There are over 1,100 miles of levees protecting the California Delta. No matter how well built the levee, no levee is flood-proof. Know as much as you can about the threat of flood – your knowledge will be crucial to your safety and the safety of those you care about. Flooding in the Delta can happen at any time, not just during the rainy season – it can even occur during times of drought! By planning ahead, you can help protect your family and neighbors, reduce damage to your property, and be better prepared to recover from a flood emergency in your area. This issue of Delta Voice will help you take the steps you need to be aware, be prepared, and take action so you are flood ready.
We drive on them, live by them, and recreate around and in between them. A multi-billion dollar farming industry and millions of Californians rely on them. They protect lives, livelihoods, and delicate ecosystems. The levees in the Delta are such a vital part of living in Northern California that it is easy for much of the population not to give them a second thought. That is... until something goes wrong.

The history of Delta levees is long and complex, starting with the Reclamation Era between 1850-1930. At the beginning of the Gold Rush, the wetlands of the Delta started to be transformed into productive cropland to feed the abrupt increase of people flocking to California. Through the 1850 “Arkansas Act,” the state began to give away 2 million acres of wetland to private owners if they reclaimed the land for crop production. Landowners utilized thousands of Chinese and other immigrant workers to build the Delta levee system. By the end of 1930, after several dry years, challenges of salinity intrusion arose, complicated by reclamation activities, mining debris, and diversions. After 1930, the era of water projects began.

Reclamation districts, funded by local assessments and managed by landowners, were an early part of Delta life. They started to form in 1861, making them one of the oldest formations of public agencies in California.

Today, 110 reclamation districts oversee Delta levees, with one-third of the levees, or “project” levees, falling under the authority of the U.S. Army Corps of Engineers and the remaining inspected and assessed annually under State oversight.

Despite an extensive network of local landowner, State and federal involvement – levee failures do happen. Erosion, boils, overtopping, cracks, and fissures can occur over time or without notice – both in dry and wet seasons – leading to potentially catastrophic flood events. Anyone who sees a concern with a levee can report it to the local reclamation district.

Fortunately, levee failures have decreased as the levee system has improved throughout the years.

Find Your Reclamation District
deltafloodready.com/reclamation-districts
It is crucial that all Delta residents are aware of and prepared for the possibility of a flood event in their area. Comprised of five counties (Contra Costa, Sacramento, San Joaquin, Solano, and Yolo) the Delta’s emergency services and evacuation procedures operate in different ways from county to county, and at times need to work together across jurisdictions to protect Delta residents. Though evacuations can be authorized by different officials at the city, county, state, and federal levels, emergency services are often shared across different agencies and jurisdictions. Delta residents and workers should contact their county’s Office of Emergency Services to understand the processes for evacuation in their area.

There are times when a flood emergency happens unexpectedly. Often, however, there is an increasing threat that is known in advance. Typically, there are three notification stages for increasing threat levels. The first level of notification is an evacuation or protection alert, where caution should be taken. At this stage, consider packing important items such as documents, food, and water for all members of the household as well as pets. The second level is an evacuation warning or notice that indicates the threat is increasing. At this stage, voluntary evacuation is suggested, especially for those who are elderly or disabled. The third and final notification level is an evacuation request or order when threat is high or an emergency event is in progress. At this stage, an evacuation is required.

You can expect to be alerted through various media such as radio, TV, social media, and electronic highway signs. If your county offers an emergency alert system, then you can also sign up to receive direct communications via calls, texts, and/or emails. In case there is no signal or your phone is not charged, the best way to receive information is through radio. A hand-crank radio is an important item to add to your emergency kit to receive information should electricity also be down or unavailable.

Understanding what to do in a flood emergency can save lives. Make a family plan with multiple evacuation routes. Choose a family meeting place and have a plan for how to communicate during an emergency. The plan should also contain how to leave your home during a flood warning and include your evacuation routes.

If you are a business owner, you should also consider developing an evacuation plan for your staff and anyone else who may be on-site during a flood emergency.

During evacuations, California Highway Patrol and other mobilized units will be dispatched to assist with road closures, detours, and other support. However, they may not always be nearby, especially in more rural areas. What should residents consider? Delta residents should learn early on which evacuation route is available and evacuate as soon as possible to minimize traffic on roads. Don’t let your gas tank get low during flood season – filling stations may not be able to dispense gasoline for several days if there is flooding in the area. Never drive through flooded roads – more people are trapped and die in their vehicles than anywhere else during floods.

For more information visit the Delta Flood Ready website:
deltafloodready.com/flood-alerts
deltafloodready.com/evacuation-plans
Although flooding on leveed Delta islands is a rare occurrence, flood risk is a fact of life in the Delta. Floods can happen with little or no warning. A powerful rainstorm, rising river, or catastrophic levee failure can happen quickly. When planning ahead in case disaster strikes, property owners must not overlook flood preparations for their homes, outbuildings, and business structures.

According to the Federal Emergency Management Agency, the average flood claim for a residence is around $40,000. Investing time and money to protect and maintain your property will save you money after a flood event and protect your neighbors, rescue workers, and even you!

Before the Flood

There is no shortage of items to consider when preparing your property for a potential flood. Begin with waterproofing any subareas, including basements and possible entryways such as window wells. Waterproofing includes making sure rain gutters and storm drains are clear and the slope surrounding your home and other buildings directs water away. Check with your local flood control agency if you need to re-grade, fill, or alter your property as a permit may be required. Make sure sump pumps are in working order and tested on a regular basis.

Storm surge can cause a backup of sewage lines and force that sewage into residences and businesses. Speak to a licensed plumber to see what options are available to prevent backflow from entering your property through connections like bathtubs, sinks, and dishwashers.

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Many homes in the Delta rely on propane for heat and cooking and have free-standing storage tanks. Farms and other agricultural businesses may store gasoline or other fuels onsite. It’s important to anchor fuel tanks to prevent them from becoming floating hazards that can explode and cause fire damage. Keep trash and discarded equipment and materials from cluttering your property. These items can become floating hazards when floodwaters rise.

Bottles of household cleaners and other chemicals can combine with floodwaters to create a poisonous soup dangerous to animals, rescue workers, or returning property owners. Store these chemicals as high as possible and in cabinets that can be tightly secured so they don’t end up in flood waters.

**Leaving Your Property**

When leaving your property, shut off all utilities coming into your home and surrounding buildings at their source, including electricity, gas, and water. Yes, even water pipes can burst during a flood event causing additional water damage to your property! Make sure you know how to safely shut down your water main, electrical breakers, and gas service in the event of an evacuation.

Disconnect appliances to reduce the chance of electric shock when power is restored. It also provides the opportunity to inspect connections for damage before utilities are restored. If you are able, raise movable appliances as high as possible to protect them from rising water.

Make sure cabinets and other storage units with hazardous materials and chemicals are secured with a lock or latch. A zip tie around the handles of a kitchen cabinet should prevent chemicals from floating and posing risks.

Finally, move vehicles, and other mechanical equipment, to the highest areas of your property if you are not able to take them with you.

Taking the time to protect your property before a flood will save you money and it may save lives.
As you prepare your family and property for the possibility of a flood emergency, consider creating a plan for your family pets and livestock.

For family pets, keep leashes or pet cages readily available should you need them, and add other pet-related items to your emergency kit, such as canned food and pet medications. You will also want to think about how to transport your pets during an evacuation, or ways you can help protect your pet if they end up in close quarters with other animals.

Most counties, along with other organizations, offer occasional free or low-cost microchipping and vaccine clinics. Contact your county directly for services or for information on organizations that offer these clinics.

Livestock owners have unique planning needs due to the size and quantity of livestock. One of the first steps to consider is creating a response network. Keep contact information available for your staff, veterinarians, neighbors, friends, and family who may be able to provide support in securing or evacuating livestock. You may want to consider who can come from outside the area in case your local network resources are already overwhelmed.

One of the most important things you can do for your pets is to make sure they are microchipped and updated on their vaccinations. If you are separated from your pet in a flood emergency or not home when disaster strikes, there are organizations that search for animals after a disaster and get them returned to their owners — or someone may simply find them safe on high ground and take them to a local shelter. Micro-chipping will help ensure a swift return. Vaccinations will also help protect your pet if they end up in close quarters with other animals.

During floods, livestock will seek shelter. In your emergency plan, consider how you can open gates that lead to higher ground and restrict access to more dangerous areas on the property. By making a plan ahead of time, you and your response network will be able to act quickly if you are unable to evacuate the animals. Whether you are transporting them off the property or providing them an opportunity to get to safety, all livestock should have visible identification numbers for swift retrieval. Immediately after a flood event, inventory all livestock and identify any missing animals. Inform neighbors and livestock auction houses of animals that are lost and include their brand or identification number.

Even if your livestock stay safe on your property, local flooding may contaminate your livestock’s drinking water. Your emergency preparedness plan should include alternate options such as trucking in water to holding areas. You will also need to consider alternative feed options. After a flood, carefully check all food and water sources for contaminants.

Water is not the only danger in a flood event. You will need to protect your livestock from the threat of fires. Remove all fuels away from barns and stables and turn off all electrical power to structures that house livestock.

The threats to livestock from flooding do not end after the flood. Thoroughly inspect your property for damage that could injure livestock such as weakened structures, eroded land, damaged fences and gates, and even displaced wild animals. You will also need to inspect your livestock for wounds and illness. Always make sure your livestock vaccinations are current.

With a little extra planning you can dramatically increase the safety of your pets and livestock during a flood event.

Visit the Pet & Livestock page on the Delta Flood Ready website for useful resources.

deltafloodready.com/pet-and-livestock-ready
# BE PREPARED
WITH AN EMERGENCY SUPPLY KIT

- Emergency contacts
- Household evacuation plan
- First aid set
- Medications (people and pets)
- 1 gallon of water per person per day
- Canned, dried, or packaged food
- Cups, plates, and utensils
- Manual can opener
- Portable battery-powered radio
- Extra batteries
- Flashlight
- Waterproof matches
- Infant formula, bottles, blankets, and diapers
- Cell phone power cords
- Clothing, shoes, and coats
- Pet supplies (food, leash, collar)
- Hygiene products and sunscreen
- Assortment of plastic bags
- Copies of important papers, such as insurance policies, identification, and bank account information
- Wrench and pliers
- At least $50 in small bills

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**Delta Flood Ready**

**Be aware. Be prepared. Take action.**

 DeltaFloodReady.com

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