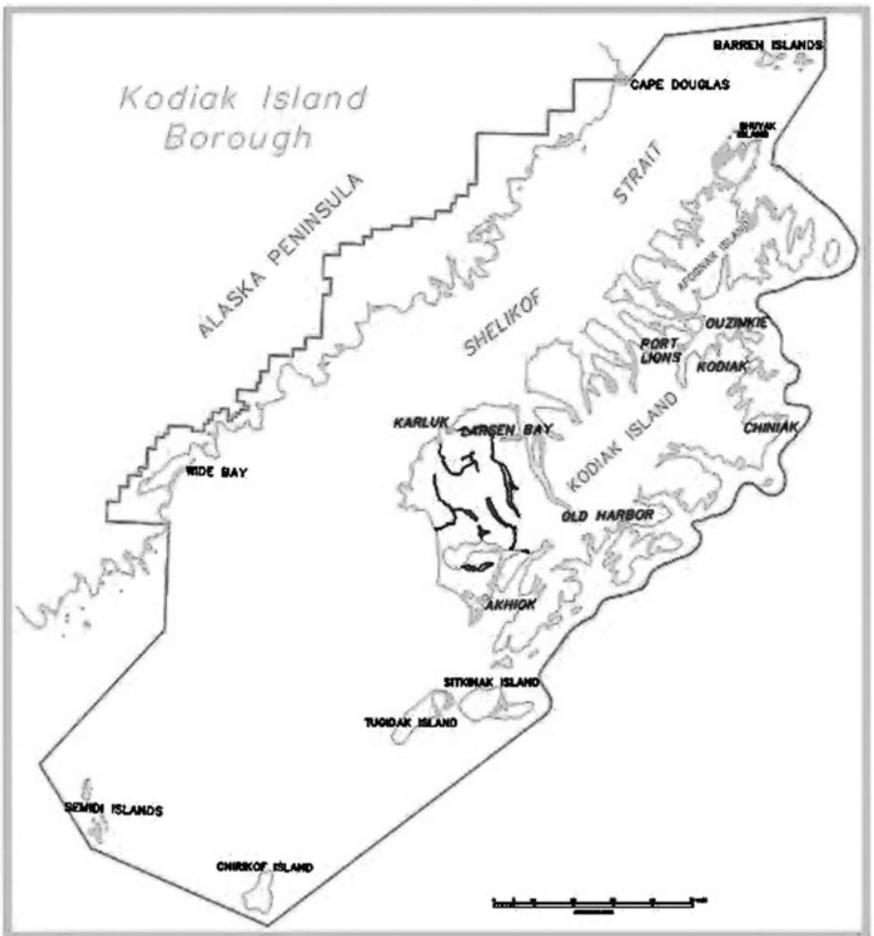


Kodiak Area Emergency Preparedness Guide



Natural disasters have shaped Kodiak's history and will continue to do so. Approximately 11 percent of the world's earthquakes occur in Alaska. Of the 10 largest earthquakes in the world since 1904, three occurred in Alaska. The vast majority of the large earthquakes in Alaska occur in the Kenai Peninsula, the Alaska Peninsula and the Aleutian Islands regions.

The Kodiak Island Archipelago is located downwind from several of Alaska's 39 active volcanoes. Dig a hole anywhere on the north end of Kodiak Island and you will find layers of white volcanic ash -- tangible reminders of the volcanic eruptions that have blanketed the landscape on occasion throughout the millennia.

Kodiak also is vulnerable to man-made disasters such as the 1989 Exxon Valdez oil spill because it lies near international shipping lanes. In the Spring of 1989, the oil tanker Exxon Valdez ran aground and spilled 11 million gallons of crude oil in Prince William Sound. Ocean currents carried the oil south and deposited the viscous oil over miles of pristine coastline throughout the Kodiak Archipelago.

The following information will help your family be prepared for such events.

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Emergency Warnings and Notifications

Siren Alert Warning System (SAWS)

Kodiak Road System, Chiniak and U.S. Coast Guard Base

- **SAWS Test Signal** - Kodiak police department activates a SAWS test signal (a wavering tone lasting 30 seconds) every Wednesday at 2 p.m. to make sure sirens are in working order.
- **USCG SAWS** - City dispatch does not set off USCG sirens which are on a separate, USCG controlled, warning system.
- **Tsunami Warning Signal** - Kodiak police department generally activates a tsunami warning signal (a wavering tone for a 3 minute repeating period) when the National Warning System broadcasts a tsunami warning for the Kodiak region. The Emergency Services Director, using established criteria, also directs the department to activate the tsunami warning signal if a local earthquake is strong enough or close enough to trigger a tsunami. **If a tsunami warning signal sounds, move to higher ground and away from the coast immediately if you are in a low lying area.**

Some types of earthquakes may not trigger a warning from the National Warning System and the Tsunami warning signals may not be sounded. These kinds of earthquakes usually will produce strong shaking lasting 15 seconds or longer. This shaking may be the only warning for a tsunami generated by these types of earthquakes. **If you have trouble standing during an earthquake or the earthquake lasts 15 seconds or longer, this may be your only warning - move to higher ground immediately. Do not wait for a tsunami signal to evacuate.** (See **Tsunamis**, page 9 for more information)

- **“All Clear” Announcement** – the Kodiak Area Siren Alert Warning System does not sound an “All Clear” signal. Stay tuned to designated emergency radio or TV stations or marine radio channels for the “All Clear” announcement. If a strong earthquake produces a tsunami, it usually will include several waves lasting several hours or more. Do not return to low-lying coastal areas until the wave action has ceased for at least several hours.

Kodiak Villages

- **Tsunami Warning Signal** – All six villages in the Kodiak Island Archipelago have siren alert warning systems. If time allows, the Alaska State Troopers will notify all villages to sound the sirens. **If a tsunami warning signal sounds, move to higher ground and away from the coast as soon as possible.**
- **If you have trouble standing during an earthquake or the earthquake lasts 15 seconds or longer, this may be your only warning – move to higher ground immediately. Do not wait for a tsunami signal to evacuate. Locally generated tsunamis may reach the coast within a few minutes.**

Hazardous Chemical Release Signal

The hazardous chemical release signal activated by the police department for the City of Kodiak and the immediate Kodiak Island Borough road system resembles a telephone busy signal. If heard for more than two minutes, go inside a building, tune to your emergency radio or TV station or marine radio channel and wait for further information. (See page 15 to learn more about what to do in the event of a hazardous chemical release.)

Emergency Radio and Television Broadcast Stations

Do not use the phone during a disaster. Lines must be kept open for emergency personnel. Stay tuned to the following radio or television stations or marine radio channels for instructions:

On the Road System

Radio

KMXT PUBLIC RADIO-FM	100.1 FM
KVOK-AM/ KRXX-FM	560AM/101.1FM

Television

KMXT	Channel 9 Channel 2 (for Island Cable Co. customers in the Bell's Flats Women's Bay Area)
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Marine Radio Channels

Kodiak Harbormaster uses radio call sign KXE279 and stands by on:

- VHF Radio Channels 12 and 16

U.S. Coast Guard stands by on:

- VHF Radio Channel 16
- Single Side Band Radio Channel 2182

NOAA Weather Radios

Battery operated or AC powered Marine Weather Forecast radios for sale at retail stores also pick up tsunami warning signals and continuously up-date signals.

Kodiak Villages

Kodiak's six villages, located in remote areas off the road system, are accessible only by boat or plane. Villages have phone service, but residents still often use agreed-upon VHF or CB radio channels to broadcast general information to the community, the local fishing fleet and air taxis flying in the area.

AKHIOK

KMXT- FM Radio	100.1FM
VHF Radio	Channel 79

KARLUK

KMXT-FM Radio	100.1FM
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LARSEN BAY

KMXT-FM Radio	100.1FM
VHF Radio	Channel 69
SSB Radio	4125

OLD HARBOR

KMXT-FM Radio	100.1FM
VHF Radio	Channel 14

OUZINKIE

KMXT-FM Radio	100.1FM
KVOK-AM	560 AM
VHF Radio	Channel 6
CB Radio	Channel 11

PORT LIONS

KMXT-FM Radio	100.1FM
KVOK-AM	560 AM
VHF Radio	Channel 6

Earthquakes

Why Earthquakes Occur

Plate Tectonics – Ever-changing Planet Earth

If the Earth were the size of an egg, its outermost layer would be about the thickness of an eggshell. This shell is broken into a number of pieces called plates. These plates are at least 40 miles thick and can range from only a few hundred miles wide to many thousands of miles in width.

A plate may contain oceans, continents, or both. The plates move slowly relative to each other at rates of one to four inches per year. Most earthquakes occur along the boundaries where plates separate from each other, slide under or past one another, or collide.

Why Kodiak Has Earthquakes

Kodiak Island is located in an area on the North American Plate where the Pacific Plate is slipping under the North American Plate. The region where the two plates are sliding past each other is called a subduction zone, which is off the coast of the Kodiak Island group. The magnitude 9.2 earthquake of 1964 occurred along the subduction zone off Kodiak Island. The earthquake triggered a series of tsunami waves, which demolished downtown Kodiak. This event provides a relatively recent example of the very real threat posed by earthquake activity activity in the Kodiak Island region.

According to recent geological studies, an earthquake of this magnitude along the subduction zone occurs every 500 years or so. However, several faults related to the subduction zone are located closer to the coastline of the Kodiak Island Archipelago and across the island. These are active faults, capable of generating magnitude 7 and 8 earthquakes and triggering swift-moving local tsunamis.

Actual ground movement during an earthquake is seldom the direct cause of injury or death. Most casualties result from collapsing buildings and falling objects and debris. Earthquakes also may cause fires, rupture utility lines, and trigger landslides. Kodiak Island's steep topography makes the area especially susceptible to landslides. (See **Landslides**, page 15) Although an earthquake is a very frightening experience, you can take a number of actions to reduce the hazards.

Before an Earthquake Occurs - Prepare

A well prepared home is the best shelter.

Strengthening Your Home

Most earthquake damage to wood-frame houses is preventable. If you know the basic carpentry skills, you can make the necessary changes to strengthen the structure. Bolting the wood frame every 3 to 4 feet along the foundation of the building, for example, can significantly reduce earthquake damage. Reinforcing the cripple walls between the foundation and the first floor of a wood-frame house also can reduce damage.

The best foundation is a continuous perimeter foundation. You also can strengthen the foundation of a house built on pilings or posts for a relatively low cost by installing bracing between the posts or pilings. A bracing system provides a minimum resistance to lateral forces for your house, porches and decks. But post or piling with bracing should be considered only a temporary solution until you can install a permanent, contiguous poured-in-place foundation system.

Securing Wood Stoves

Freestanding wood burning stoves pose additional earthquake hazards. Fire codes require stoves be unsupported on all four sides, which makes them vulnerable to sliding or overturning in an earthquake. If the stove tips and/or separates from the stovepipe, cinders or sparks may escape and cause the house to catch on fire.

To reduce the potential hazard, anchor the stove to the floor and secure the stove pipe sections. **But it is important that the anchors or braces do not conduct heat from the stove and create a fire hazard.**

To install the many types of wood stoves on the market, follow these recommendations:

- ❖ Use bricks and mortar to anchor stoves sitting on a brick hearth.
- ❖ Install approved wood stove units in mobile homes, which come with pre-drilled holes in the pedestals or legs that can be attached to the under-lying floor framing.
- ❖ Anchor stoves sitting on a concrete slab directly to the concrete.
- ❖ Secure each stovepipe segment together and anchor stovepipes to the flue exit.

Getting the Work Done

If you want to hire someone to do the job, you should contact a licensed professional about making changes to your home or place of work. Contact the Kodiak City/Borough Building Permit and Inspection Department at 710 Mill Bay Road, 486-8070, to modify details to fit local building codes.

Scrutinizing Your Home

- ❖ Check for potential fire risks: Bolt down or build strong support for oil furnaces, water heaters, gas appliances, propane bottles, and fuel tanks.
- ❖ Use flexible utility connections.
- ❖ Know where and how to shut off electricity, gas, water and heating fuel.
- ❖ Securely fasten shelves to walls and place large heavy objects on low shelves.
- ❖ Bolt down or anchor top-heavy furniture.
- ❖ Secure hanging light fixtures and hanging plants.
- ❖ Store bottled goods, glass and china on low shelves.

Renting Homes, Office or Buildings

Renters have less control over their buildings than homeowners. But you can protect yourself and loved ones. When looking for housing:

- ❖ Remember that apartment buildings must meet the same codes and structural requirements as houses.
- ❖ Avoid rental units made of unreinforced masonry or those with large openings in the lower floor such as garage doors and building on stilts.
- ❖ Consider the safety of attached structures such as stairways and balconies, which can break during the earthquakes.
- ❖ Ask the landlord when the building was constructed.
- ❖ Ask the landlord if seismic retrofitting has been done.
- ❖ Ask the landlord if water heaters have been securely strapped to wall studs.
- ❖ Ask the landlord if you have permission to bolt heavy furniture to the walls.

Living in Mobile Homes

Mobile homes and modular buildings not attached to permanent foundations can slide off the foundations if not properly secured to resist horizontal motion.

Sending Your Children to Schools

Ask school officials:

- ❖ Have buildings been recently evaluated for seismic safety?
- ❖ Are hazardous materials properly stored?
- ❖ How frequently are earthquake emergency drills held? When was the last one held?
- ❖ Have non-structural items such as hanging light fixtures, book cases, etc., been secured to reduce risk of earthquake damage or injury?
- ❖ What is the plan in place to care for my children after an earthquake?

During an Earthquake – Stay Calm

- ❖ **If indoors**, *duck and take cover* under a heavy desk or table or stand against an inside wall. *Hold* the desk or table so it doesn't move away from you. Stay away from glass. Douse all fires. Don't use matches, candles or other open flames either during or after the tremor, because of possible gas leaks.
- ❖ **If in a crowded building**, DO NOT rush for a doorway because many other people may do the same. Stay away from stairwells and elevators. If you must leave the building, choose your exit carefully.
- ❖ **If outdoors**, move away from buildings, trees and utility wires. The greatest danger from falling debris is just outside doorways and close to outer walls.
- ❖ **If in a moving vehicle**, stop as quickly as safety allows, but not under a bridge or near buildings. Remain in the vehicle. The truck, car or bus may rock violently on its springs, but it is a good place to stay until the shaking stops. Watch for fallen objects, downed electrical wires or undermined roads when you resume driving.

After an Earthquake – Remain Vigilant

- ❖ **Be prepared to evacuate low-lying areas** (See next section). An earthquake in Kodiak that is strong enough to make it difficult to stand or that lasts longer than 15 seconds is an automatic tsunami warning to evacuate low-lying areas after shaking stops.
- ❖ **Be prepared for aftershocks.** Although most are smaller than the main shock, some aftershocks may be larger enough to cause additional damage. Stay out of severely damaged buildings because aftershocks can cause them to collapse.
- ❖ **Check for Injuries.** Do not move seriously injured persons unless they are in immediate danger of further injury.
- ❖ **Turn on your radio or television** for latest emergency bulletins and instructions from local authorities.
- ❖ **Check utility lines.** Shaking may disconnect or damage gas, electric, heating fuel, or water lines. Do not touch downed power lines or objects touched by downed lines. Shut off the main switches and valves if they are damaged or disconnected. If you smell gas, shut off the main valve, open windows, leave the building immediately and report leakage to the authorities. Do not re-enter the building until a utility official says it's safe.
- ❖ **Check chimneys for damage.** Unnoticed cracks can cause fires. Approach chimneys with caution because they may topple or collapse.
- ❖ **Clean up** spilled medicines and other potentially harmful materials immediately.
- ❖ **Check food items** in your refrigerator for spoilage if power has been off. Do not eat or drink from open containers near shattered glass.

After an Earthquake – Attend to you and your family’s mental health

The primary concern for most of us following an earthquake is the care and safety of our family members. To alleviate this worry, have a family emergency plan in place. (See **Comprehensive Family Plan**, page 20)

During the days and weeks after an earthquake, you and your family may experience a variety of reactions. Use the following suggestions to help you and your family recover from the experience:

- ❖ Talk to other people about your experiences, reactions, feelings, etc.
- ❖ Take it easy – don’t push yourself.
- ❖ Plan extra time to do the usual tasks.
- ❖ Recognize that you may be running on adrenaline.
- ❖ Rest – plan to let yourself sleep uninterrupted for a long period of time.
- ❖ Check to see if your decision-making ability has been impaired and ask others to give you feedback on how you are coping.
- ❖ Let others do their part – you aren’t the only responsible person.
- ❖ Discuss your current emergency plan with significant others and prepare for future crises.
- ❖ Remember to eat “smart”. Eat small meals with protein and carbohydrates with lots of liquids. Avoid junk food, excessive sugar, alcohol, and caffeine.
- ❖ Exercise.
- ❖ Accept whatever feelings you and loved ones have. If sleeping with a flashlight makes you or your child feel better, then keep one near your bed.
- ❖ Recognize that people are all on different timetables, so others may not react the same as you or share your feelings.

***Note:** If you have been involved in post-earthquake tasks, your reactions may be delayed until your activity level slows down.*

Tsunamis (Tidal Waves)

Tsunamis (soo-nah-mees), also called “tidal waves”, can be triggered from large offshore earthquakes or localized submarine landslides. The most serious threat of tsunamis in Kodiak is from geologic disturbances in Alaska Pacific waters.

In 1946, a strong earthquake centered in the eastern Aleutian Islands generated a tsunami that destroyed the nearby Scotch Cap lighthouse on Unimak Island. This wave was nearly 100 feet in height.

A similar wave from a strong local earthquake located immediately offshore of Kodiak could strike our coastline with far less warning than tsunamis from other Pacific regions. Local tsunamis can arrive onshore a few minutes after strong earthquake shaking and not be detected by the Pacific Tsunami Warning System. The strong shaking, lasting 15 seconds or more, may be the only warning for this kind of tsunami.

If you are along the coast and an earthquake centered nearby generates a tsunami, move to higher ground and away from the coast immediately. Do not wait for an official warning because there won't be time to broadcast one before the wave rushes onshore.

Tsunamis commonly include many waves that arrive on the coastline at intervals of as much as an hour apart. In 1964 about a dozen waves over more than 12 hours struck Kodiak following the great earthquake. Do not return to low-lying coastal areas until officials make an “All Clear” announcement or until tide action has returned to normal for at least several hours.

Siren Alert Warning System

Kodiak Road System, Chiniak and U.S. Coast Guard Base

- **SAWS Test Signal** - Kodiak police department activates a SAWS test signal (a wavering tone lasting 30 seconds) every Wednesday at 2 p.m. to make sure sirens are in working order.
- **USCG SAWS** - City dispatch does not set off USCG sirens which are on a separate, USCG controlled, warning system.
- **Tsunami Warning Signal** - Kodiak police department generally activates a tsunami warning signal (a wavering tone for a 3 minute repeating period) when the National Warning System broadcasts a tsunami warning for the Kodiak region. The Emergency Services Coordinator, using established criteria, also directs the department to activate the tsunami warning signal if a local earthquake could result in a tsunami.
- **If a tsunami warning signal sounds, move to higher ground and away from the coast immediately if you are in a low lying area.**
- **If you have trouble standing during an earthquake or the earthquake lasts 15 seconds or longer, this may be your only warning - move to higher ground immediately if you are in a low-lying area. Do not wait for a tsunami signal to evacuate.**

Kodiak Villages

- **Tsunami Warning Signal** – All six villages in the Kodiak Island Archipelago have siren alert warning systems. If time allows, the Alaska State Troopers will notify all villages to sound the sirens. **If a tsunami warning signal sounds, move to higher ground and away from the coast immediately.**
- **If you have trouble standing during an earthquake or the earthquake lasts 15 seconds or longer, this may be your only warning – move to higher ground immediately. Do not wait for a tsunami signal to evacuate.**
- **“All Clear” Announcement** – the Kodiak Area Siren Alert Warning System does not sound an “All Clear” signal. Stay tuned to designated emergency radio or TV stations or marine radio channels for the “All Clear” announcement.

Do not return to low-lying coastal areas until normal tide action has returned for several hours.

Before a Tsunami – Review Safety Rules

When you hear a tsunami siren or feel a strong earthquake that lasts more than 15 seconds or that makes it difficult to stand up, you must assume a tsunami is on its way and immediately evacuate to higher ground. Your local emergency services organization, the police, firefighters, the harbormaster, and other participants in the tsunami warning system, will expect you to follow their directions. History has shown that those who have ignored the tsunami signals or did not heed official advice have lost their lives. If you remember the following facts and cooperate with emergency service officials, you will help yourself and the community better survive the effects of a tsunami:

- **An earthquake in Kodiak that makes it difficult to stand up or that last longer than 15 seconds is a natural warning of possible immediate danger. Keep calm and quickly move to higher ground away from the coast.**
- All earthquakes do not cause tsunamis, but many do. When you hear that an earthquake has occurred in the ocean or coastline regions, prepare for a tsunami emergency. Do not stay in low-lying coastal areas after a local quake.
- Stay tuned to your radio or television station during a tsunami emergency. Bulletins issued through emergency agencies and National Weather Service offices can save your life.
- A tsunami is not a single wave, but a series of waves. Stay out of danger areas until local officials issue an “All Clear” notice.
- A noticeable rise or fall of coastal water can herald an approaching tsunami. This is nature’s tsunami warning and you should head for higher ground as soon as you notice an unusual change in the tide level.
- A small tsunami at one beach can be a giant wave a few miles away. Don’t let the modest size of one wave make you lost respect for all tsunamis.

- Tsunami waves in a series of waves are not all the same size. Commonly the early waves are much smaller than the later waves in the series.
- ***Never go down to the beach to watch for a tsunami. When you can see the wave, you are too close to escape.***
- The Tsunami Warning System does not issue false alarms. When an ocean-wide warning is issued, a tsunami exists. When a regional warning is issued, a tsunami probably exists.
- All tsunamis – like hurricanes – are potentially dangerous, even though they may not damage every coastline they strike.
- Tsunamis visit every coastline in the Pacific sooner or later. Warnings apply to you if you live in any Pacific coastal area.

Unless otherwise determined by emergency coordination officials, potential danger areas for tsunamis of local origin are areas less than 100 feet above sea level and within one mile of the coast. Potential danger areas for tsunamis from distant regions are areas less than 50 feet above sea level and within one mile of the coast.

During a Tsunami Event – Go to Sites, Shelter or High Ground

Note: During an evacuation, public school students should remain in their classrooms with teachers and other school staff, who are trained in emergency preparedness procedures. Kodiak schools are part of the overall shelter management plan for the community. Working with the American Red Cross, schools are designated community shelters in the event residential housing is uninhabitable. Kodiak High School has limited portable emergency power and can feed the Kodiak population for 72 hours

- **City of Kodiak** – Kodiak High School is the tsunami evacuation center for people leaving low-lying areas less than 100 feet above sea level. The school may also serve as a shelter if your house is uninhabitable.
- **Womens Bay Area/Bell’s Flats Area** – Residents in low-lying areas should evacuate to high ground behind Bell’s Flats. Womens Bay Fire Hall is the tsunami shelter site if your house is uninhabitable.
- **U.S. Coast Guard Base** – Personnel in low-lying areas should evacuate to designated high ground areas.
- **Monashka Bay/Bayside Fire District Area** – Residents in low-lying areas should evacuate to higher ground. North Star Elementary School is the tsunami shelter site if your house is uninhabitable.
- **Kodiak Villages** – Residents should evacuate to higher ground immediately. Village schools will serve as long-term shelters after the danger of tsunami and water levels have subsided if your house is uninhabitable. Village tsunami shelters are:

- Akhiok Tsunami Shelter
- Chiniak School or Chiniak Tsunami Shelter
- Karluk Community Building
- Larsen Bay Tsunami Shelter
- Old Harbor Clinic
- Ouzinkie Tsunami Shelter
- Port Lions School

During a Tsunami Vessel Evacuation – Judge risks before heading to deeper water

In water greater than 100 fathoms deep, tsunami waves are not dangerous. However, boat owners must be sure to reach water 100 fathoms deep before the arrival of the tsunami. Plan what you would do with your boat well before a tsunami event occurs.

In Port

In deep water, greater than 100 fathoms, tsunami waves are not dangerous. But in shallow water, they can be very destructive. Boats moored in port or in the Near Island or Woody Island channels are not safe because extremely strong currents occur even during a small tsunami wave. But the attempt to save a boat in port or shallow water is a very risky operation.

If a tsunami warning has been issued and residents are evacuating low-lying coastal areas, you should seriously consider weather conditions, seaworthiness of your vessel, the estimated arrival time of the tsunami, and the time and inconvenience of moving your boat before proceeding.

At Sea

If your boat is in shallow water, where large currents and waves may form, you should head for deep water, 100 fathoms or greater. The period of tsunami wave action can last several hours. Remain in deep water until all significant wave or tide action has ceased for at least several hours and official issue an “All Clear” announcement before returning to port. Listen for bulletins from the U.S. Coast Guard on Single Side Band Radio Channel 2182 or VHF Channel 16 and the Kodiak Harbormaster on VHF Radio Channel 12.

Volcanoes/Ash Fall

Volcanoes are eruptions from earth's interior, which can produce lava flows or explosions that spew rock, gases, ash and other debris. The likelihood of Kodiak residents experiencing the effects of a volcanic eruption is high. Kodiak is located adjacent to the famed "Pacific Ring of Fire", a ring of volcanoes encircling the Pacific Ocean. In the Kodiak region, the "Ring of Fire" extends from the Kenai Peninsula, to the north of the Kodiak Island Archipelago, and along the Alaska Peninsula and the Aleutian Chain.

Since 1700, at least 41 volcanoes in Alaska have erupted, some of these as many as 25 times. The Alaska Peninsula, Kenai Peninsula, Cook Inlet and Kodiak Island regions are the most likely areas to be covered with volcanic ash. The hazards Kodiak faces are primarily from secondary results, such as ash clouds, gases, corrosive rain and associated earthquakes and tsunamis. In 1912, for example, the Katmai/Novarupta volcanic eruption on the Alaska Peninsula covered much of the Kodiak region in six feet of ash.

Volcanic ash is pulverized rock from a volcanic explosion. Fresh volcanic ash can be harsh, acidic, gritty and sulfur-smelling. Fine ash is extremely slippery, which can create driving and walking hazards. Heavy ash fall can reduce sunlight, clog waterways, sewer plants and damage machinery. The thick ash layer from the Katmai/Novarupta volcanic eruption in 1912 blocked out the sun for three days in Kodiak and eventually choked streams and killed vegetation.

Before an Ash Fall – Be Prepared

In addition to a first aid kit and survival equipment, you should have on hand:

- ✓ Approved dust/mist respirators for family members in your home disaster kit.
- ✓ Dust/mist respirators for your family in your vehicle disaster kit.
- ✓ Prescription glasses on hand to replace contact lenses.
- ✓ Extra air filters for your vehicles.
- ✓ Extra windshield washer fluid for your vehicle.
- ✓ Extra pair of windshield wiper blades for your vehicles.
- ✓ Large plastic bags to protect your office equipment.

During an Ash Fall – Stay Put

- ✓ Stay indoors, if possible.
- ✓ Do not drive unless absolutely necessary.
- ✓ Wear respirators when outdoors.
- ✓ Keep children indoors.
- ✓ Leave older children at school, unless school officials tell you to pick them up.
- ✓ Keep pets indoors.

- ✓ Get clean water to livestock as soon as possible.
- ✓ Minimize exertion to reduce inhaling ash.
- ✓ Close doors, windows and dampers.
- ✓ Don't burn wood stoves or fireplaces.
- ✓ Plug draft sources.
- ✓ Don't operate exhaust fans or clothes dryers.
- ✓ Drive slowly and follow far behind other vehicles – ash is slippery.
- ✓ When driving, use washer liquid when using wipers – ash is abrasive.
- ✓ Drive with an extra air filter and change the filter when your car loses power.
- ✓ Cover and don't operate stereos and other sensitive, non-essential equipment, including computers, copiers and fax machines.
- ✓ Store computer disks and CDs in sealed bags or containers.
- ✓ Vacuum, rather than wipe up, ash from furniture, carpets, etc., because ash will scratch.
- ✓ Brush, shake and presoak laundry. Use extra water and detergent, but not hand soap, because it will gum up.

After and Ash Fall – Proceed Cautiously

- ✓ Wear a respirator during ash cleanup.
- ✓ Wear goggles for eye protection.
- ✓ Sweep or shovel heavy accumulations of ash from flat or low-pitched roofs and rain gutters, because the weight of the ash can cause structural damage.
- ✓ Mow lawns when damp and bag lawn clippings to reduce dust.
- ✓ Limit children and pet outdoor activities until ash dust is gone.
- ✓ Change oil and oil filter in your vehicles.
- ✓ Change the air filters in your vehicles and the air filter in your home furnace.
- ✓ Wash your vehicles thoroughly with water to remove all ash.
- ✓ Remove protective covers from office equipment only after all ash is cleaned up.

Landslides

Landslides – masses of sliding mud or rocks – are common to the Kodiak region. Frequent earthquakes, cycles of freezing and thawing temperatures, heavy rains and steep topography contribute to landslide hazards, especially along coastal roads and in hillside residential areas. Landslides, particularly in areas along Rezanof Drive and the Chiniak Highway, can block roadways, damage vehicles and knock down power lines.

In 1991, a landslide in a residential area on Pillar Mountain caused the evacuation of 50 homes and 150 people. More recently, smaller landslides have closed roads, cutting off downtown Kodiak from the state airport, the Coast Guard base, the Womens Bay/Bell's Flats area and beyond.

When a landslide Occurs – Listen Up

- If a landslide occurs in your neighborhood, evacuate your home or workplace immediately.
- Call 911 to notify emergency service personnel of the landslide, any injuries or potential danger.
- Tune to your local radio or TV stations for information.
- Follow emergency service personnel directions and advice.

Hazardous Chemical Releases

Hazardous chemical or material releases or spills occur either at the site where chemicals – ammonia, chlorine, fertilizers, acids, crude oil, diesel, gasoline, propane, home heating fuel and jet fuel – are stored for use and retail sale or during shipping and transporting via ocean-going vessels, trucks and planes.

The 1989 Exxon Valdez oil spill, which contaminated hundreds of miles of Southcentral Alaska's marine environment, is a recent example of the devastation and disruption that can occur when hazardous materials are mishandled. Hazardous spills and releases also can occur in conjunction with natural disasters such as earthquakes and landslides.

But chlorine and ammonia, the most dangerous chemicals used and transported in Kodiak, present the greatest threat to life and health if released accidentally into the air.

Ammonia gas is used in Kodiak's fish processing plants for refrigeration. If released, it can be extremely irritating to the eyes, airways and skin. If inhaled, you may stop breathing and die.

Chlorine is a greenish-yellow gas with a pungent, suffocating odor. It reacts explosively when combined with other common chemicals. Contact with chlorine causes burns to skin and eyes. If inhaled, this poisonous gas can be fatal.

Hazardous Chemical Release Signal

The hazardous chemical release signal is a loud air horn signal resembling a telephone "busy signal". If sounded for more than 2 minutes, seek shelter indoors.

Shelter-in-Place

Shelter-in-Place is a personal protection program adopted by the Kodiak Emergency Services Organization and the Kodiak Island Borough School District, which outlines a plan for residents and students to follow in the event of a chemical release.

It is difficult to outrun the potentially rapid spread of a chemical product that is dispersed through the air. Quickly following the Shelter-in-Place procedures below will help protect you and your family:

1. Move quickly inside.
2. Close all doors and windows.
3. Move to a smaller, interior room the house or building.
4. Shut down all ventilation systems that move air in, out or through the building.
5. Seal all windows, doors, heating vents and the like with plastic sheeting and secure with duct tape.
6. Tune to emergency radio or television station broadcasts to listen for further instructions concerning the chemical emergency.

Does Shelter-in-Place really work?

Yes. During the 1992 Gulf War, Israeli citizens used Shelter-in-Place techniques to protect themselves against chemical weapons threats. Alaska houses are especially suited for Shelter-in-Place because most are tightly constructed and well insulated for cold weather protection. The techniques are easily and quickly accomplished so your pre-selected room can be sealed from a chemical emergency.

Why not evacuate?

Shelter-in-Place can protect you from high levels of ammonia and chlorine until winds disperse the chemicals. Evacuation may be an option, but it often is more time consuming. And, with Kodiak's limited road system, evacuation routes could quickly become congested, which would increase your chances of being exposed to the airborne chemical. If the chemical release follows a natural disaster such as an earthquake or tsunami, evacuation routes also may be blocked. Local emergency officials will decide whether residents should evacuate or use Shelter-in-Place.

Are children in school protected?

Kodiak Island Borough School District teachers, administrators and support staff are trained in Shelter-in-Place procedures. These are designed to ensure your children will be safe during a chemical emergency. It is natural to want to take your children out of school, but you may expose yourself and your children to the hazard by doing so. Talk with school officials to assure yourself that Shelter-in-Place procedures are in place at your children's schools.

When should you Shelter-in-Place?

If you hear the Hazardous Chemicals Release signal for more than two minutes, go inside and turn on your radio to find out what you should do. Or, if you are outside and smell a strong odor, go inside and call 911 and begin Shelter-in-Place procedures while you listen to the radio or local emergency TV station for information.

What should you do if you smell ammonia, chlorine or some other odd odor?

Move away from the source as quickly as possible and then call 911 to report the chemical emergency.

What should you do if you are in a vehicle during a chemical release?

Drive away from the direction the release is moving. If that is not possible, stay in the vehicle and close all windows, fresh air vents, heating and air conditioning systems. Turn on your radio and tune to local radio stations for chemical hazard announcements.

Petroleum Spills

In the wake of the 1989 Exxon Valdez oil spill, Kodiak has learned much about oil spill protection, preparedness and prevention. Community members have worked with local and state officials and oil industry representatives since the 1989 disaster to improve oil-shipping and handling practices.

Kodiak, which ranks annually among the top three largest fishing ports on the West Coast, also experiences its share of petroleum product mishaps from gas, diesel fuel and jet fuel spills along its busy waterfront. Improved cleanup plans are now in place. Triggered by the Exxon Valdez spill and expanded to respond to all petroleum product mishaps throughout the Kodiak archipelago, detailed petroleum spill response and protection strategies for sensitive geographic areas have been developed by the Department of Environmental Conservation, the U.S. Coast Guard, and the Kodiak Island Borough.

Specific response plans and protection equipment, including boom and sorbent pads, now are situated in strategic sites in town, in villages, and in other geographically sensitive areas through the Kodiak region. Planning ahead, Kodiak stands ready to respond quickly to most any petroleum product spill on land or in the water in the Kodiak region.

But cleanup plans, no matter how thorough, still depend on vigilant individuals like you to be of any use. Follow the general guidelines below to help protect and preserve Kodiak's pristine waters and wilderness areas:

- **If you smell fuel or see sheen or emulsion** (foamy appearance from oil mixing with water) from a gas, heating fuel or diesel spill, immediately shut off all potential sources of combustion.
- **Use a sorbent pad** immediately to mop up a small petroleum product leak or spill to prevent further contamination.
- State law requires you to notify the state about **any** amount of spilled petroleum product. Immediately call one of the agencies below:

Department of Environmental Conservation
(Any spill or chemical release)
1-907-269-7500 (Business hours)
1-800-478-9300 (Evenings,
weekends and holidays)

National Marine Safety Response Center
(Ocean spills)
1-800-424-8802 (24-hour phone
number)

U.S. Coast Guard Marine Safety
Detachment Center
(Ocean spills)
907-486-5918

Pandemic Influenza

A pandemic is a global outbreak of a disease. An influenza pandemic occurs when a new influenza virus emerges for which there is little or no immunity in the human population, it begins to cause serious illness, and then spreads easily from person-to-person worldwide.

A pandemic is likely to be a prolonged and widespread outbreak, which could require temporary changes in how we operate in many areas of our society, such as schools, businesses, churches, transportation and public services.

Bird flu risks to people

- Bird flu infection to people from infected poultry is a rare event and usually results in mild disease, but the resulting disease from the current strain of H5N1 is severe. The virus causes a severe viral pneumonia and multi-organ failure.
- Symptoms of the bird flu in humans have ranged from typical flu-like symptoms to pneumonia, and other severe and life threatening complications.

Bird flu prevention and treatment

- Studies suggest certain prescription medicines approved for human flu viruses would work in the treatment of the bird flu infection in humans. Currently, there is no widely available vaccine to protect humans against the H5N1 bird flu virus being seen in Asia. However, vaccine development efforts continue.
- The H5N1 bird flu virus is resistant to some of the antiviral medications commonly used for flu. However, two antiviral medications, oseltamivir (Tamiflu) and zanamivir, are being used to treat the flu caused by the H5N1 virus.

Flu, Bird flu, and Pandemic Flu

- **Influenza (Flu)** *viruses are a group of viruses that primarily infect birds, but also can infect and cause illness in mammals, including pigs, horses, and humans. Influenza has probably existed in mammals and birds since ancient times.*

Flu epidemics occur every year or two years when a flu virus undergoes a small genetic change, just enough that many people are susceptible to the infection. Severe illness and death during annual influenza epidemics is most common among the elderly and persons with underlying medical condition.

- **Flu pandemics** occur when there is a major change in the genetic makeup of the virus. All humans are susceptible, the attack rates are high, and the mortality rates may be high as well. Influenza pandemics spread rapidly and can travel around the world in only a few months.
- Bird flu (avian influenza) is a contagious disease of birds but may occasionally cause disease in other animals, including humans. The current outbreak of the H5N1 bird flu virus is the most severe outbreak in poultry ever recorded and is unusual in the severity of the illness it causes in humans.

What You Can Do

- Develop preparedness plans as you would for other public health emergencies.
- Participate and promote public health efforts in your state and community.
- Implement prevention and control actions recommended by your public health officials and providers.
- Adopt business/school practices that encourages sick employees/students to stay home.
- Anticipate how to function with a significant portion of the workforce/school population absent due to illness or caring for ill family members.
- Practice good health habits, including eating a balanced diet, exercising daily, and getting sufficient rest. Take these common-sense steps to stop the spread of germs:
 - Wash hands frequently with soap and water or waterless hand cleaner
 - Cover coughs and sneezes with tissues or cough into your sleeve.
 - Stay away from others as much as possible if you are sick.
- Stay informed about pandemic influenza and be prepared to respond.
 - Consult www.pandemicflu.alaska.gov frequently for updates on state, national and international information on pandemic influenza
 - Use national and local pandemic hotlines that will be established in the eventuality of a global/worldwide influenza outbreak.
 - Listen to radio and television, and read news stories about pandemic flu.

General Disaster Survival Tips

Have a family plan in place and a disaster survival kit ready to grab and go if alternative shelter is not available and your house is uninhabitable after a natural or man-made disaster.

Comprehensive Family Plan

Families need to discuss several topics before a disaster occurs.

- ✓ Talk about which areas of the home present the greatest potential danger during a disaster.
- ✓ Decide which areas of the home are the safest.
- ✓ Decide how and where family members will reunite if the family is separated during a disaster.
- ✓ Determine alternate escape routes if regular exits are blocked.
- ✓ Know the closest shelter to your home, school, work or other places you frequent.
- ✓ Assign each family member a responsibility during an emergency and then practice your plan.

Auxiliary Lighting

Don't use matches, candles, lanterns or any open flames until you have checked for gas leaks.

- ✓ Keep flashlights and extra batteries on hand.
- ✓ Have supplies for lanterns – votive candles set in empty jars will burn up to 15 hours.
- ✓ Have supplies for “non-candles” – floating plastic disks, paper wicks and a bottle of salad oil will provide hundreds of hours of light.

Cooking Supplies

Keep enough cooking fuel to last at least a week.

- ✓ Use an open fireplace as long as your chimney has not been damaged. You can use firewood, coal or charcoal to prepare hot meals.
- ✓ Keep extra charcoal on hand for barbeque, but never use charcoal indoors without ventilation.
- ✓ Keep waterproof matches in an airtight container.
- ✓ Have fire starter pellets or “Sterno” logs handy for starting fires quickly.

Alternative Drinking Water Sources

During disasters, public water supplies may break down. Water lines often crack and allow impure substances to pollute the local water supply. A supply of fresh water may be your most precious survival item.

- ✓ Turn off your main water valve immediately.
- ✓ Use your hot water tank for an alternative water source.
- ✓ Use the flush tank of the toilet, but not water from the toilet bowl, for an alternative water source as long as the water is not treated with blue or green chemicals.
- ✓ Melt ice cubes for a water source.
- ✓ Drink liquids from canned fruits, vegetables and other canned foods.
- ✓ Use bottled water sparingly.

Don't take chances – no water can be presumed safe and all drinking and cooking water should be purified. Don't use water stored in vinyl plastic containers, such as waterbeds, for drinking water, because vinyl may release harmful chemicals into stored water.

How to Purify Water

Prepare and purify only enough water to last a maximum of 48 hours to minimize chances of re-contamination.

- ✓ **Use purification tablets**, available at most drug stores, and use as indicated.
- ✓ **Use liquid household bleach.** Don't use dry bleach or granulated household bleach because they are poisonous.

<u>Water</u>	<u>Bleach</u> (double amount if water is cloudy)
1 quart »	2 drops
1 gallon »	8 drops
5 gallons »	½ tsp.

- ✓ **Use iodine.**

<u>Water</u>	<u>Bleach</u> (double amount if water is cloudy)
1 quart »	5 drops
1 gallon »	20 drops
5 gallons »	2-1/2 tsp.

Mix thoroughly by stirring or shaking the container. Let it stand 30 minutes. You should smell a slight chlorine odor. If not, repeat above and let it stand for an additional 15 minutes before using.

Stored water may develop a disagreeable appearance, taste or odor, but that does not indicate impurity. If stored water tastes flat after opening, it probably lacks air. To aerate, simply pour the water from one container to another several times.

Sterilizing Water Containers

To keep drinking water safe from contamination, store it tightly in sterilized containers. Plastic gallon milk containers with screw tops work best. Sterilize as follows:

1. Wash containers with soapy water and rinse thoroughly.
2. Fill containers $\frac{3}{4}$ full with water and add $\frac{3}{4}$ cup liquid bleach.
3. Turn upside down to sterilize stopper or lid.
4. Let bleach water stand 2 to 3 minutes.
5. Pour bleach water, which can be used several times into the next container.
6. Fill sterilized container with purified water and close the lid tightly.
7. Mark container "Purified Drinking Water" and note the date.

Food Storage – Common Sense Rules

Stored foods – even canned goods – eventually lose nutritional value. No food should be kept in storage beyond the date on the product. To store large quantities (hoard) and to keep food beyond its product date is wasteful, foolish and selfish.

- ✓ Buy sensibly and appropriately.
- ✓ Choose two or three different areas on your premises – basement, garage, out-building – and various sizes of storage containers to store food, because space is often difficult to find.
- ✓ Keep canned goods off the ground to minimize rust.
- ✓ Keep metal or plastic containers tightly sealed to discourage insect and rodent infestation.
- ✓ Don't use containers that had previously held petroleum products or other poisonous products.
- ✓ Store heaviest goods closest to the floor to minimize damage during an earthquake.

Food Storage Tips

- ✓ Select foods your family enjoys and rotate them in your home food supply.
- ✓ Buy emergency supplies a few items at a time to avoid breaking your budget.
- ✓ Choose foods that have nutritional value and are easy to store.
- ✓ Use mostly dried and instant foods with some canned goods, because canned items are heavy to carry.
- ✓ Choose foods that will keep for at least 6 months.
- ✓ Store food supplies in a cool dark area because light can destroy vitamins and make oils rancid.
- ✓ Avoid high air temperatures to increase shelf life.
- ✓ Close containers tightly to minimize oxygen and moisture, which can spoil food.
- ✓ Stock a compact food supply in a single box or container so one person can easily carry it. Pack a box for each family member to carry.
- ✓ Store 7 days' supply of bottle drinking water, allowing 1-1/2 gallons of water a day for each person.
- ✓ Dump and replenish stored water every 6 months.
- ✓ Pack non-food items for serving meals easily:
 - Paper plates and napkins
 - Knives, forks and spoons
 - Pre-moistened towelettes
 - Manual can/bottle opener
 - Salt and pepper
 - Sharp knife
 - Matches
 - Heavy duty aluminum foil
 - Liquid soap
- ✓ Choose or package foods in one serving or one-meal sizes to eliminate leftovers.
- ✓ Label food supply with date of purchase or last date to use.
- ✓ Be able to produce 7 days of good meals for your family anywhere, with a minimum of time, equipment, heat or energy, and water.

Fire Safety Tips

Before Disaster Occurs – Follow Fire Safety Rules

- ❖ **Install smoke detectors**, especially near all bedrooms or sleeping areas. Check the batteries twice a year.
- ❖ **Practice “Exit Drills in The Home”** (EDITH) with all family members. Have two ways out for every room. Have a rope or ladder for a two-story house.
- ❖ **Keep fire extinguishers** easily accessible in the kitchen and near wood stoves and know how to use them.
- ❖ **Remove trash** and excess goods from closets and basements.

After a Disaster – Minimize Fire Hazards

- ❖ Shut off fuel lines, propane lines and electrical service in your home or building, if time and safety permits.
- ❖ Leave utility services and lines off until you are sure no danger exists from fuel or gas leaks, or electrical short circuits.

In Case of a Fire – Follow Fire Safety Rules

- ❖ If lives are in jeopardy, escape immediately, and then call 911 after you get to a safe place.
- ❖ Stop, Drop and Roll if your clothes catch on fire. **DO NOT RUN!**
- ❖ Always call 911 first and then stay to fight the fires, but only if they are small. Point your fire extinguisher at the base of the fire where the flames meet the fuel – paper, wood or petroleum products.
- ❖ Get out **FAST** if there is a lot of smoke or hot vapors. **Smoke and toxic gas can kill you in seconds.**

Escaping from a Building Fire – Be Vigilant

- ❖ If you smell smoke or see a fire, leave the building immediately, and then call 911.
- ❖ Before opening a door in a burning building, feel the door with the back of your hand.
- ❖ If the door is hot, go out another exit, because the room on the other side of the door is probably on fire.
- ❖ If the door is cool, kneel down and check the air coming in under the door. If it is cool, the adjacent room may be safe to enter.

- ❖ When opening the door to an adjacent room, proceed cautiously. Kneel behind the door and turn your face away while opening the door a small amount. Listen and smell for fire and smoke.
- ❖ Close all windows and doors behind you as you leave the room.
- ❖ Crawl low under the smoke layer to escape.
- ❖ Use stairways – never elevators – to escape from a burning building.

Trapped in a Burning Building – Keep Cool

- ❖ Use wet cloths to cover your hands, face, nose and mouth if you cannot escape.
- ❖ Dampen your clothes, if possible.
- ❖ Place a wet towel at the bottom of the doorway to prevent smoke from entering your room.
- ❖ Open one of the windows slightly and hang something out of it to attract attention.
- ❖ Leave a window slightly open and stay low to breathe cleaner air.

First Aid

Medical Treatment

- Use **Providence Kodiak Island Medical Center** for serious health care needs requiring a physician during a disaster.
- Use **first aid stations** at shelters throughout the city and in villages for minor outpatient treatment.
- Use your **family first aid skills** and your **first aid kit** to leave medical professionals free to treat more seriously injured or sick people.

First Aid Kit

- Keep your first aid kit well stocked with fresh supplies and store it in an easily accessible location.
- Use a small toolbox or fishing tackle box for the kit and stock with these items:

<u>Item</u>	<u>Use</u>
Triangular bandages	Arm sling
Steri-gauze pads in several sizes	Wound cleaning and dressing
Rolls of gauze bandages	Holds dressings in place
Surgical tape	Many uses
Sanitary napkins (large size)	Dressings for severe bleeding
Bandages	Small wound covers
Cotton swabs	Many uses
Small scissors	Bandage sizing and cutting
Tweezers	Splinter, glass removal
Razor (disposable)	Wound area cleaning and shaving
Splints	Many uses
Plastic wrap	Severe burn and open chest wound cover
Baking soda	Acid neutralizer
Special medications	Family members' individual needs
Miscellaneous supplies First aid book Safety pins Smelling salts Antiseptic solution Aspirin/Tylenol	Many uses

7-day Disaster Survival Kit

- Keep your survival kit in an easily accessible location.
- Use a sturdy container, such as a plastic garbage can, which can double as a water storage or waste materials container.
- Keep a smaller version of the survival kit in your vehicles.
- Rethink your kit and family needs at least once a year and replace batteries and update clothes.
- Ask your pharmacist about storing prescription medications.
- Fill your disaster survival kit with the items below:
 - Flashlight with extra batteries
 - Portable AM/FM radio with extra batteries
 - First aid kit
 - Matches
 - Can opener
 - Fire extinguisher
 - Bottle water
 - Food (canned or dried)
 - Blankets
 - Special medications
 - Extra clothing
 - Sleeping bags/tent
 - Hand tools
 - Rope
 - Signaling devices (flares, mirror, whistle, bright cloth)
 - Books, cards, games pen and paper (to boost morale)
 - Axe, small shovel, broom, pail and sand (optional)
 - Special needs bag for invalids, including medications, warm clothing, blankets
 - Special supplies for infants, including purified water, formula, sterile bottles

Emergency Phone List

Emergencies on the Kodiak Road System

All Emergencies.....911

Kodiak Police Department.....486-8000

Alaska State Troopers.....486-4121

U.S. Coast Guard

Base Security.....487-5266, ext 1

Kodiak City Fire Department.....486-8040

Bayside Fire Department.....486-4536

Womens Bay Fire Department.....487-4312

U.S. Coast Guard

Fire Department.....487-5808

Kodiak Harbor Master.....486-8080

Emergencies in the Kodiak Villages

Akhiok....._____

(Position not currently filled, write in number
when it becomes available)

Larsen Bay.....1-907-847-2262

Old Harbor.....1-907-286-2275

Ouzinkie.....1-907-680-2212

Port Lions.....1-907-454-2330

VPSO Coordination –

Kodiak Area Native Assn.....486-9800

Medical Facilities on the Kodiak Road System

Providence Kodiak Island

Medical Center.....486-3281

Providence Kodiak Island
Mental Health Center.....486-2400

Kodiak Area
Native Association.....486-9800

Kodiak Island
Medical Associates.....486-6065

North Pacific
Medical Group.....486-4183

U.S. Coast Guard Clinic.....487-5757

Medical Facilities in the Kodiak Villages

Akhiok Clinic.....1-907-836-2230

Karluk Clinic.....1-907-241-2212

Larsen Bay Clinic.....1-907-847-2208

Old Harbor Clinic.....1-907-286-2205

Ouzinkie Clinic.....1-907-680-2265

Port Lions Clinic.....1-907-454-2275

Poison Control.....1-800-222-1222

Kodiak Island Emergency
Services Organization
710 Mill Bay Road
Kodiak, Alaska 99615

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