54)

## **MAP DEVELOPMENT**

Chair Long noted that the maps outside of the FIRM zones were questioned, one question raised was what measurement would be used to determine the height, would it be the high during seasonal high water. He said the high mark would need to be clearly stated.

Mr. Lyon indicated the Borough would work off of the center lines as they appear today, and determine if they were correct, and if there was hard rock that was going to send the water one direction instead of the other.

Chair Long stated the center line was not a perfect triangle, and would trigger exception clauses, he also proposed change of 20-feet on each side instead of 30-feet. He also noted some of the questions that were raised regarding the maps as proposed, some are pretty well developed on multiple sets of data and some are less; however, in most cases the data used was as extensive as the data used in federal regulations. He said in regards to regulating activities within the zones, it did not, the only thing being regulated was the development of new primary residential structure, it would not regulate sales of a large parcel.

Mr. Lyon said the historic flood data was posted on the web, and the lines were backed up with the stored data in the General Information Services Department.

Chair Long stated one requirement of FEMA was the use of the best historical data, he said that did not mean it was perfect, that did not mean it was sometime wrong, if it was wrong we would be willing to admit it and make the changes.

Mr. McCracken asked about the status of current gravel extraction permits. Mr. Lyon stated the permits were good until the expiration date.

Mr. Gray asked if the 2005 flood shown on the map was not actually in 2006. Mr. Lyon stated the flood actually took place in November and December of 2005 and continued into January of 2006.

Mr. Gray asked if the lines we have defining the flood zones were defensible. Mr. Lyon said yes.

Mr. Mahalak stated there was defensible evidence that the area had surge relief flooding during the 1986 flood. He said the 1986 flood was the largest in the area as far as he was concerned other than the 1917 flood, he stated Ordinance 2009-09 had grounds to stand on just from the foot print from the 1986 flood event alone.

Chair Long stated the information available in 1981 that FEMA used to develop the maps that were working on to a much higher level of regulation than the zone. He said the information FEMA used to create the maps was antidotal, house to house, door to door information, interviews with home owners.

Ms. Thompson stated her concern was did the Borough have better technology available today and using antidotal information was a liability. She stated the Borough should be using the LIDAR data.



Mr. Lyon stated there were areal photos available from the 1986 event that were scribed onto the map, that was how it was put together. He said if someone were to come in and say they were not affected by the flood, he would be able to pull a photo out of the file and show that they had been.

Mr. Mahalak said FEMA defines a flood as inundation of 1-foot or more, he said in the future that was something that should be delineated.

Ms. Toll stated that an additional option to consider would be making sure people had camera's available or GPS's to gather data for the Borough.

Mr. McCracken stated he would like to see Ordinance 2009-09 postponed until after the LIDAR flight had been done this spring, to further enhance the data available.

Chair Long said it was his opinion that Ordinance 2009-09 would be in affect for one year and it was important that it was established.

Mr. Mahalak stated that the sedimentation range would not affect his opinion.

Mr. Walden stated that he trusted the maps being created and believed we could prove their validity should they be challenged, he said the Borough should have some type of document that would indicate how the maps were created.

Mr. Wille asked if a power point presentation could be put together for property owners that were not necessarily in Seward, to explain the theory behind this action.

(08:59:42)

## **GENERAL DISCUSSION AND QUESTIONS**

Mr. McCracken asked if the task force would be supplied with information on previous land swaps, in which, the Borough had participated. He also asked if the correspondence regarding navigable streams could be provided at the next meeting.

Mr. Gray said he did contact the NRCS regarding the easement issue, and asked if agencies would be allowed access to the area for maintenance. He said he was told would be granted.

Mr. Lyon said they were working on a similar agreement within the Old Mill Subdivision and it was required that the work in the stream be done to restore it to its natural state with natural vegetation.

Ms. Thompson said NRCS needed the Borough to preserve the flood plain; however, they would allow some access for response to a disaster.

(09:07:00)

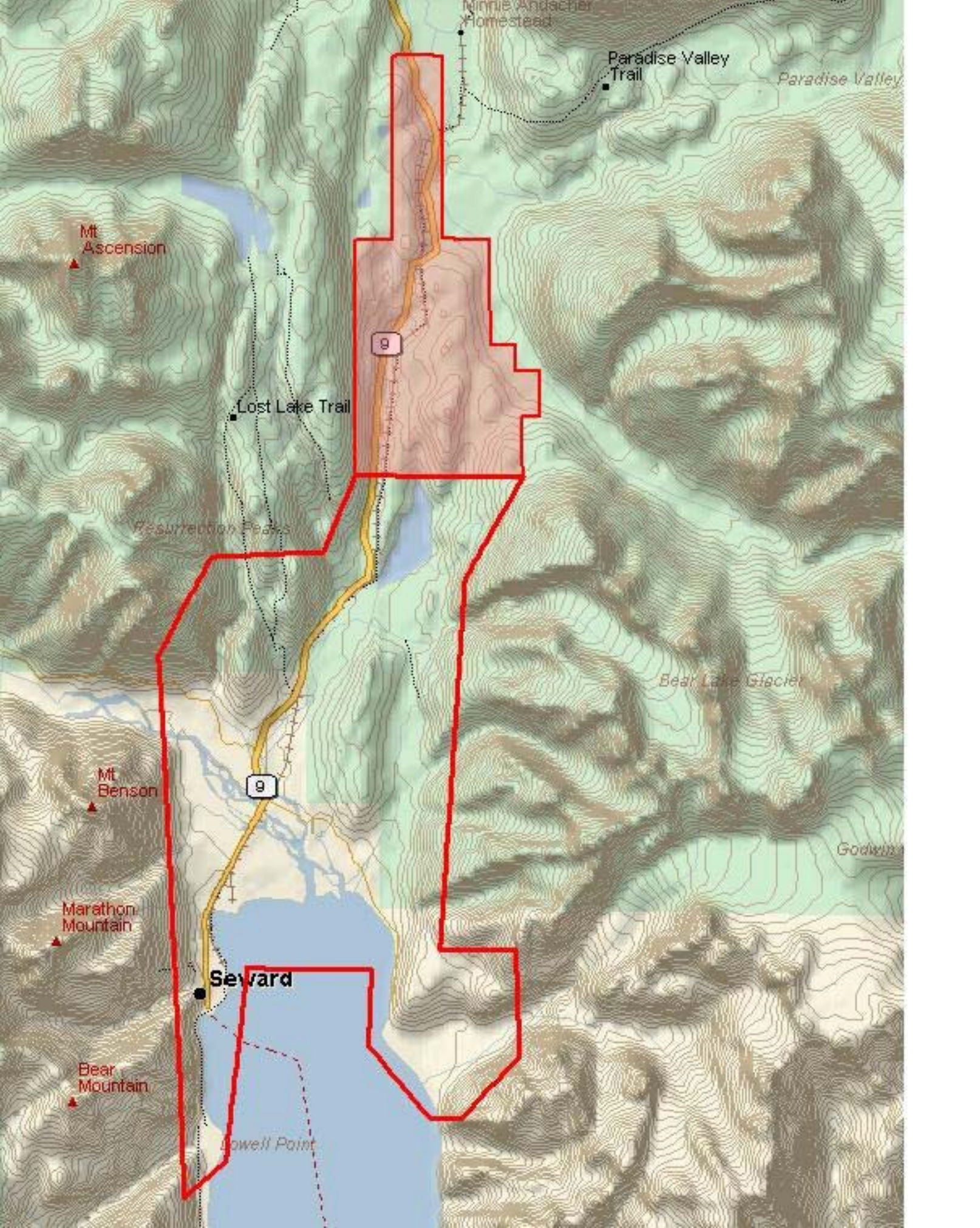
## **TASK FORCE MEETING AND ANNOUNCEMENTS**

The next meeting of the Flood Plain Task Force was scheduled for April 1, 2009 at 6:00 p.m.

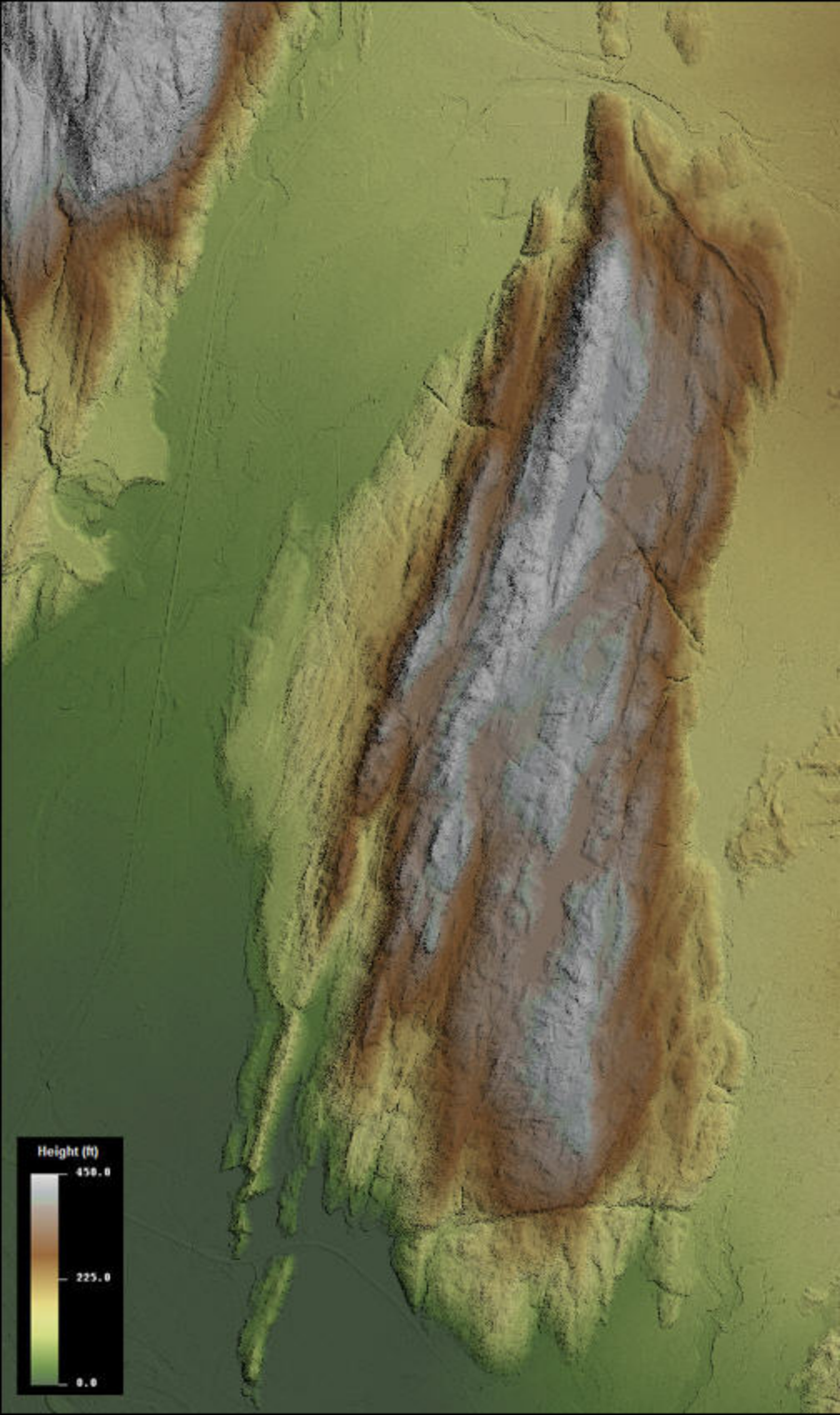
## **ADJOURNMENT**

The committee adjourned at 9:12 p.m.

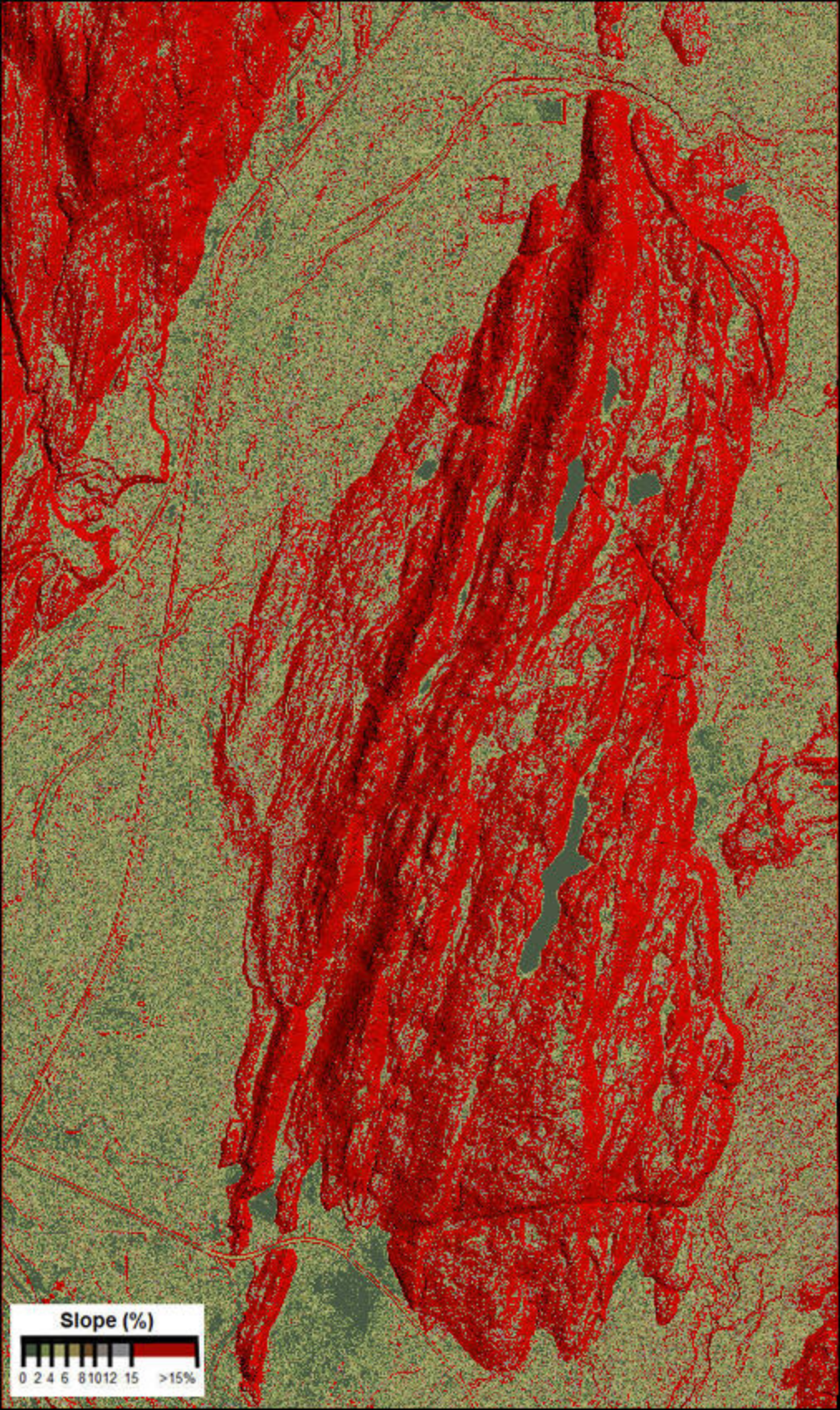












Slope (%)





# State of Alaska Residential Real Property Transfer Disclosure Statement

Prepared in compliance with Alaska Statute (AS) 34.70.010 - 34.70.200

## General Information

AS 34.70.010 requires that before the Transferee/Buyer (hereafter referred to as **Buyer**) of an interest in residential real property makes a written offer, the Transferor/Seller (hereafter referred to as **Seller**) must deliver a completed written disclosure form. This disclosure statement is in compliance with AS 34.70.010. It concerns the residential real property\* located in the \_\_\_\_\_ Recording District, \_\_\_\_\_ Judicial District, State of Alaska.

Legal Description: \_\_\_\_\_

Property Address/City/Other: \_\_\_\_\_

\* Residential real property means any single family dwelling, or two single family dwelling units under one roof, or any individual unit in a multi-unit structure or common interest ownership community whose primary purpose is to provide housing. AS 34.70.200(2) and (3).

**AS 34.70.020 provides that if a disclosure statement or material amendment is delivered to the transferee after the transferee has made a written offer, the transferee may terminate the offer by delivering a written notice of termination to the transferor or the transferor's licensee within three days after the disclosure statement or amendment is delivered in person or within six days after the disclosure statement or amendment is delivered by deposit in the mail.**

**AS 34.70.040(b) provides that if an item that must be completed in the disclosure statement is unknown or is unavailable to the Seller, and if the Seller or Seller's agent has made a reasonable effort to ascertain the information, the Seller may make an approximation based on the best information available to the Seller or Seller's agent. It must be reasonable, clearly labeled as an approximation, and not used to avoid the disclosure requirements of AS 34.70.010 – AS 34.70.200.**

All disclosures made in this statement are required to be made in good faith (AS 34.70.060). The Seller is required to disclose defects or other conditions in the real property or the real property interest being transferred. To comply, disclosure need not include a search of the public records, nor does it require a professional inspection of the property.

If the information supplied in this disclosure statement becomes inaccurate as a result of an act or agreement after the disclosure statement is delivered to the Buyer, the Seller is required to deliver an amendment to the disclosure statement to the Buyer. An addendum/amendment form for that purpose may be attached to this disclosure statement. Upon delivery to a buyer, any inspection/reports generated by a purchase agreement of this property automatically becomes an addendum/amendment to the property disclosure.

**Exemption for First Sale:** Under AS 34.70.120, the first transfer of an interest in residential real property that has never been occupied is exempt from the requirement for the Seller to complete the Disclosure Statement.

**Waiver by Agreement:** Under AS 34.70.110, completion of this disclosure statement may be waived when transferring an interest in residential real property if the Seller and Buyer agree in writing. Signing this waiver does not affect other obligations for disclosure.

**Violation or Failure to Comply:** A person who negligently violates or fails to perform a duty required by AS 34.70.010 - AS 34.70.200 is liable to the Buyer for actual damages suffered by the Buyer as a result of the violation or failure. If the person willfully violates or fails to perform a duty required by AS 34.70.010 -AS 34.70.200, the Seller is liable to the Buyer for up to three times the actual damages. In addition to the damages, a court may also award the Buyer costs and attorney fees to the extent allowed under the rules of court.

Seller's Initials \_\_\_\_\_ Date \_\_\_\_\_ Property Address \_\_\_\_\_ Buyer's Initials \_\_\_\_\_ Date \_\_\_\_\_

## Seller's Information Regarding Property

### Property Type (check one):

- Single Family     Zero Lot Line/Town House     Condominium     Townhome/PUD  
 Duplex (Including Single Family with an Apartment)  
 Other (please specify) \_\_\_\_\_

Do you currently occupy the property?  Yes     No    If Yes, how long? \_\_\_\_\_

If not a current occupant, have you ever occupied the property?  Yes     No    If so, when? \_\_\_\_\_

Year Property Built: \_\_\_\_\_. If property was built prior to 1978, or if Seller has any knowledge of lead-based paint, Seller must complete Disclosure of Information and Acknowledgment of Lead-based Paint and/or Lead-based Paint Hazards in accordance with Section 1018 of the Residential Lead-Based Paint Hazard Reduction Act of 1992 (also known as Title X) and provide Buyer with the "Protect Your Family From Lead in Your Home" pamphlet. The pamphlet can be found on the Internet at <http://www.epa.gov/lead/leadprot.htm>.

Construction Overview:  Wood Frame     Manufactured     Modular     Other: \_\_\_\_\_

Foundation:  Masonry Block     Poured Concrete     Piling     Treated Wood     Other: \_\_\_\_\_

Name of original builder (if known): \_\_\_\_\_

### Property Features:

**Check** all items that are **built-in** and will remain with the property. **Also . . .**

**Circle** those checked items that have known defects or malfunctions. **Also . . .**

**Describe** the defect or malfunction on the Addendum/Amendment(s) To The Disclosure Statement.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Cooktop                     | <input type="checkbox"/> Wood Stove(s) # of _____   | <input type="checkbox"/> T.V. Antenna                                       |
| <input type="checkbox"/> Oven(s) # of _____          | <input type="checkbox"/> Jetted Tub   | <input type="checkbox"/> Satellite Dish                                     |
| <input type="checkbox"/> Rods & Blinds               | <input type="checkbox"/> Hot Tub <input type="checkbox"/> Cover   | <input type="checkbox"/> Window Screens                                     |
| <input type="checkbox"/> Microwave(s) # of _____     | <input type="checkbox"/> Steam Shower Room  | <input type="checkbox"/> Security System                                    |
| <input type="checkbox"/> Dishwasher                  | <input type="checkbox"/> Water Softener   | <input type="checkbox"/> Smoke Detector(s) # of _____                       |
| <input type="checkbox"/> Trash Compactor             | <input type="checkbox"/> Water Filtering System   | <input type="checkbox"/> CO Detectors # of _____                            |
| <input type="checkbox"/> Garbage Disposal            | <input type="checkbox"/> Greenhouse <input type="checkbox"/> Attached <input type="checkbox"/> Detached | <input type="checkbox"/> Fire Alarms  |
| <input type="checkbox"/> Instant Hot Water Dispenser | <input type="checkbox"/> Ventilating System   | <input type="checkbox"/> Auto Garage Door Opener(s)<br># of Opener(s) _____ |
| <input type="checkbox"/> Central Vacuum Installed    | <input type="checkbox"/> Heating System   | <input type="checkbox"/> Built-In Refrigerator                              |
| <input type="checkbox"/> Intercom                    | <input type="checkbox"/> Storage Shed(s) # of _____   | <input type="checkbox"/> Other _____  |
| <input type="checkbox"/> Paddle Fan(s) # of _____    | <input type="checkbox"/> Built-In Barbecue  |   |

Comments: \_\_\_\_\_

### Structural Components:

**Circle** only those items that have known defects, malfunctions, or have had major repairs performed within the last five years.

**Also . . . Describe** the defect, malfunction, or repair on the Addendum/Amendment(s) To The Disclosure Statement.

- |                    |                  |                              |                         |                          |
|--------------------|------------------|------------------------------|-------------------------|--------------------------|
| • Fences/Gates     | • Rain Gutters   | • Insulation                 | • Electrical Systems    | • Electronic Air Cleaner |
| • Driveways        | • Exterior Walls | • Woodstove(s)<br># of _____ | • Sewage Systems        | • Heat Recovery          |
| • Private Walkways | • Interior Walls | • Fireplace(s)<br># of _____ | • Water Supply          | • Ventilator System      |
| • Retaining Walls  | • Floors         | • Gas Starter                | • Garage                | • Swimming Pool          |
| • Foundation       | • Ceilings       | • Chimneys                   | • Garage Floor Drain    | • Mechanical             |
| • Crawl Space      | • Doors          | • Plumbing Systems           | • Carport               | • Filtration             |
| • Roof             | • Windows        | • Heating Systems            | • Washer/Dryer Hook-ups | • Pool Cover             |
| • Patio/Decking    | • Skylights      | • Solar Panels               | • Humidifier            |                          |
| • Slabs            | • Venting        | • Wind Generators            | • Air Conditioner       | • Hot Water Heater       |

Other items not covered above? \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Seller's Initials    Date    Property Address    Buyer's Initials    Date



**Documentation: Check** the documents for the subject property that the seller has available for review:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Engineer/Property/Home Inspection Report(s) | <input type="checkbox"/> Written Agreements with Adjacent Property Owners | <input type="checkbox"/> Party Wall Agreement        |
| <input type="checkbox"/> Title Information                           | <input type="checkbox"/> Energy Rating Certificate or PUR-101             | <input type="checkbox"/> Lease/Rental Agreement      |
| <input type="checkbox"/> As-Built Survey                             | <input type="checkbox"/> Resale Certificate                               | <input type="checkbox"/> Soils Test                  |
| <input type="checkbox"/> Certificate of Occupancy or PUR-102         | <input type="checkbox"/> Water Rights Certificate                         | <input type="checkbox"/> Well Log and Water Tests    |
| <input type="checkbox"/> Deed Restrictions                           | <input type="checkbox"/> Subdivision Covenants/Restrictions               | <input type="checkbox"/> Hazardous Materials Test(s) |
| <input type="checkbox"/> Other _____                                 |   | <input type="checkbox"/> Other _____                 |

**Additional Information:**

Supply information for the following items:

**Yes**      **No**

To the best of your knowledge, has the property been inspected by an engineer/home inspector in the last 5 years?.....      

➤ **Drainage:**

- ◆ Are you aware of ever having any water in the crawl space, basement, or lower level?.....         
 If Yes, how has the problem been resolved?  
 Sump Pump(s)     Curtain Drain     Rain Gutter/Extension     Other \_\_\_\_\_  
 When was problem resolved? \_\_\_\_\_  
 Location of each sump pump: \_\_\_\_\_
- ◆ To where does the water drain after it leaves the sump pump? \_\_\_\_\_  
 If gutters, where do downspouts discharge? \_\_\_\_\_
- ◆ Is there a floor drain in the structure, including garage?.....         
 If Yes, where is it located and where does it drain to? \_\_\_\_\_

➤ **Roof or Other Leakage:**

- Type:  Asphalt/Composition Shingle     Cedar Shake     Built-up     Metal     Other \_\_\_\_\_  
 Age: \_\_\_\_\_ years. Location of attic access? \_\_\_\_\_
- ◆ Are you aware of any ice damming on the roof? .....         
 If Yes, provide location. \_\_\_\_\_
  - ◆ Are you aware of any water leaking into the home? i.e., windows, lights, fireplace, etc. ....         
 If Yes, provide location. \_\_\_\_\_

➤ **Fireplace and/or Woodstove:** Date chimney(s) last cleaned? \_\_\_\_\_ Who cleaned? \_\_\_\_\_

➤ **Heating System(s):**

- Mark all types that apply:  Hot Water Baseboard     Forced Air     Radiant Heat     Electrical Heat  
 Wood Stove     Other \_\_\_\_\_
- Age: \_\_\_\_\_ years. Last Cleaned: \_\_\_\_\_ Last Inspected: \_\_\_\_\_
- Source:  Natural Gas     Electric     Propane Tank leased or owned? \_\_\_\_\_  Wood     Coal  
 Oil with \_\_\_\_\_ gallon storage which is  Buried     Above Ground     Other \_\_\_\_\_
- Age of Tank? \_\_\_\_\_ years.

➤ **Hot Water Heater:**

Age: \_\_\_\_\_ years. Capacity: \_\_\_\_\_ gallons. Type:  Gas     Electric     Other \_\_\_\_\_

➤ **Water Supply:**

Type:  Public     Private     Community     Cistern/Water Tank If Cistern/Water Tank: \_\_\_\_\_ Size  
 Other \_\_\_\_\_

**If Private:** Well Depth: \_\_\_\_\_ feet. Flow Rate: \_\_\_\_\_ gallons per minute. Date Tested: \_\_\_\_\_

- ◆ Have you had any problems with your water supply?.....
- ◆ Has the water supply been tested in the past 12 months?.....         
 If Yes, attach all documentation from all tests.
- ◆ Are you aware of any contaminants in your water supply, to include but not limited to E-coli, nitrates, heavy metals, arsenic or other contaminants? .....
- ◆ Has the well failed while you have owned the property?.....
- ◆ Have you ever had a well pump problem or failure?.....
- ◆ Do you supply water to, or receive water from others?.....         
 If Yes, is there a recorded agreement?.....
- ◆ Do you have a water rights certificate for this property?.....

**Additional Information (Continued):**

➤ **Sewer System:** Yes No

Type:  Public  Private  Community  Other \_\_\_\_\_

◆ Does your sewer system have a lift station/lift pump? .....

If Private:  Septic Tank  Holding Tank  Other: \_\_\_\_\_

Drainfield System:  Bed  Trench  Mound  Pit  Crib  Other \_\_\_\_\_

Innovative Sewer System:  Intermittent Sand Filter  Biocycle  Recirculating Upflow Filter

Secondary sewer treatment plant  Other \_\_\_\_\_

◆ Has the sewer system failed while you owned the property? .....

If Yes, explain: \_\_\_\_\_

Age of sewer system: \_\_\_\_\_ Location: \_\_\_\_\_

◆ Have you had any work maintenance or inspections done on the sewer system during your ownership? .....

If Yes, explain: \_\_\_\_\_

Approval/Certification source (and date if known): \_\_\_\_\_

◆ Are you aware of any abandoned sewer systems, leachfields, cribs, etc. on the property? .....

➤ **Freeze-ups:**

◆ Have you had any frozen water lines, sewer lines, drains, or heating systems? .....

If yes, please explain. \_\_\_\_\_

◆ Are there any heat tapes, heat lamps, or other freeze prevention devices? .....

Location, and explain use. \_\_\_\_\_

➤ **Average Annual Utility Costs:**

Gas	\$ _____	Company/Source: _____
Electric	\$ _____	Company/Source: _____
Oil	\$ _____/Gallons: _____	Company/Source: _____
Propane	\$ _____	Company/Source: _____
Wood	\$ _____	Company/Source: _____
Coal	\$ _____	Company/Source: _____
Water	\$ _____	Company/Source: _____
Sewer	\$ _____	Company/Source: _____
Refuse	\$ _____	Company/Source: _____
Other	\$ _____	Company/Source: _____

To the best of your knowledge, are you aware of any of the following conditions with respect to the subject property? If answer is "Yes," indicate the relevant item number and explain the condition on the Addendum/Amendment(s) to the Disclosure Statement.

➤ **Title:** Yes No

1. Do you know of any existing, pending, or potential legal action(s) concerning the property? .....

2. Do you know of any street or utility improvements planned that will affect the property? .....

3. Road maintenance provided by? \_\_\_\_\_

4. Is the property currently rented or leased? .....

If Yes, expiration date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

5. Is there a homeowner's association (HOA) for the property? .....

If Yes, HOA name: \_\_\_\_\_ HOA Telephone: \_\_\_\_\_

Mandatory  Voluntary  Inactive Monthly Dues Amount: \$ \_\_\_\_\_ per \_\_\_\_\_

Are there any levied or pending assessments? .....

Who is responsible for issuing the resale certificate?

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

➤ **Setbacks/Restrictions:**

6. Have you been notified of any proposed zoning changes for the property? .....

7. Are you aware of features of the property shared in common with adjoining property owners, such as walls, fences, and driveways, whose use or responsibility for maintenance may affect the property? .....

8. Are there subdivision conditions, covenants, or restrictions? .....

9. Are you aware of any violations of building codes, zoning, setback requirements, subdivision covenants, borough, or city restrictions on this property? .....

10. Are you aware of any nonconforming uses of this property? .....



**Additional Information (Continued):**

- |  | <b>Yes</b>               | <b>No</b>                |
|--|--------------------------|--------------------------|
| 11. Are you aware of any deed, or other private restrictions on the use of the property?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Are you aware of any variances being applied for, or granted, on this property? .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are you aware of any easements on the property? .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>➤ Encroachments:</b>  |                          |                          |
| 14. Does anything on your property encroach (extend) onto your neighbor's property? .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Does anything on your neighbor's property encroach onto your property?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>➤ Environmental Concerns:</b>   |                          |                          |
| 16. Are you aware of any substances, materials, or products that may be an environmental hazard such as asbestos, formaldehyde, radon gas, lead-based paint, fuel or chemical storage tanks, contaminated soil, water or by-products from the production of methamphetamines on the subject property?..... | <input type="checkbox"/> | <input type="checkbox"/> |
| 16a. Are you aware of any mildew or mold issues affecting this property? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Are you aware of any underground storage tanks on this property, other than previously referenced fuel or septic tanks? Number of tanks: _____ .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Are you aware if the property is in an avalanche zone/mudslide area?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Are you aware if the property has flooded? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Flood zone designation: _____  |                          |                          |
| 20. Are you aware of any erosion/erosion zone or accretion affecting this property?.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Are you aware of any damage to the property or any of the structures from flood, landslide, avalanche, high winds, fire, earthquake, or other natural causes?.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Have you ever filed an insurance claim for any environmental damage to the property? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Are you aware of a waste disposal site or a gravel pit within a one-mile radius of the property? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>➤ Soil Stability:</b>   |                          |                          |
| 24. Are you aware of any debris burial or filling on any portion of the property?.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Are you aware of any permafrost or other soil problems which have caused settling, slippage, sliding, or heaving that affect the improvements of the property? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Are you aware of any drainage, or grading problems that affect this property?.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>➤ Construction, Improvements/Remodel:</b>   |                          |                          |
| 27. Have you remodeled, made any room additions, structural modifications, or improvements? .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, please describe. Was the work performed with necessary permits in compliance with building codes? .....  |                          |                          |
| Was a final inspection performed, if applicable? .....   |                          |                          |
| 28. Has a fire ever occurred in the structure?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>➤ Pest Control or Wood Destroying Organisms:</b>  |                          |                          |
| 29. Are you aware of any termites, ants, insects, squirrels, vermin, rodents, etc. in the structure?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| a. If Yes, what type? _____  |                          |                          |
| b. If Yes, where? _____  |                          |                          |
| 30. Has there been damage in the past resulting from termites, ants, insects, squirrels, rodents, etc. in the structure?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| a. If Yes, when? _____   |                          |                          |
| b. If Yes, what type? _____  |                          |                          |
| c. If Yes, where? _____  |                          |                          |
| d. If Yes, describe what was done to resolve the problem: _____  |                          |                          |
| <b>➤ Other:</b>  |                          |                          |
| 31. Are you aware of any murder or suicide having occurred on the property within the preceding 3 years?.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Are you aware of any human burial sites on the property?.....  | <input type="checkbox"/> | <input type="checkbox"/> |

**Additional Information (Continued):**

**Yes**      **No**

**33. Noise**

- a. Are you aware of any noise sources that may affect the property, including airplanes, trains, dogs, traffic, race tracks, neighbors, etc? .....
- b. If Yes, explain: \_\_\_\_\_  
\_\_\_\_\_

**34. Pets**

- a. Have there been any pets/animals in the house? .....
- b. If Yes, what kind? \_\_\_\_\_

I / We have completed this disclosure statement according to AS 34.70.010 - AS 34.70.200 and these instructions, and the statements are made in good faith and are true and correct to the best of my/our knowledge as of the date signed. I/We authorize any licensees involved or participating in this transaction to provide a copy of this statement to any person or entity in connection with any actual or anticipated transfer of the property or interest in the property.

Seller: \_\_\_\_\_

Date: \_\_\_\_\_

Seller: \_\_\_\_\_

Date: \_\_\_\_\_

**Buyer's Notice and Receipt of Copy**

**Transferee (Buyer) Awareness Notice:** Under AS 34.70.050, Transferee (Buyer) is independently responsible for determining whether a person who has been convicted of a sex offense resides in the vicinity of the property that is the subject of the Transferee's (Buyer's) potential real estate transaction. This information is available at the following locations: Alaska State Trooper Posts, Municipal Police Departments, and on the State of Alaska, Department of Public Safety Internet site: [www.dps.state.ak.us](http://www.dps.state.ak.us).

**Transferee (Buyer) Awareness Notice:** Under AS 34.70.050, Transferee (Buyer) is independently responsible for determining whether, in the vicinity of the property that is the subject of the transferee's potential real estate transaction, there is an agricultural facility or agricultural operation that might produce odor, fumes, dust, blowing snow, smoke, burning, vibrations, noise, insects, rodents, the operation of machinery including aircraft, and other inconveniences or discomforts as a result of lawful agricultural operations.

The Buyer is urged to inspect the property carefully and to have the property inspected by an expert. Buyer understands that there are aspects of the property of which the Seller may not have knowledge and that this disclosure statement does not encompass those aspects. Buyer also acknowledges that he/she has read and received a signed copy of this statement from the Seller or any licensee involved or participating in this transaction.

Buyer: \_\_\_\_\_

Date: \_\_\_\_\_

Buyer: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Seller's Initials      Date

\_\_\_\_\_  
Property Address

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Buyer's Initials      Date





# State of Alaska Residential Real Property Transfer Disclosure Statement

## Exemption For First Sale

Prepared in compliance with Alaska Statute (AS) 34.70.010 - 34.70.200

Legal Description: \_\_\_\_\_

Property Address/City: \_\_\_\_\_

Under AS 34.70.120, the first transfer of an interest in residential real property that has never been occupied is exempt from the requirement for the Seller to complete the Disclosure Statement.

Buyer may wish to obtain inspections of the property and seek other professional advice.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

**Transferee (Buyer) Awareness Notice:** Under AS 34.70.050, Transferee (Buyer) is independently responsible for determining whether a person who has been convicted of a sex offense resides in the vicinity of the property that is the subject of the Transferee's (Buyer's) potential real estate transaction. This information is available at the following locations: Alaska State Trooper Posts, Municipal Police Departments, and on the State of Alaska, Department of Public Safety Internet site: [www.dps.state.ak.us](http://www.dps.state.ak.us).

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**Transferee (Buyer) Awareness Notice:** Under AS 34.70.050, Transferee (Buyer) is independently responsible for determining whether, in the vicinity of the property that is the subject of the transferee's potential real estate transaction, there is an agricultural facility or agricultural operation that might produce odor, fumes, dust, blowing snow, smoke, burning, vibrations, noise, insects, rodents, the operation of machinery including aircraft, and other inconveniences or discomforts as a result of lawful agricultural operations.

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I certify that this is the first transfer of an interest in the property identified above and that the property has not been occupied before this transfer of interest.

Seller: \_\_\_\_\_

Date: \_\_\_\_\_

Seller: \_\_\_\_\_

Date: \_\_\_\_\_

Buyer: \_\_\_\_\_

Date: \_\_\_\_\_

Buyer: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Seller's Initials      Date

\_\_\_\_\_  
Property Address

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Buyer's Initials      Date



# State of Alaska Residential Real Property Transfer Disclosure Statement

## Waiver By Agreement

AS 34.70.110

Prepared in compliance with Alaska Statute (AS) 34.70.010 - 34.70.200

Legal Description: \_\_\_\_\_

Property Address/City: \_\_\_\_\_

Under AS 34.70.110, completion of this disclosure statement may be waived when transferring an interest in residential real property if the Seller and Buyer agree in writing.

Parties may wish to obtain professional advice and/or inspection of the property.

**It is recommended that the buyer read the complete State of Alaska Residential Real Property Transfer Disclosure Statement.**

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**Transferee (Buyer) Awareness Notice:** Under AS 34.70.050, Transferee (Buyer) is independently responsible for determining whether a person who has been convicted of a sex offense resides in the vicinity of the property that is the subject of the Transferee's (Buyer's) potential real estate transaction. This information is available at the following locations: Alaska State Trooper Posts, Municipal Police Departments, and on the State of Alaska, Department of Public Safety Internet site: [www.dps.state.ak.us](http://www.dps.state.ak.us).

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**Transferee (Buyer) Awareness Notice:** Under AS 34.70.050, Transferee (Buyer) is independently responsible for determining whether, in the vicinity of the property that is the subject of the transferee's potential real estate transaction, there is an agricultural facility or agricultural operation that might produce odor, fumes, dust, blowing snow, smoke, burning, vibrations, noise, insects, rodents, the operation of machinery including aircraft, and other inconveniences or discomforts as a result of lawful agricultural operations.

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By law, completion of this disclosure statement may be waived when transferring an interest in residential real property if the Transferor (Seller) and the Transferee (Buyer) agree in writing. If both parties agree to waive the requirement to complete this disclosure statement, please sign below.

**Signing this waiver does not affect other obligations for disclosure.**

Seller: \_\_\_\_\_

Date: \_\_\_\_\_

Seller: \_\_\_\_\_

Date: \_\_\_\_\_

Buyer: \_\_\_\_\_

Date: \_\_\_\_\_

Buyer: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Seller's Initials      Date

\_\_\_\_\_  
Property Address

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Buyer's Initials      Date

**From:** [Walden, Scott](#)  
**To:** [Thompson, Colette](#); [Morgan, Shellie](#);  
**Subject:** Real Estate Disclosure  
**Date:** Thursday, March 19, 2009 11:50:46 AM

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**Exemption for First Sale:** Under AS 34.70.120, the first transfer of an interest in residential real property that has never been occupied is exempt from the requirement for the Seller to complete the Disclosure Statement.

**Waiver by Agreement:** Under AS 34.70.110, completion of this disclosure statement may be waived when transferring an interest in residential real property if the Seller and Buyer agree in writing. Signing this waiver does not affect other obligations for disclosure.



## Levee System Information for Stakeholders

### *State and Community Officials*

- Map Modernization and Levee Systems
- Levee System Assessment Requirements
- Procedures for Documenting Flood Risk
- U.S. Army Corps of Engineers Participation in Levee System Assessment
- Mapping Requirements for Levee System Construction and Restoration Projects
- Useful Resources
- Information on Outreach Best Practices
- For More Information

Read general information about levee systems on the Levee System Introduction page.

### **Map Modernization and Levee Systems**

As the Federal agency that is responsible for administering the National Flood Insurance Program (NFIP), the Federal Emergency Management Agency (FEMA) identifies flood hazards, assesses flood risks, and provides appropriate flood hazard and risk information to communities nationwide. This information is provided to communities in the form of maps, called Flood Insurance Rate Maps (FIRMs). FEMA has an effort underway, called Flood Map Modernization (Map Mod), to update and modernize existing effective FIRMs for most of the United States.

Levee systems have been identified in over one-fourth of the counties that will receive modernized maps—Digital Flood Insurance Rate Maps (DFIRMs)—as part of Map Mod. Therefore, FEMA has been working, and continues to work with Federal, State, and local professionals and technical partners to determine the flood protection and risk-reduction capabilities of the Nation's levee systems and to accurately reflect the flood hazard and risk in the levee-impacted areas on the DFIRMs.

### **Levee System Assessment Requirements**

Some levee systems are shown on effective FIRMs as providing protection from the 1 percent-annual-chance flood event (sometimes called the base, or 100-year, flood). To determine whether the levee systems shown on DFIRMs still provide that level of protection, the levee system must be certified. FEMA issued Procedure Memorandum No. 34 (PM 34) to clarify the levee system certification requirements. PM 34, which clarified procedures documented in Appendix H of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, requires levee owners to obtain and submit certain data and documentation to show that the levee systems continue to provide 1-percent-annual-chance flood protection. Once FEMA has received and reviewed the required levee data and documentation, FEMA will "accredit" the levee system and will revise the affected FIRM or DFIRM

panel(s) to show the area behind the levee system as having a moderate flood risk. FEMA will label the levee-impacted area as Zone X (shaded).

If FEMA does not receive the data and documentation required to show compliance with Section 65.10, FEMA will "de-accredit" the levee system – that is, FEMA will show the levee system on the affected FIRM or DFIRM panel(s) as not providing protection from the 1-percent-annual-chance flood. FEMA will label the impacted area behind the levee system as Zone A or Zone AE, depending on whether an approximate engineering study or detailed engineering study was performed for the flooding source.

To assist community officials and levee owners with the compilation and submittal of the required levee data and documentation, FEMA developed a "how-to" checklist for floodplain managers and engineers titled *Meeting the Criteria for Accrediting Levees on NFIP Flood Maps: How-To Guide for Floodplain Managers and Engineers*.

## **Procedures for Documenting Flood Risk**

The compilation and submittal of the Section 65.10-required data and documentation can be a time-consuming process. Therefore, FEMA clarified the procedures for documenting flood risk in Procedure Memorandum No. 43 (PM 43). Under the clarified procedures, communities/levee owners will have up to 24 months to obtain and submit the required data and documentation. In the meantime, their levee system(s) will be considered provisionally accredited, and FEMA will designate most or all of the area behind the levee system as Zone X (shaded) on the DFIRM. In the interest of public safety, FEMA also will show a note clarifying the provisional nature of this zone designation on the DFIRM.

On March 16, 2007, FEMA issued a revised version of PM 43, with several attachments, to further clarify the procedures to be followed for Federal and non-Federal levee system projects that are maintenance deficient. The U.S. Army Corps of Engineers (USACE) is providing qualifying communities/levee owners with a one-time-only "maintenance deficiency correction period" of 1 year. For additional information on the revised version of PM 43, please visit the Floodplain Managers, Surveyors, Engineers, and Architects.

## **U.S. Army Corps of Engineers Participation in Levee System Assessment**

FEMA and USACE management and staff coordinate closely on levee system issues. On September 26, 2006, the USACE issued a memorandum that provides policy guidance for the inspection of levee systems in the USACE programs. The USACE memorandum helps clarify the responsibilities of USACE and FEMA staff for notifying levee owners of the condition of their levee systems. The USACE memorandum also explains the data required to credit levee systems with providing flood protection. FEMA and USACE staff collaboratively developed this memorandum and FEMA PM 43, which are intended to be companion documents to cover situations where levee systems in the USACE program are evaluated for accreditation on DFIRMs.

On January 18, 2007, the USACE issued supplemental policy guidance for the inspection of levee systems. For additional information on the USACE guidance, please visit the previously referenced



Floodplain Managers, Surveyors, Engineers, and Architects page.

## **Mapping Requirements for Levee System Construction and Restoration Projects**

In the interest of public safety, communities, State agencies, and Federal agencies sometimes construct new levee systems to address flood hazards and reduce flood risks to the people and structures in certain communities or areas within a state. In other situations, communities, State agencies, or Federal agencies will undertake a project to restore the flood protection capabilities of a levee system that had previously provided 1-percent-annual-chance flood protection, but which had been found to no longer provide this level of flood protection. FEMA has established regulatory and procedural requirements for the mapping of areas impacted by levee system construction and restoration projects.

The Levee System Construction and Restoration Projects page contains information and resources related to FEMA regulatory and procedural requirements. This page also outlines the benefits of including FEMA flood protection restoration zones and adequate progress determinations, shown as Zone AR and Zone A99, on FIRM and DFIRM panels.

## **Useful Resources**

The resources listed below will assist State and community officials in gaining a better understanding of levee systems and the flood risk in levee-impacted areas. These resources and an array of other useful FEMA, NFIP, and Map Mod resources are located in the FEMA Library.

- Living with Levee Systems: Information for Property Owners
- Requirements of 44 CFR Section 65.10: Mapping of Areas Protected by Levee Systems
- The NFIP and Levee Systems: An Overview
- The NFIP and Levee Systems: Frequently Asked Questions
- Provisionally Accredited Levees Brochure
- Levee Systems and Flood Insurance: Information for Insurance Industry Professionals
- Levee Systems and Flood Insurance: Information for Mortgage Lenders
- Acronyms and Abbreviations: Frequently Used for Levee Systems
- Glossary: Frequently Used Terms for Levee Systems

## **Information on Outreach Best Practices**

FEMA encourages State and community officials to read the Outreach Best Practice, titled Silver Jackets: Bringing Agencies Together for the Benefit of Communities, which highlights an interagency approach to increase communications between government agencies for the benefit of States and communities.

# Meeting the Criteria for Accrediting Levee Systems on NFIP Flood Maps

## How-to-Guide for Floodplain Managers and Engineers

A levee system is a flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices. A levee is a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

As part of the flood mapping process, the Department of Homeland Security, Federal Emergency Management Agency (FEMA) and its State and local mapping partners review levee system data and documentation.

It is the levee owner's or community's responsibility to provide data and documentation to demonstrate that a levee system meets National Flood Insurance Program (NFIP) requirements as described in Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations (44 CFR Section 65.10), which you may view on the FEMA Web site at [www.fema.gov/plan/prevent/fhm/lv\\_fpm.shtm](http://www.fema.gov/plan/prevent/fhm/lv_fpm.shtm).

To be recognized as providing a 1-percent-annual-chance level of flood protection on the modernized NFIP maps, called Digital Flood Insurance Rate Maps (DFIRMs), levee systems must meet *and continue to meet* the minimum

design, operation, and maintenance standards (44 CFR Section 65.10)..

To help clarify the responsibilities of community officials, levee owners, or other parties seeking recognition of a levee system identified during a study/mapping project, FEMA issued Procedure Memorandum No. 34 (PM 34), *Interim Guidance for Studies Including Levees*, on August 22, 2005. PM 34 provided clarification of the procedures provided in Appendix H of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*.

FEMA issued Revised Procedure Memorandum No. 43, *Guidelines for Identifying Provisionally Accredited Levees*, on March 16, 2007, which allows issuance of preliminary and, in some cases, effective DFIRMs while communities/levee owners compile and submit required data and documentation. FEMA issued Procedure Memorandum No. 45, *Revisions to Accredited Levee and Provisionally Accredited Levee Notations*, in April 2008 to clarify map notes for accredited and provisionally accredited levee systems.

This document provides information regarding the types of data and documentation that must be submitted for levee systems to be accredited on DFIRMs, including a checklist and an index of further resources you may wish to consult.

### COMMUNITIES WITH LEVEE SYSTEMS SHOULD KNOW:

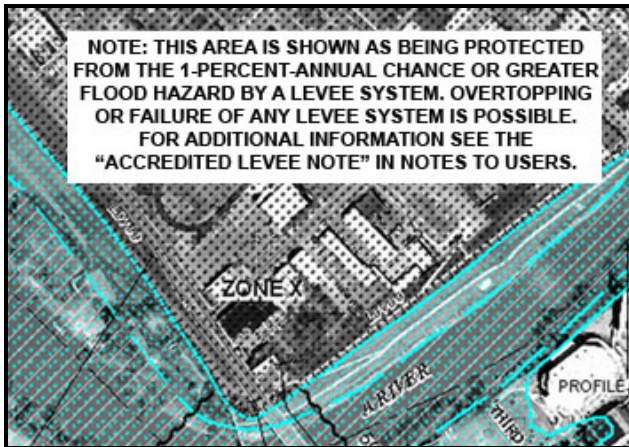
- The community and/or other party seeking recognition or continued recognition of a levee system must provide data and documentation showing that the levee system provides base (1-percent-annual-chance) flood protection for FEMA to credit the levee system with flood protection on a FIRM or DFIRM.
- Communities *must* actively participate in the levee system documentation process.
- Levee systems without sufficient data and documentation will not be credited with providing base flood protection.
- Some levee systems may qualify for the Provisionally Accredited Levee (PAL) designation.
- Guidance regarding the PAL designation and other levee issues is available at:

[www.fema.gov/plan/prevent/fhm/lv\\_fpm.shtm](http://www.fema.gov/plan/prevent/fhm/lv_fpm.shtm)



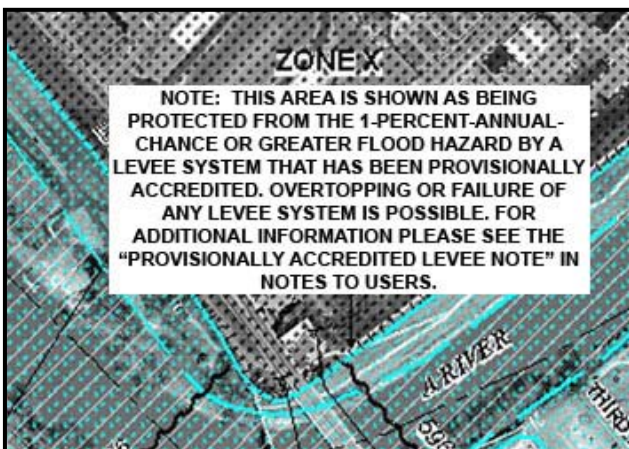
## HOW FEMA WILL MAP LEVEE SYSTEMS

FEMA mapping requirements are designed to provide the people living and working behind levee systems with accurate, up-to-date flood hazard and risk information so that they may make wise decisions to minimize damage and loss of life. FEMA does not evaluate the performance of a levee system—this is the responsibility of the levee owner. FEMA is responsible for establishing levee system evaluation and mapping standards, determining flood insurance risk zones, and reflecting these determinations on DFIRMs.



### Accredited Levee System

An accredited levee system is a system that FEMA has determined can be shown on a DFIRM as providing a 1-percent-annual-chance or greater level of flood protection. This determination is based on the submittal of data and documentation required by 44 CFR Section 65.10. The area landward of an accredited levee system is shown as a moderate-risk area, labeled Zone X (shaded), on the DFIRM except for areas of residual flooding, such as ponding areas, which will be shown as high-risk areas, called Special Flood Hazard Areas (SFHAs). Flood insurance is not mandatory in Zone X (shaded) areas, but is mandatory in SFHAs. FEMA strongly encourages flood insurance for all structures in levee-impacted areas.



### Provisionally Accredited Levee (PAL) System

The PAL designation may be used for a levee system that FEMA has previously accredited with providing 1-percent-annual-chance flood protection on an effective FIRM/DFIRM, and for which FEMA is awaiting data and/or documentation that will show the levee system is compliant with 44 CFR Section 65.10. Before FEMA will apply the PAL designation to a levee system, the community or levee owner will need to sign and return an agreement indicating the data and documentation required for compliance with 44 CFR Section 65.10 will be provided within a specified timeframe. The impacted area landward of a PAL system also is shown as a moderate-risk area, labeled Zone X (shaded). Therefore, flood insurance is not mandatory for insurable structures in the levee-impacted area; however, it is strongly encouraged by FEMA as are other protective measures.









### Levee System Not Accredited or De-accredited

If the levee system is not shown as providing 1-percent-annual-chance flood protection on an effective FIRM, the system is considered “not accredited” and the levee-impacted area is mapped as Zone AE or Zone A on a DFIRM, depending on the type of study performed for the area. If the levee system was previously shown as providing 1-percent-annual-chance flood protection on an effective FIRM or DFIRM, but does not meet the PAL requirements or is no longer eligible for the PAL designation, FEMA will de-accredit the levee system and re-map the levee-impacted area as an SFHA, labeled Zone AE or Zone A depending on the type of study performed. Flood insurance will be required for insurable structures with federally backed mortgages in SFHAs.





Design Criteria*	Section of the NFIP Regulations: 65.10(b)
<p><b>Description:</b> For levee systems to be recognized (i.e., accredited) by FEMA, evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists must be provided. The following requirements must be met:</p>	
<p><b>Checklist for Design Criteria:</b></p>	
	<p><b>Freeboard.</b> Minimum freeboard required 3 feet above the Base Flood Elevation (BFE) all along length, and an additional 1 foot within 100 feet of structures (such as bridges) or wherever the flow is restricted. Additional 0.5 foot at the upstream end of a levee. Coastal levees have special freeboard requirements (see Paragraphs 65.10(b)(1)(iii) and (iv)).</p>
	<p><b>Closures.</b> All openings must be provided with closure devices that are structural parts of the system during operation and designed according to sound engineering practice.</p>
	<p><b>Embankment Protection.</b> Engineering analyses must be submitted that demonstrate that no appreciable erosion of the levee embankment can be expected during the base flood, as a result of either currents or waves, and that anticipated erosion will not result in failure of the levee embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability.</p>
	<p><b>Embankment and Foundation Stability Analyses.</b> Engineering analyses that evaluate levee embankment stability must be submitted. The analyses provided must evaluate expected seepage during loading conditions associated with the base flood and must demonstrate that seepage into or through the levee foundation and embankment will not jeopardize embankment or foundation stability. An alternative analysis demonstrating that the levee is designed and constructed for stability against loading conditions for Case IV as defined in the U.S. Army Corps of Engineers (USACE) Engineer Manual 1110-2-1913, <i>Design and Construction of Levees</i>, (Chapter 6, Section II), may be used.</p>
	<p><b>Settlement Analyses.</b> Engineering analyses must be submitted that assess the potential and magnitude of future losses of freeboard as a result of levee settlement and demonstrate that freeboard will be maintained. This analysis must address embankment loads, compressibility of embankment soils, compressibility of foundation soils, age of the levee system, and construction compaction methods. In addition, detailed settlement analysis using procedures such as those described in USACE Engineer Manual 1110-1-1904, <i>Soil Mechanics Design— Settlement Analysis</i>, must be submitted.</p>
	<p><b>Interior Drainage.</b> An analysis must be submitted that identifies the source(s) of such flooding, the extent of the flooded area, and, if the average depth is greater than 1 foot, the water-surface elevation(s) of the base flood. This analysis must be based on the joint probability of interior and exterior flooding and the capacity of facilities (such as drainage lines and pumps) for evacuating interior floodwaters.</p>



<b>Operation Plan*</b>	<b>Paragraph 65.10(c)(1) of the NFIP Regulations</b>
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**Description:** For a levee system to be recognized (i.e., accredited), the operational criteria must be as described below. All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual, a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or when the manual for a previously recognized system is revised in any manner. All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

<b>Checklist for Operation Plan:</b>	
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<input type="checkbox"/>	<b>Flood Warning System.</b> Documentation of the flood warning system, under the jurisdiction of Federal, State, or community officials that will be used to trigger emergency operation activities; and demonstration that sufficient flood warning time exists for the completed operation of all closure structures, including necessary sealing, before floodwaters reach the base of the closure.
<input type="checkbox"/>	<b>Plan of Operation.</b> A formal plan of operation including specific actions and assignments of responsibility by individual name or title.
<input type="checkbox"/>	<b>Periodic Operation of Closures.</b> Provisions for periodic operation, at not less than one-year intervals, of the closure structure for testing and training purposes.
<input type="checkbox"/>	<b>Interior Drainage Plan.</b> See below.



<b>Interior Drainage Plan</b>	<b>Paragraph 65.10(c)(2) of the NFIP Regulations</b>
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**Description:** Interior drainage systems associated with levee systems usually include storage areas, gravity outlets, pumping stations, or a combination thereof. These drainage systems will be recognized by FEMA on NFIP maps for flood protection purposes only if the following minimum criteria are included in the operation plan.

<b>Checklist for Interior Drainage Plan:</b>	
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<input type="checkbox"/>	<b>Flood Warning System.</b> Documentation of the flood warning system, under the jurisdiction of Federal, State, or community officials that will be used to trigger emergency operation activities; and demonstration that sufficient flood warning time exists to permit activation of mechanized portions of the drainage system.
<input type="checkbox"/>	<b>Plan of Operation.</b> A formal plan of operation including specific actions and assignments of responsibility by individual name or title.



	<b>Manual Backup.</b> Provision for manual backup for the activation of automatic systems.
	<b>Periodic Inspection.</b> Provisions for periodic inspection of interior drainage systems and periodic operation of any mechanized portions for testing and training purposes. No more than 1 year shall elapse between either the inspections or the operations.
<b>Maintenance Plan</b>	<b>Paragraph 65.10(d) of the NFIP Regulations</b>

**Description:** For levee systems to be recognized as providing protection from the base flood (i.e., accredited by FEMA), the maintenance criteria must be as described herein.



**Checklist for Maintenance Plan:**

	Levee systems must be maintained in accordance with an officially adopted maintenance plan, and a copy of this plan must be provided to FEMA by the owner of the levee system when recognition is being sought or when the plan for a previously recognized system is revised in any manner.
	All maintenance activities must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance.
	This plan must document the formal procedure that ensures that the stability, height, and overall integrity of the levee and its associated structures and systems are maintained. At a minimum, the plan shall specify the maintenance activities to be performed, the frequency of their performance, and the person by name or title responsible for their performance.

**Certification Paragraph 65.10(e) of the NFIP Regulations**

**Description:** Data submitted to support that a given levee system complies with the structural requirements set forth in “Design Criteria” (Paragraphs 65.10(b)(1) through (7) of the regulations) must be certified by a Registered Professional Engineer. Also, certified “as-built” plans of the levee must be submitted. Certifications are subject to the definition given in Section 65.2 of the NFIP regulations. In lieu of these structural requirements, a Federal agency with responsibility for levee design may certify that the levee has been adequately designed and constructed to provide protection from the base flood.

**Checklist for Certification Requirement:**

	All data submitted is certified by Professional Engineer or certified by a Federal agency.
	Certified as-built levee plans are included in the submittal.

## A NOTE ABOUT FLOOD RISK AND FLOOD INSURANCE

Levee systems are designed to provide a *specific level of protection*. They can be overtopped or fail during larger flood events.

Levee systems also decay over time. They require regular maintenance and periodic upgrades to retain their level of protection. When levees do fail, they often fail catastrophically. The resulting damage, including loss of life, may be much greater than if the levee system had not been built.

For all these reasons, FEMA strongly encourages people in levee-impacted areas to understand their flood risk, know and follow evacuation procedures, and protect their property by purchasing flood insurance protection, by floodproofing, or by taking other protective measures.

## CHECKLIST INFORMATION

The checklist provided in this fact sheet is meant to assist local community officials and levee owners in gathering the data and documentation that will be required for FEMA to show a levee system as providing 1-percent-annual-chance flood protection on the community's DFIRM. Where possible, text from the actual NFIP regulations (44 CFR Section 65.10) was used.

The checklist is set up according to the appropriate paragraph of 44 CFR Section 65.10. For example, Design Criteria can be found in Paragraph 65.10(b):

Design Criteria*	Section of the NFIP Regulations: 65.10(b)
	<b>Description:</b> For levee systems to be recognized (i.e., accredited) by FEMA, evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists must be provided.

For a comprehensive description of each item in this checklist, please see Appendix H of the *Guidelines and Specifications for Flood Hazard Mapping Partners*. Locations of this resource, and other useful resources, are provided below.

## INDEX OF RESOURCES

This fact sheet is accessible, along with an assortment of other levee-related resources, through a dedicated portion of the FEMA Web site. The gateway to the FEMA-provided levee information, which is organized by stakeholder group to assist levee owners, community officials, and other stakeholders, is [www.fema.gov/plan/prevent/fhm/lv\\_intro.shtm](http://www.fema.gov/plan/prevent/fhm/lv_intro.shtm). The FEMA resources referenced in this fact sheet, listed below, are directly accessible through [www.fema.gov/plan/prevent/fhm/lv\\_fpm.shtm](http://www.fema.gov/plan/prevent/fhm/lv_fpm.shtm).

- Procedure Memorandum No. 34, *Interim Guidance for Studies Including Levees*
- Revised Procedure Memorandum No. 43, *Guidelines for Identifying Provisionally Accredited Levees*.
- Procedure Memorandum No. 45, *Revisions to Accredited Levee and Provisionally Accredited Levee Notations*
- Appendix H, "Mapping of Areas Protected by Levee Systems," of *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- Section 65.10. *Mapping of Areas Protected by Levee Systems* of the NFIP regulations.

Flood insurance information can be found at [www.fema.gov/business/nfip](http://www.fema.gov/business/nfip) or on the NFIP's consumer Web site, [www.FloodSmart.gov](http://www.FloodSmart.gov).

Links to the USACE Web site also are provided on the levee-dedicated pages; the resources discussed in this fact sheet are accessible through the USACE Web page at [www.usace.army.mil/publications/eng-manuals](http://www.usace.army.mil/publications/eng-manuals).