



A CITIZEN'S GUIDE TO

FLOODING & FLOOD RECOVERY



Since 1862 there have been at least 25 serious floods on the Napa River and numerous floods on tributaries to the river. Living and working in Napa means being prepared for possible flooding every winter.

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NAPA'S TEN MOST SEVERE FLOODS

The historical record shows at least 25 significant floods on the Napa River since 1862. Comparing modern floods with events that occurred decades ago is challenging, as accurate measurement of the rainfall amounts and peak stages of the river have not been possible until relatively recent times. This data from the ten most severe floods on record provides insight into the elements of a severe flood; namely, large amounts of rain over relatively short periods of time, occurring after the ground has become saturated and much of the rainfall becomes runoff. The chart demonstrates that a flood can happen after a prolonged period of moderate to heavy rain, as in 1986, or after a short period of extremely intense rain, as in 2005. Creek floods can develop over much shorter periods of time. Three inches of rain over six hours is often enough to cause creek flooding. Simply put, floods are a product of the location, duration, and intensity of storms.

<i>Date(s) of flood</i>	<i>Days of rain prior to flood</i>	<i>Total multi-day rainfall/Conn Dam gauge</i>	<i>Total rainfall at Conn Dam day prior to flood</i>	<i>Peak stage at Oak Knoll Ave</i>	<i>Peak stage at Lincoln Ave</i>
Feb 17-18, 1986	7	14.2"	3.6"	30.20'	24.20'
Dec 31, 2005	2	6.6"	6.4"	29.85'	23.04'
Mar 9, 1995	2	7.6"	4.4"	30.50'	22.80'
Jan 21, 1967	3	6.8"	4.0"	26.47'	22.7' to 23.2'
Feb 27, 1940	3	10.0"	5.6"	28.0' (est.)	22.3'
Jan 1, 1997	3	7.6"	4.0"	28.07'	21.4'
Dec 22, 1955	5	16.0"	4.8"	27.5' to 28.2'	20.6'
Jan 9, 1995	4	11.9"	5.5"	26.8'	20.5'
Feb 3, 1998	3	5.9"	4.8"	26.72'	20.2'
Jan 31, 1963	3	7.9"	3.0"	27.59'	19.8' to 20.5'



**Main Street
City of Napa
February 1940**

The City of Napa is at risk of both slow-rise and flash floods.

HOW NAPA FLOODS

Typical floods on the Napa River are slow-rise floods. This type of flood is preceded by a warning time lasting from hours to days. There is a sequence of events-rainfall producing heavy runoff, flood watches and river advisories issued-that can be tracked over time.

Creeks and streams may produce slow-rise or flash floods. Flash floods may occur after an extremely short warning time, or with no warning time at all in some situations.

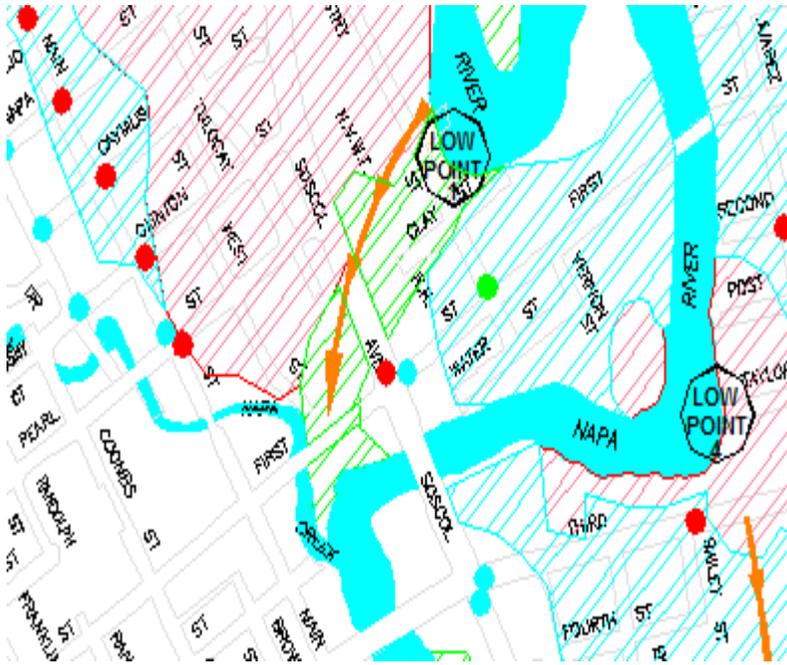
Areas at risk of flooding in Napa are generally from Trancas Street in the north to Imola Avenue in the south, Coombs Street to the west and Silverado Trail to the east. However, it's important to understand that flooding can and does occur outside these general boundaries. Any creek, stream, or drainage system can be overwhelmed during heavy rains. Flooding could occur while you are in your home, at work, or while you are out of town. It might happen in the middle of the night or on a holiday.

As a result of our risk of flooding, the City of Napa dedicates a significant amount of time and resources to disaster preparedness and encourages all citizens to be informed and prepared. This booklet is designed to provide information to help you with preparation for flooding, responding correctly when a threat develops, and getting your home or business cleaned up and back to normal when the flood is over.

ARE YOU AT RISK?

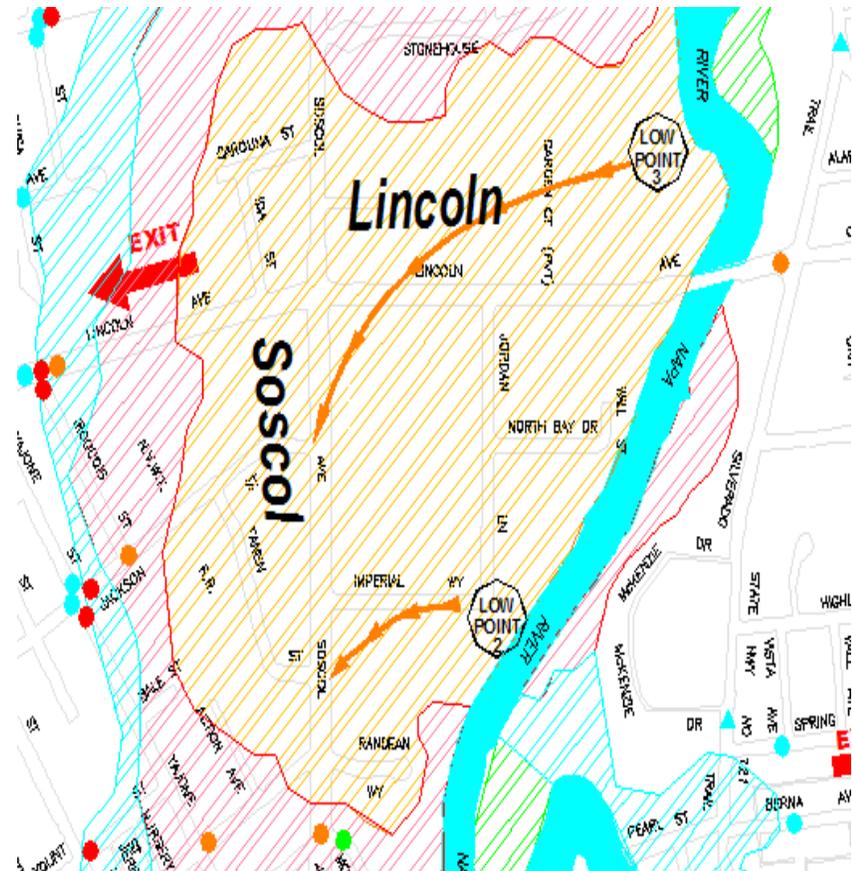
The first step in preparedness is to evaluate your level of risk. Flood maps and flood protection references are available at the Napa City-County Library at 580 Coombs Street; or visit the City of Napa Public Works Department at 1600 First Street to see if you are in a mapped floodplain. If so, Public Works staff can provide more information on past flood problems in the area. If requested, Public Works staff will visit a property to review its flood problem and explain ways to stop flooding or prevent flood damage. These services are free.

The maps on pages 5-7 show the City's four defined areas modeled as the greatest flood risk. These are labeled as Phases (A), (B), (C) and (D). With the completion of the Dry Bypass and other Flood Project components flooding on the Napa River will be different from past flooding experiences. Modeling the new flooding pattern will help the City anticipate where flooding will develop as well as documentation of actual flood events such as inundation boundary lines, high water marks and photos going forward.



The Phase (A) area is flooded when flow from the Napa River begins to cross McKinstry Street and flow through the dry bypass. The McKinstry Street flood gates will then be closed. McKinstry Street between First Street and Soscol Avenue will also be closed.

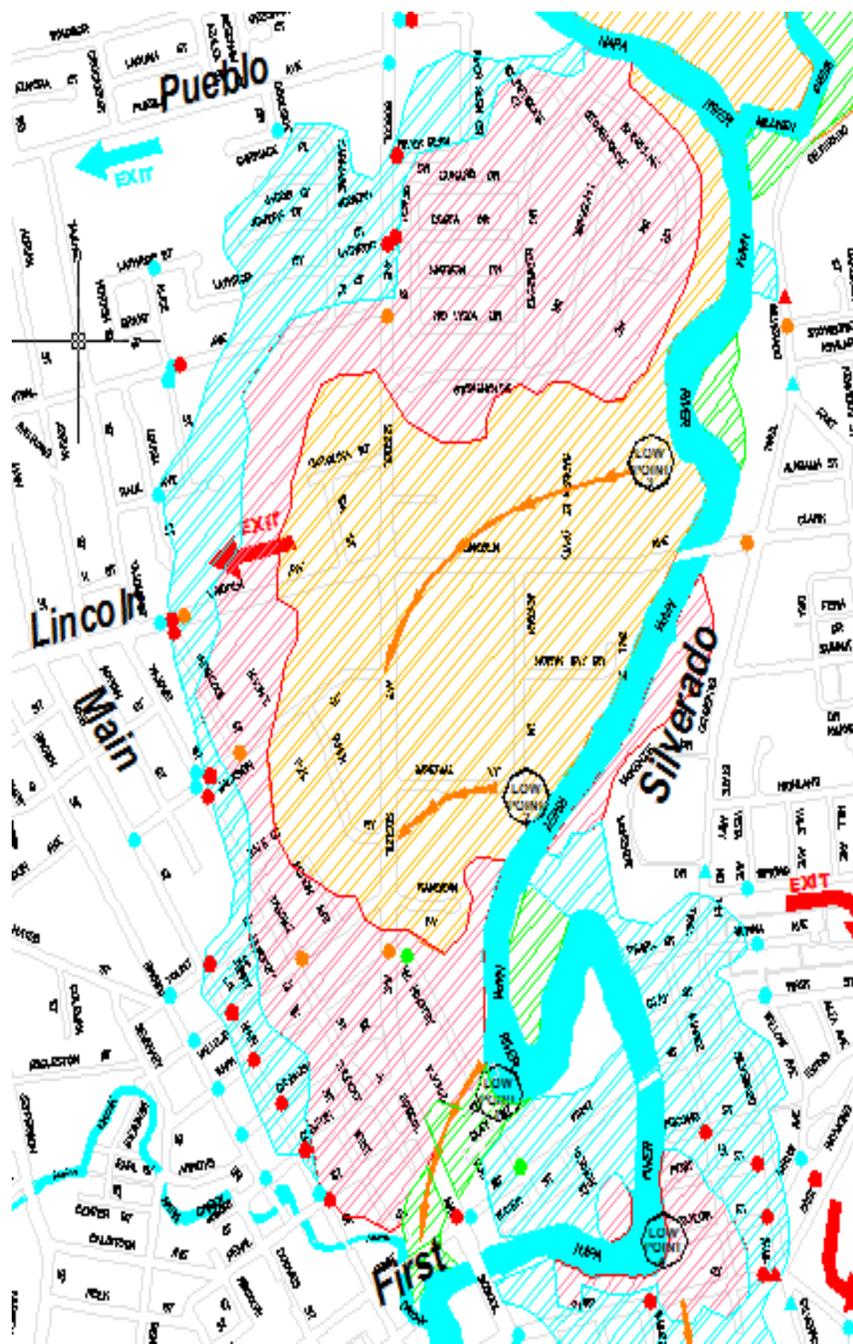
The Phase (B) area is the area inundated when the Napa River leaves its banks at Lincoln Avenue near RiverPointe. The Phase (B) area is generally bounded on the west by Iroquois Street; on the north by Stonehouse drive; on the east by the Napa River and on the south by Soscol Avenue and Randeau Way. Also: Trancas Street on the north and Silverdo Trail on the east (not shown). While the Phase (B) area is inundated, the Phase (A) area will remain flooded by waters from the Napa River. See the list of streets that will be closed in this area on page 17.

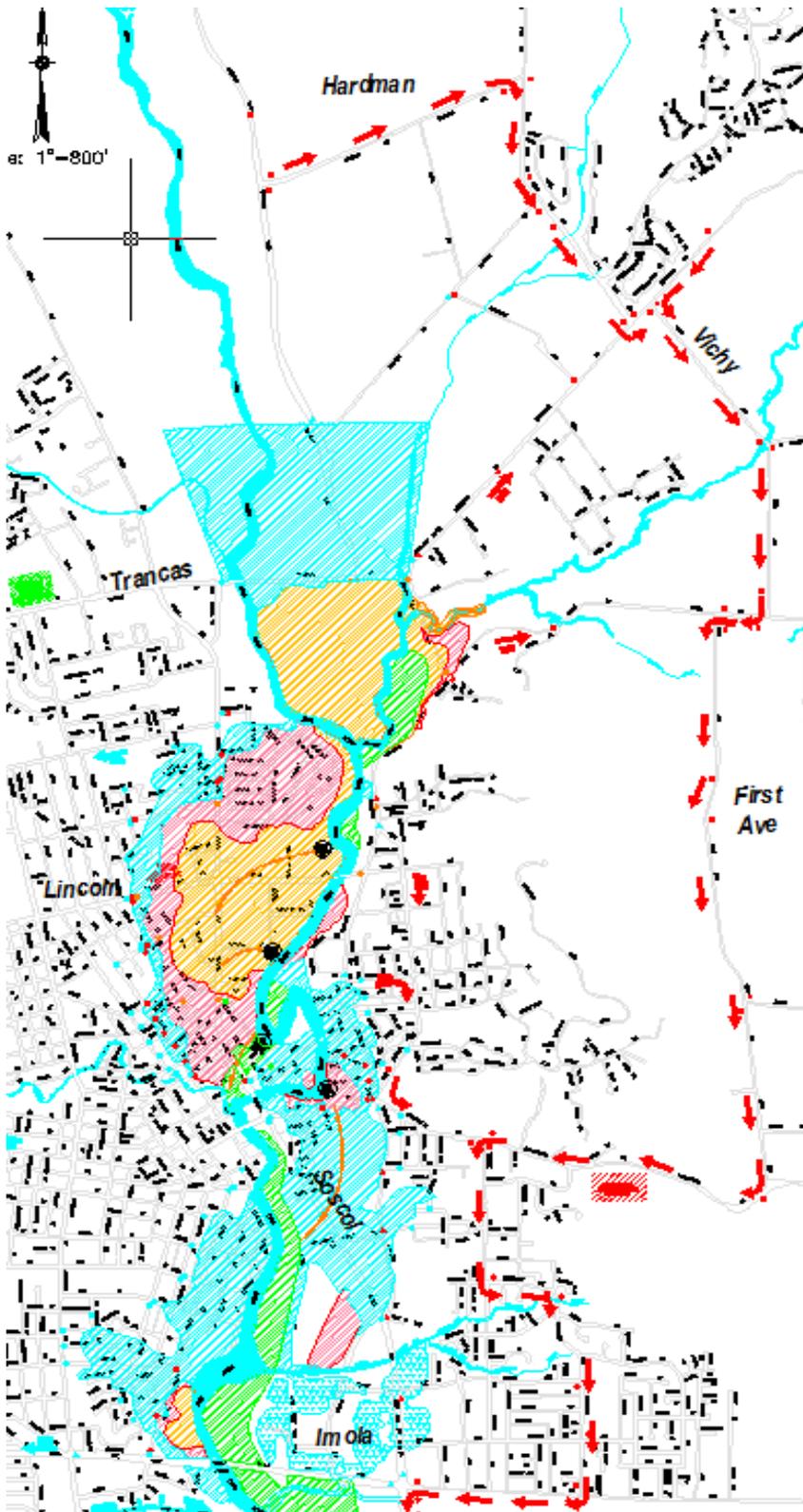


As floodwaters rise, the inundated area grows and the **Phase (C) area** begins to flood. This area is generally bounded by Stonehouse Court on the north, and Silverado Trail on the east. To the south, flooding on the east side of the river spreads to Taylor Street. Flood waters expand to the north and west along Lincoln Avenue, reaching as far west as Main Street in some areas, First Street and Soscol Avenue on the south to the Napa River. As the Phase (C) area is inundated, the Phase (A) and Phase (B) areas will remain flooded. See the list of streets that will be closed in this area on page 17-18.

A full-size, downloadable color version of this map showing all four phase areas is available at www.cityofnapa.org on the "Weather and Flood" page or at www.cityofnapanews.com/emergency.htm

Users can enlarge the online pdf version of this map to see greater detail.





Inundation of the **Phase (D)** area takes place next in the sequence during severe floods. Floodwaters will extend north as far as the intersection of Silverado Trail and McKinley drive, and to the east a short way along Monticello Road and Hagen Road. Soscol Avenue north of Lincoln to Pueblo Avenue will flood. The areas of downtown and old town will flood south of Seminary & Ash Street at the most western point. Flooding in phase (D) includes the Riverside Drive and south of Oak Street extending as far west as Seminary Street, and flooding occurs south of Imola Avenue to the City limit. (In the flood of December 2005, flooding in the downtown area appeared to be lessened due to the partially completed Flood Protection Project. Additional work completed since that flood may provide a reduction of flooding in the future in the Riverside Drive/South Coombs Street area and south of Imola Avenue.) See the list of streets that will be closed in this area on pages 18-19. Arrows indicate evacuation routes for those on the east side of the river seeking to travel to the west side via Imola Avenue or south via Soscol Avenue/Highway 221.

REDUCING YOUR RISK

If your property is at risk of flooding, there are things you can do to reduce your exposure to damage

BE A GOOD STEWARD

- If your property is next to a ditch, creek, or river, do your part to keep the banks clear of brush and debris. The County has a stream maintenance program that can help remove major blockages such as downed trees, but this is often the responsibility of the property owner as most creeks and streams are actually private property and not owned by the City or other public agencies.
- Do not dump or throw anything into ditches, creeks, or rivers. Dumping in waterways is a violation of Fish & Game Section 5650. Even grass clippings and branches can accumulate and plug channels. A plugged channel cannot carry water,, and when it rains the water has to go somewhere. Every piece of trash contributes to flooding.
- If you see dumping of debris in the ditches or streams, contact the Public Works Department at 707-257-9520 or 707-257-9600.
- Always check with the Community Development Department before you build on, alter, re-grade, or add fill on your property. A permit may be needed ensure that projects do not cause problems on other properties.
- If you see building or filling without a City permit sign posted, contact the Building Division at 707-257-9540.

GET FLOOD INSURANCE FOR YOUR STRUCTURE AND CONTENTS

Homeowner's insurance policies do not cover damage from floods, but the City of Napa participates in the National Flood Insurance Program. That means you can purchase a separate flood insurance policy. This insurance is backed by the Federal government and is available to everyone, even for properties that are known to have flooded in the past. There is a 30-day waiting period before flood insurance goes into effect, so contact your insurance agent well in advance of the storm season. Currently there are about 1,118 flood insurance policies in effect in the City of Napa.

Some people have purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Usually these policies just cover the building's structure and not the contents; additional insurance is available to cover contents. During the kind of flooding that happens in the City of Napa, there can be as much or more damage to the furniture and contents than to the structure.

Even if the last flood missed you, or you have done some flood proofing, the next flood could be worse.

FLOOD PROOFING

There are several different ways to protect a building from flood damage.

- Keep water away by re-grading your lot or building a small floodwall or earthen berm. These methods work if your lot is large enough, if flooding is not too deep, or if your property is not in the floodway. The Public Works Department can help you find out if these methods are appropriate for your location.
- Make your walls waterproof and place watertight closures over doorways and other openings. This method is not recommended for houses with basements or if water will get over two feet deep.
- Raise the house above flood levels. A small wood frame house can be elevated for approximately \$75,000. As an example, take a look at the houses on Carolina and Ida Streets. Some have been raised five to six feet.
- Prevent sewers from backing up into the basement during heavy rains. This can happen in many buildings, even those not in the floodplain. A gate valve installed in the sewer pipe can prevent backup. Contact the Napa Sanitation District at 707-258-6000 for additional information.

Remember: Most alterations to your building or land require a permit from the Community Development. Even re-grading or filling in the floodplain requires a permit.

SANDBAGGING

Some people in flood prone area take advantage of the City's proactive sandbag program and bring sandbags to their location at the start of the rainy season. Read more about sandbagging on page 11.



Main and Caymus

City of Napa

1940

BE PREPARED

There are many things you can do before the rainfall begins.

- Learn First Aid and CPR.
- Learn where you can get weather forecasts, advisories, watches, and warnings. See page 26 for recommended information sources.
- Locate your utility connection points and prepare written instructions on how to turn off electricity, gas, and water if authorities advise you to do so.
- Secure important family documents in a waterproof, portable container you can grab quickly in case of evacuation. In this container you may want to keep:
 - Financial documents such as insurance policies, wills, contracts, deeds, stocks & bonds, bank account numbers, and credit card account numbers.
 - Identification documents such as passports, Social Security cards, birth certificates, marriage certificates, and death certificates.
 - Medical documents such as immunization records and information on your prescriptions.
 - Other documents such as written inventory of valuable household goods, a list of important telephone numbers, and anything else that you would find difficult to replace.
- Establish an out of the area “family contact” and let friends and relatives know to call that person for information on you.
- Conduct drills so your family will know what to do if there should be sudden flooding.
- Decide how and where your family will reunite if separated.
- Determine a safe place for your pets if you need to evacuate.
- Keep your gas tank at least half full at all times. If you have a sudden need to evacuate you will be ready to go.
- Prepare a disaster kit that will make you self-sufficient for three days. Your kit should include:
 - Water stored in closed, clean containers. Store 1 gallon per person per day, and water for pets.
 - Non-perishable foods
 - Can opener
 - Battery operated or crank powered radio
 - Flashlight and extra batteries
 - Matches and candles for use when you are sure there are no gas leaks
 - First aid kit, essential medications and spare eyeglasses
 - Mess kit or paper cups and plates and plastic utensils
 - Alternate cooking source
 - Protective clothing, shoes, hats, gloves, rainwear and bedding
 - Whistle
 - Entertainment such as books and games
 - Fire extinguisher suitable for all types of fires
 - Emergency cash
 - Special items for infants, the elderly or disabled
 - Utility knife
 - Adjustable wrench for turning off gas and water if needed

- Toilet paper, towelettes, soap and personal hygiene items

PREPARING SANDBAGS IN ADVANCE

The City of Napa makes sandbags and sand available free of charge at the start of the rainy season. The sandbag operation takes place at the City’s Corporation Yard at 770 Jackson Street on the first Saturday of each month November through March, from 9am through 1pm. This program allows residents and businesses to fill their own sandbags and take them to the location where they may be needed. (Experienced sandbaggers will attest that it is a lot easier to fill sandbags when it’s dry and when you have plenty of time.) Most people who use this program keep the sandbags on hand throughout the winter. If you know you are at risk of flooding, it just makes sense to take advantage of this program. In the spring, when the rainy season is ending, the City will announce pick up dates and City crews will haul away the sandbags at no charge.

SANDBAG OPERATIONS WHEN A WATCH IS ISSUED

When the National Weather Service issues a Flood or Flash Flood Watch for the Napa River or its tributaries, or when a local emergency has been declared and the City’s Emergency Operations Center (EOC) is activated, the City provides sandbags free of charge at Memorial Stadium off of Menlo Avenue. If access to Memorial Stadium is unavailable, the alternative location would be the back parking lot at Napa Valley Language Academy (formerly Westwood School) on Freeway Drive.

Sandbags can also be purchased at:

Clark’s Rock	650 Green Island Road	707-252-2044
Home Depot	255 Soscol Avenue	707-251-0162

Sand can be purchased at:

Clark’s Rock	650 Green Island Road	707-252-2044
Home Depot	255 Soscol Avenue	707-251-0162
Syar Industries	230 Napa-Vallejo Hwy	707-252-8711
Shamrock	999 Kaiser Road	707-226-7421



**Brown Street
City of Napa
1905**

BUSINESS SITES

Special considerations for places of business

Most of the information in this guide applies to both residents and businesses, but there are some considerations for persons who have a business operation in an area at risk of flooding.

Before a flood threatens:

- If you are a tenant, discuss the flooding threat with the landlord. Understand the responsibilities of each party.
- Review flood insurance options.
- Be acquainted with your neighbors and their plans for flood response. You may make the effort to protect your location, but a neighbor might not, and you could be flooded from adjoining walls, doors or other openings.
- Know the location of drains on your roof and in the surrounding area. Make sure water has a place to go.
- Know the location of all utilities and how to shut them off.
- Make a flood plan for your business addressing preparations before a flood, what you will do during a flood, and how you will clean up and get back to business after a flood.
- Consider preparing sandbags and storing other materials like plywood, plastic, and tape in advance.
- Build an emergency kit for the workplace. See the list on page 10 for ideas.
- Make a list of employee home phone and cell phone numbers.
- Hold a meeting to understand which employees can be called on to help with sandbagging or other measures.
- Plan for a place to park cars outside the flood risk area.
- Plan for a place to relocate inventory and equipment if needed.
- Plan for evacuating critical files, including accounts receivable, general ledger, tax returns, checks, customer lists and orders, contracts and other documents.
- Plan for a place to relocate any toxic or hazardous chemicals.

If a flood is imminent:

- Activate your flood plan
- Disconnect electrical equipment and relocate it if possible
- Turn off gas and water if you know how to do so safely
- Raise elevators to the second floor and turn them off
- Empty your safe and remove cash and valuables from the site
- Remove toilets and close off floor drains
- Notify your alarm company
- Notify key customers and suppliers
- Document flood preparations and flood damage with photos and video

ADVISORIES, WATCHES AND WARNINGS...OH MY!

Know how to respond as official information is released

If heavy rains bring the possibility of a flood, the National Weather Service will begin to issue bulletins

- **Advisory:** weather conditions are expected to cause significant inconveniences that may be hazardous
- **Watch:** there is the possibility of severe weather within the designated water area.
When a watch is issued, be alert.
- **Warning:** flooding is occurring or severe weather is imminent.
When a warning is issued take action immediately!
If you are in a low area, especially near a creek, stream, or river, get to higher ground immediately.

Whether on foot or in a vehicle, never attempt to cross a running creek, stream, or river when a Flood or Flash Flood Watch or Warning is in effect. Flash Floods can take only a few minutes to develop.

See the sources of information listed on page 24 to learn where you can stay in touch with advisories, watches, and warnings as they are issued.

HOW THE CITY OF NAPA RESPONDS

The City of Napa maintains an emergency plan, and personnel have had a lot of experience with flooding. When the ground has become saturated and more rainfall means substantial runoff, or when a series of heavy storms is tracking toward our area, the potential for flooding develops. We begin to keep a close eye on radar, forecasts, and the levels on the local waterways. If needed, briefings are held for City staff to make sure it's understood that a flood could happen. If the situation worsens, the City Manager, operating as the Emergency Services Director, may open an Emergency Operations Center (EOC) using the statewide Standard Emergency Management System (SEMS) structure. The EOC responds to the public safety and information needs of the community.

If an emergency creates a situation that requires more resources than the City can supply, assistance is requested from County, State or Federal authorities.



**Pearl and Main
City of Napa
1955**

UNDERSTANDING STREAM AND RIVER LEVEL INFORMATION

The Napa River and its tributaries are monitored by a system of gauges that are tied in to a central web page at <http://napa.onerain.com>. This site was developed cooperatively by the City of Napa, County of Napa, City of St. Helena, and the Napa County Flood Control and Water Conservation District. It contains a wealth of information and real-time data on weather, rainfall and resulting levels in the waterways.

The “monitor stage” and “flood stage” can be viewed for each monitoring point (“Monitor stage” means the waterway is approaching the level where flooding will begin-“flood stage” is the level where that waterway will spill over its banks.) This web-based tool is useful for those in flood prone areas, allowing the threat level to be tracked 24 hours a day, 7 days a week.

This information on monitor stages and flood stages will be used in releases to the public and media before and during a flood, so it is important for those in at-risk areas to know how to interpret the data.

WHAT RIVER AND STREAM LEVELS TELL US

The threat of widespread flooding from the Napa River in the city of Napa is most directly assessed by viewing the river level at Oak Knoll Avenue (sometimes referred to as “Napa River Near Napa.”) Monitor Stage at this point is 22 feet. When the river reaches this level and appears to be rising, the City’s EOC will be placed on standby or activated. The status is said to be “Stage 1” and flooding is expected. Public safety personnel will begin to patrol low-lying areas, and crews may begin placing barricades and closing streets. (See the maps on pages 5-7 and the list of street closures on pages 17-19.) If the river rises to Flood Stage of 25 feet, this is said to be “Stage 2” and flooding begins. At this point the City’s emergency plan is activated and the evacuation of the Phase (A) area begins. If the river is forecast to reach 28.0 feet at Oak Knoll, the Phase (B) area will be evacuated, a forecast of 30 feet leads to evacuation of the Phase (C) area; and a forecast of over 30 feet indicates the Phase (D) area will be evacuated. As these areas are evacuated, the streets are closed.



**Trancas Street
City of Napa**

AS CONDITIONS CHANGE, BE READY TO TAKE ACTION

Most people in the City do not need to leave their homes during a flood. The general rule is to “shelter in place” for those who are not at risk of flooding. The City asks that you do not travel during a flood unless necessary. The work of Police, Fire and other personnel is made more difficult when sightseers cause traffic congestion and get stranded in floodwaters. Stay out of the floodwaters and stay out of the way- let the first responders do their jobs to help those in need. Keep in mind that it is against the law to drive around barricades and into a closed street. Violators will be fined.

IF YOU MUST EVACUATE YOUR HOME

When it appears that flooding is likely, residents will be advised to evacuate from certain areas. If you are asked to evacuate, move to a safe place before access is cut off by floodwaters. The City will open shelters as needed for those who do not have family or friends available nearby.

If time permits, here are some steps to take before you leave your home.

- Move valuable household possessions to the upper floors of your home
- Disconnect all electrical appliances or turn off all electrical circuits at the fuse panel by pulling the main switch
- If you know how to do so safely, shut off gas services at the meter and turn off water service at the main valve
- Take your necessary medications, a change of clothing, and your container of important family documents. (See page 10.)



**Third Street
City of Napa
January 1997**

BE SMART, STAY SAFE

If you are lucky enough to be out of harm's way as a flood develops, it's very tempting to venture out in the flooded areas to see what's happening. Unfortunately, sightseers make the problems worse. Getting stranded in your car means you will need to be rescued, and public safety workers may be called away from a place where they are badly needed. Curious drivers who go around barricades cause waves to wash over sandbags and make flooding worse, and the increased water pressure from these waves can cause broken windows.

WHEN THE FLOOD HAPPENS

For your safety, and for the well-being of those who are flooded, please follow these rules during a flood:

- Stay away from power lines and electrical wires. Electrical current can travel through water. Report downed power lines to PG&E at (800) 743-5000 or the City Streets Division at 257-9520.
- Be alert for gas leaks. Don't smoke or use candles, lanterns or open flames if you have any suspicion of leaking gas.
- Avoid walking in flooded areas if possible. There may be missing manhole covers or debris under the water. If you must walk through water, use a stick to check the firmness of the ground in front of you.
- Do not walk through flowing water. Even water as shallow as six inches may cause you to be swept away.
- Do not try to drive over a flooded road. There may be debris or washouts you can't see. One foot of water will float many vehicles, and two feet of moving water can wash away most vehicles, including SUV's and trucks. You may become stranded, trapped or worse.
- Do not drive around street barricades. You will be fined.
- If your car stalls in floodwaters, abandon it immediately if safe and get to higher ground.
- Keep children and teenagers with you. Their curiosity may lead them into a dangerous situation
- Watch for snakes and other animals that may have been displaced by floodwaters.
- Carbon monoxide exhaust kills. Camping stoves and charcoal fires as well as generators and other gasoline-powered machines, must be used outdoors only.
- Avoid unnecessary trips. If you must travel, let someone else know where you're going and when you expect to return.
- Minimize use the telephone. Call for family emergencies or to report dangerous conditions, but keep lines available for those who need them. Use 911 only for a life threatening emergency.
- Stay tuned to radio, TV and internet sources of emergency information and instructions.

When flooding is imminent, City crews will begin to block off streets that will soon be flooded. The street closures are done in four phases.

PHASE (A) AREA STREET CLOSURES (SEE MAP ON PAGE 5)

- McKinstry Street

PHASE (B) AREA STREET CLOSURES (SEE MAP ON PAGE 5)

- Carolina All
- Garden Court All
- Ida Street All
- Imperial Way All
- Jackson Street Between Iroquois Street and Soscol Avenue
- Jordan Lane All
- Lincoln Avenue Yajome Street and Silverado Trail
- North Bay Drive All
- Randeau Way All
- Tanen Street All
- Wall Street All

PHASE (C) AREA STREET CLOSURES (SEE MAP ON PAGE 6)

- Action Avenue All
- Bale Street All
- Beach Street All
- Costa Drive All
- Caymus Street Between Main Street and Soscol Avenue
- Clinton Street Between Main Street and Soscol Avenue
- Cunard Drive All
- Edgewater Drive All
- Hagen Road At Silverado Trail (Highway 121)
- Iroquois Street Between Jackson Street and Lincoln Avenue
- Jackson Street Between Iroquois and Yajome Street
- Lake Park Drive All
- Matson Drive All
- McKinstry Street All
- Napa Street Between Main Street and Soscol Avenue
- Post Street Between Juarez Street and River
- Rio Vista Drive All
- River Glen Drive Part
- Second Street Between Juarez Street and Silverado Trail (Highway 121)

- Soscol Avenue Between Central Avenue and Lincoln Avenue
- Soscol Avenue Between Sousa Lane and Silverado Trail (Highway 121)
- Stonehouse Court All
- Stonehouse Drive All
- Taylor Street All
- Tulocay Street All
- Vallejo Street Nursery Street and Soscol Avenue
- West Street All
- Yajome Street Between Bale Street and Pearl Street

PHASE (D) AREA STREET CLOSURES (SEE MAP ON PAGE 7)

- Alice Street Between Paul Avenue and Central Avenue
- Arboreo Street All
- Bailey Street All
- Brown Street All
- Burnell Street All
- Carriage Place All
- Central Avenue Between Alice Street and Soscol Avenue
- Clay Street River to Silverado Trail
- Coombs Street Between Oak Street and Imola Avenue (Highway 121)
- Cross Street All
- Eighth Street All
- Elm Street Between Randolph Street and Riverside Drive
- Evans Avenue Between Silverado Trail and Willow Avenue
- First Street Between Soscol Avenue and Willow Avenue
- Fourth Street Napa Valley Wine Train RR and Bailey Street
- Franklin Street Between Ash Street and South Coombs Street
- Iroquois Street All
- Jacob Court All
- Jerry Lane All
- Joseph Court All
- Juarez Street All
- Lathrop Court All
- Lathrop Street Between Alice Street and Carriage Place
- Laurel Street Between Randolph Street and Riverside Drive
- Main Street Yount Street and Clinton Street
- Oak Street Between Coombs Street and Riverside Drive
- Oil Company Road All
- Paul Avenue Between Louisa Street and Alice Street
- Pearl Street Between River and Silverado Trail
- Pine Street Between Coombs Street and Riverside Drive
- Post Street All
- Randolph Street Elm Street to Franklin Street
- River Glen Drive All

- Riverside Drive All
- Second Street Napa River and Silverado Trail
- Seventh Street All
- Silverado Trail (Hwy 121) Between Spring St. and Soscol Ave. and Trancas to McKinley
- Sixth Street All
- Soscol Avenue Between River Glen Drive and Central Avenue
- Sousa Lane All
- Spruce Street Between South Seminary St. and Coombs Street
- Sycamore Street Between S. Seminary Street and Franklin Street
- Third Street Soscol Avenue and East Avenue
- Trancas Street Between Old Soscol and Silverado Trail
- Vernon Street All
- Water Street All
- Yajome Street Between Jackson Street and Pearl Street
- Yount Street Between Main Street and Yajome Street



**Aerial View
Central Napa
February 1986**

DRINKING WATER

Floods in Napa can vary in length from just minutes in a flash flood on a creek, to several days in a major river flood. Once the water recedes, cleanup will begin and streets will be reopened when safe. Shelters will close as residents are able to return to their homes.

The City of Napa water system is not likely to be seriously affected by a flood. However, if there is no water service, and your supply of stored water runs out, a typical household water heater tank holds a supply of 30 to 60 gallons. This can be accessed in an emergency. After shutting off the main valve from the tank to the household to depressurize the tank, it is advisable to vent the tank by opening a hot water faucet or disconnecting the hot water line at the top of the heater. Turn off gas or electricity to the tank before draining.

Other sources of water can be melted ice cubes, toilet reservoir tanks (without disinfectants), and juices from canned foods. Water from swimming pools and spas is not for drinking, but can be used for washing and other purposes.

AFTER THE FLOOD

If you are concerned that your water is contaminated, there are several ways to purify it.

- Boil water vigorously for 3 to 5 minutes. To improve the taste after boiling, pour from one container to another several times to aerate.
- Use purification tablets, available at most drug stores. Follow directions on the package.
- Add bleach for purification. Liquid household bleach (5.25% sodium hypochlorite) can be used. Add bleach according to the table below. Mix and let stand for 30 minutes.

Amount	Clear Water	Cloudy Water
1 Quart	2 drops	4 drops
1 Gallon	8 drops (1/4 teaspoon)	16 drops (1/2 teaspoon)
5 Gallons	40 drops (1-1/4 teaspoons)	80 drops (2-1/2 teaspoons)

If you are on a well and it was covered by floodwaters, you are advised to have your water tested after a flood to make sure it has not been contaminated. Contact the Napa County Department of Environmental Health at 707-253-4471.

CONTAMINATED WATER

Flood waters are likely to be contaminated. All persons should avoid direct contact with all flood waters. If contact is made, good personal hygiene including washing of hands and avoiding hand-to-mouth contact will limit any potential health risk.

In the event of flooding or significant sewage discharge inside or near inhabited buildings, the following safety precautions and methods for cleaning and disinfecting should be kept in mind.

- Avoid ingestion of contaminated food or water and contact with contaminated surfaces.
- Children should be kept away from flood areas and flooded buildings
- Wash hands thoroughly after working at flood sites and after contact with flood water.

GETTING BACK TO NORMAL- RETURNING HOME AND CLEANING UP

After a flood, it will take time to get things cleaned up. Be patient. Here are some “**DO** and **DON’T**” tips to help you clean up safely.

- **DO** make sure the building is structurally sound or made safe before entry.
- **DO** document damage with photos and video, and contact your insurance agent.
- If there has been structural damage, **DO** be aware of electrical shock resulting from exposed wiring, especially likely in wet conditions.
- If it was not turned off before evacuation, **DO** turn off your electricity when you return home. Some appliances, such as televisions, can shock you even after they have been unplugged.
- **DO** take care to avoid ingestion of contaminated food or water, or contact with contaminated surfaces.
- **DO** clean and disinfect everything that got wet. Floodwaters pick up sewage and chemicals from many locations.
- **DO** take good care of yourself. Recovering from a flood is a big job. It is tough on both the body and the spirit. The effect a disaster has on you and your family may last a long time. Rest often and take good care of yourself and your family.
- **DO** hire a reliable, licensed contractor if repairs are needed.
- **DO** prepare for the next flood.
- **DON’T** use lanterns, matches or candles to examine buildings; flammable material may be inside. Use flashlights.
- **DON’T** use appliances or motors that have gotten wet unless they have been taken apart, cleaned and dried.
- **DON’T** use fresh foods or canned goods that have come in contact with floodwaters
- **DON’T** turn on the gas supply to the building. This should be done by utility crews. (See page 24 for PG&E contact information.)
- **DON’T** keep flooded cosmetics and medicines. They are health hazards. When in doubt, throw them out.
- **DON’T** remove standing water in a basement too fast. If the pressure is relieved too quickly it may put undue stress on the walls.
- **DON’T** dry buildings with mechanical dehumidifiers, which may draw out moisture too quickly and cause additional damage. Allow structures to dry naturally.

- **DON'T** scrub or brush mud and other deposits from materials. This may cause further damage.
- **DON'T** let water-damaged papers remain in wet boxes. Remove them and air dry or freeze dry.
- **DON'T** open any books or albums that were completely submerged. Wet paper is very weak and will tear.
- **DON'T** keep objects in dark, hot, stagnant air with high humidity. These conditions encourage mold.
- **DON'T** try to separate bundles of saturated paper.

CLEANING TIPS

Disposal of Debris and Sandbags

After a flood the City will place large bins in impacted neighborhoods to make it easy to get rid of debris and household items that are beyond saving.

Sandbags can be returned to the City Corporation Yard at 770 Jackson Street, or taken to the nearest park and placed on turf or in the parking lot. Do not place sandbags in the gutter as they will clog the storm drains.

The information sources listed on page 24 will provide additional post-flood cleanup information.

Interior Cleaning

- Before removing items from water, prepare a clean, dry, well-ventilated temporary area for sorting and storing your objects. Wet objects should be moved only once because they are fragile, so setting aside such an area is vital.
- Wear rubber gloves and if possible a facemask when handling items.
- Provide support for damaged objects when moving them, such as a cart, or a flat sturdy surface.
- Carefully dispose of standing water in interior areas.
- Dispose of any food items you suspect of being contaminated.
- Contaminated household items, especially cooking and eating utensils, should be thoroughly cleaned and sanitized before use. Utensils should be soaked for 30 seconds in a clear rinse solution containing 100 parts per million (ppm) available chlorine (approximately 1 ounce of household bleach per 3 gallons of water).
- Thoroughly clean and sanitize contaminated food-contact surfaces with generous quantities of disinfecting solution. A sanitizing rinse solution which contains 100 parts per million available chlorine can be prepared by mixing approximately 2 teaspoons of household bleach per gallon of water. Milder disinfectants such as pine disinfectant or non-chlorine bleach can be used on non-food contact surfaces such as cabinets, furniture, etc., to avoid damage to these materials. Properly dispose of furniture and other materials which are too heavily soiled or contaminated.
- Soiled or contaminated carpets and pads should be removed to be cleaned more thoroughly. Carpeting may be salvaged if cleaned with detergent and disinfectant; padding is absorbent

and cannot be salvaged. Construction materials may also be contaminated or deteriorated and need to be removed. Dispose of all discarded materials properly.

- Call an expert if in doubt about how to salvage any materials.

Exterior Cleaning

- Disinfect contaminated soil or ground surfaces by broadcasting calcium oxide, or “lime.” Lime is caustic disinfecting powder used primarily for exterior areas, available at hardware or nursery supply stores. Mix lime into contaminated soil layers with shovels or other tools.

IF POWER REMAINS OFF BUT IT IS SAFE TO STAY IN YOUR HOME

Food Preparation

- Prepare only quantities sufficient for immediate use. Leftovers must be avoided if refrigeration is inadequate.
- Observe proper temperature controls. Keep food hot (above 140 degrees Fahrenheit) or cold (45 degrees or below)
- Keep hand contact to a minimum when preparing foods.
- Use single service eating and drinking utensils whenever possible.
- Wash any food containers and utensils that have come in contact with flood waters in detergent with water, rinse with clean water, then immerse in sanitizing solution of one tablespoon of household bleach to each gallon of water, for at least one minute.
- Be sure to use water from a safe source, or water that has been previously treated.

KEEPING SAFE AND HEALTHY

Heating

- **DON'T** use heat sources inside your home that are intended for outdoor use, such as charcoal grills or propane heaters. You can die from carbon monoxide poisoning if gas, oil, kerosene, wood or charcoal is burned improperly inside your home.

INFORMATION BEFORE, DURING AND AFTER A FLOOD

Useful phone numbers

City of Napa Public Outreach Coordinator Current status/recorded message.....	258-7843
City of Napa Emergency Operations Center Public Information Hotline.....	258-7817
City of Napa Police/Non-Emergency	257-9223
American Red Cross/Napa Office	257-2900
Volunteer Center	252-6222
PG&E	1-800-743-5000
Napa Valley Unified School District	253-3511

USEFUL WEBSITES

- City of Napa - www.cityofnapa.org
- Emergency Alert Notifications – www.nixle.com
- Rainfall amounts, river and stream levels - <https://napa.onerain.com/home.php>
- Road closures in the Bay Area - www.511.org
- Road closures in Napa County - <http://services.countyofnapa.org/roadinfo>
- County of Napa Emergency Services - <http://www.countyofnapa.org/emergencies/>
- Preparedness Information - www.ready.gov
- California Office of Emergency Services - www.oes.ca.gov
- Federal Emergency Management Agency (FEMA) - www.fema.gov
- Napa Valley Register – www.napavalleyregister.com

Information from TV and Radio

Napa TV- Public Access Cable Channels 27 and 28
KVON 1440 AM-Napa/KVYN 99.3 FM- St. Helena
KCBS 740 AM- San Francisco
KGO 810 AM- San Francisco