FLOOD ALERTS

More than 1,100 miles of Delta levees have been designed and built to hold back water 24 hours a day, 365 days a year. However, their resilience and strength are not always guaranteed – especially during flood season. 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, 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. California Office of Emergency Services is responsible for coordinating all five counties together to plan the Delta’s emergency and evacuation strategies. 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 (see sidebar) 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 (see the sidebar for a link about emergency kits). 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 be expected 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. 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. The Yolo County web mapping app is a useful tool for Yolo residents to identify optimal evacuation routes by simply inputting an address (see resources). As flood season makes its way, be sure information can be easily relayed to you and watch for alerts. You can also learn more about flood safety during Delta Flood Preparedness Week October 14-19 and the California Flood Preparedness Week October 19-26.

FLOOD PREPAREDNESS RESOURCES

Sacramento and Yolo County Alert System
sacramento-alert.org

Yolo County Evacuation Map
evacuate.yolocounty.org

CA Flood Preparedness Week
water.ca.gov/what-we-do/flood-preparedness/flood-preparedness-week

Delta Emergency Preparedness Activities
delta.ca.gov/levees_and_emergency_response/flood_prep
Altered Land: Life in the Pre-European Delta

Native peoples recently celebrated their heritage at the Stockton Labor Day Pow Wow. Through songs, dances, arts and crafts, and foods, indigenous people marked an annual return to the Delta, which served as a vital center in pre-European California. The story of the historic Delta’s complex society is relatively unknown and under-appreciated.

According to anthropologist David Stuart, prior to European settlement, the population density of the eastern Delta was the highest in North America except for central Mexico. Native peoples have lived in the Delta for at least 6,000 years, long before it resembled the pre-reclamation landscape. Rising sea levels after the last Ice Age created the familiar maze of sloughs and upland areas at least 4,000 years ago.

Native Californians did not practice agriculture, but they were not your typical hunter-gatherers. They maximized harvest through technologies and techniques, including using fishing and waterfowl nets, hooks and lines, and harpoons; and employing horticultural practices such as pruning, weeding, transplanting, beating seeds, and starting small fires. They ate or otherwise made use of many species, including acorns, grass and wildflower seeds, forbs, various wetland plants, shellfish, salmon, sturgeon, deer, antelope, elk, ducks, and other waterfowl.

Setting fires accomplished different objectives, including managing cattails and tules for food, clothing, and building materials; providing open water habitat for fish, ducks, geese, and birds, and wetland habitat for other species; encouraging growth of seeds and new plants; and reducing insects and pests. The small burns created multiple habitat types that allowed the Native peoples to survive changing conditions.

Their intense habitat management led to a social system akin to agrarian societies but still unique, consisting of high densities, small groups living in one or two sedentary villages, active trade networks, food and resource stockpiles, complex cultural, political, and religious systems, and relatively little violence.

Many Spanish, Mexican, and American settlers arriving in the region in the 1800s remarked on the pristine landscape, not realizing that Native peoples had been actively managing their homeland landscapes for centuries. The Delta’s “natural” spaces are still evidence of an important and vibrant culture that defies expectations.

FURTHER READING & PLACES TO VISIT

Delta Narratives Essays by Camfield, Garone, Helzer, Swagerty, and Smith
delta.ca.gov/delta_heritage/delta_narratives

The Native Peoples of San Joaquin County: Indian Pioneers, Immigrants, Innovators, Freedom Fighters, and Survivors, Part 1. by David Stuart
sanjoaquinhistory.org/articles.php

California Indian Museum, Sacramento
parks.ca.gov/indianmuseum

San Joaquin County Historical Museum, Lodi
sanjoaquinhistory.org
Pumpkins may have been cultivated in North America as far back as 7000-5550 B.C. – making them one of the earliest cultivated crops in the West. They are a winter squash in the fruit family *Cucurbitaceae* which also includes cucumbers and melons. Whether they are being carved up for Halloween or pureed into pies, pumpkins are a fall favorite – and major crop in the Delta ag economy! Ranking thirteenth on the list of top twenty Delta crops, more than 1,600 Delta acres of the coveted *Cucurbita* (that’s Latin for pumpkin) were harvested in 2016 at an estimated value of $16.5 million a year.

That’s a lot of pumpkins! However, a single pumpkin can go a long way, providing for both entertainment, decoration, and food! The tradition of the “Jack-O’-Lantern” stems from an Irish legend about a man named Stingy Jack who was a somewhat unpleasant character famous for playing tricks on people. These days pumpkin carving is a favorite fall pastime. However, their utility does not stop at mere porch decor. A delicious and versatile ingredient, pumpkin can be used for so much more than pumpkin pies (and the now widely-popular pumpkin spiced latte)! Try out this creative pumpkin comfort food recipe, sure to please at your next Halloween party or around the Thanksgiving table this year.

**Sheet-Pan Mac & Cheese with Pumpkin & Brown Butter**

**Ingredients**

- 2 teaspoons salt, plus more for pasta water
- 1 pound cavatappi pasta (or other twisty pasta shape!)
- 6 tablespoons butter, plus more to grease the pan
- 1/2 teaspoon white pepper (you can substitute black or rainbow if you prefer)
- 1 pound sharp cheddar, grated, roughly divided into about three-quarters (12 ounces) and one-quarter (four ounces)
- 4 ounces Pecorino Romano, grated
- 1 cup whole milk
- 1 1/4 cups pumpkin puree
- 1 1/4 cups plain panko
- 1/2 cup shelled pumpkin seeds (pepitas), raw

**Directions**

Heat oven to 475°F. Grease a 11x17-inch sheet pan. Bring a pot of salted water to a boil and add noodles. Cook noodles for 4 to 5 minutes so they are still firm. Drain pasta but reserve 1/2 cup of cooking water. Brown 6 tablespoons of butter over medium heat in the same pot. Turn the heat down to low. Add noodles to browned butter and quickly coat noodles. Add 2-3 tbsp of the reserved cooking water. Stir sauce and pasta until creamy. Add in the pumpkin puree with 1-2 tbsp of reserved water if needed. Turn off the heat. Transfer to a greased sheet pan. Sprinkle the remaining cheddar, then the panko and pumpkin seeds. Bake for 15 to 20 minutes.

Whether for Jack-O’-Lanterns or tasty side dishes, pumpkin enthusiasts fire up their electronic devices at the start of fall and start asking, “Where is the nearest pumpkin patch?” Luckily, the Delta boasts some of the coolest pumpkin patches in the Valley! Here are a couple of Delta patches worth their weight in pumpkin pie:

**Dave’s Pumpkin Patch**

**West Sacramento**

A West Sacramento favorite, Dave’s sports the ever popular 10-acre maze, more than 2 acres of pumpkins in all sizes and shapes, a full-service snack bar serving tri-tip sandwiches, popcorn, and a variety of treats, and a host of kid-friendly activities.

**Dell’Osso Farms**

**Lathrop**

Nestled near I-5 in Lathrop, Dell’Osso is perhaps the “Disneyland” of pumpkin patches in the Delta. Families can choose from many activities including their massive corn maze, haunted castle, Dell’Osso express train, hay ride, mystery tour, scarecrow ride, goat walk, duck races, tire pyramid, Dell’Osso speedway, animal zoo, ball shoot arena, tire play area, lawn games, super slide, kids play land, kiddie Ferris wheel, spinning pumpkins, pillow jumping, children’s interactive pirate show, and pig races.
Agricultural land covers 531,772 of the 738,000 total acres that make up the legal Delta, with the crops from that land valuing more than $882 billion. The Delta is an abundant, agricultural powerhouse and its farmers are learning how to use new farming technologies to keep it thriving and sustainable.

The 2019 Forbes AgTech Summit hosted last June in Salinas, showed off the latest ag technologies that may just be the next big boon for farmers. However, many new technologies are already utilized on today’s farms such as soil sensors, aerial mapping via drones, and radio frequency identification (RFID) which is used for monitoring crops and livestock. In order to stay competitive over other producers, farmers are progressively enhancing their farming techniques for greater efficiency, higher crop productivity, and control over the land.

Another benefit of farming technology is sustainability. Farmers from Yolo County now take part in “climate-smart agriculture” incentive programs. The goal is to meet the state’s greenhouse gas emissions reduction target of 1990 levels by 2020. Through grants, farmers take on a variety of approaches and practices to cut emissions from their farms. Farms like Wilson Vineyards near Clarksburg were able to install high-tech tools such as soil moisture probes that are more energy efficient and cost effective while also conserving more water than traditional irrigation monitoring.

Valley Vision has also been supporting ag tech development in Yolo County by administering surveys to research the restraints and gaps in rural broadband - one of the biggest obstacles for expanding farming technology. Only 43 percent of California’s rural population has the same internet speed as urban areas, according to California Public Utilities Commission. Without a good internet connection in the rural areas, farmers are unable to fully utilize their ag tech and the apps that often run and monitor the tech tools on the ground. The Federal Communications Commission is currently working on creating “gigabit zones” which will bring broadband opportunities to rural and other economically challenged areas, including the Delta. Reliable broadband is a vital step for Delta farmers who seek to capitalize on the technological advances of today – and tomorrow!

Ajit Pai (pictured center), Chairman of the Federal Communications Commission, toured Clarksburg in Spring of 2019 with a focus on rural broadband and its impact on the agricultural economy, rural development, health care, public safety, and emergency services. David Ogilvie (pictured left) and Tom Merwin (pictured right), of Muddy Boot Wines explain how smart farming technologies work to support their vineyard while also being hindered by unreliable broadband.

Connecting the Delta: Broadband Action Plan

Commission staff is working on improving broadband infrastructure in the five legacy communities that have participated in the community action planning processes. Valley Vision prepared the Broadband Action Plan to assess existing infrastructure and provide recommendations for next steps. Learn more: www.delta.ca.gov/delta_heritage/community_action_planning
Survival of the Salmon

Though Native Americans did not practice agriculture in the Delta, they did harvest a wide variety of food sources including salmon. Estimates of indigenous consumption of salmon in the Central Valley range from 8.5 to 11 million pounds annually, depending on population estimates. The salmon fishery continued to be important to the economy with the Euro-American commercial fishing industry during the late nineteenth century until the last cannery closed when salmon populations declined due to over-fishing and habitat loss. Hydraulic mining covered salmon spawning beds with silt and reduced salmon spawning habitat. The U.S. Fish and Wildlife Service in 2011 estimated the Sacramento River salmon fishery at $100 million annually.

Chinook salmon (Oncorhyncus tshawytsccha) are an anadromous species which means they are born in freshwater streams, spend their adult life in salt water, and migrate back to the upper reaches of their freshwater natal streams to spawn. Chinook salmon usually return at either 2 or 3 years old to lay eggs and then these adults die. Four distinct runs of Chinook Salmon spawn in the Sacramento-San Joaquin River system, named for the season when most of the adults enter freshwater: fall-run, late fall-run, spring-run and winter-run. All of the runs are protected to some extent by endangered species laws. Fall-run salmon contribute the most to the large commercial and recreational fishery in the ocean. Due to declines in salmon populations, the inland valley area catch (which includes the Sacramento-San Joaquin Delta) is closed to recreational fishing.

California Department of Fish and Wildlife, National Marine Fisheries Service, and U.S. Fish and Wildlife Service have been studying how Chinook salmon move through the Delta and how to limit threats to their survival. Work is underway to develop additional floodplain habitat, which allows juveniles to grow big and strong before moving out to saltwater, limit predators, and provide better habitat along the river from their spawning habitat to the Delta’s salt water – fresh water mixing zone. Providing conditions that promote salmon survival will hopefully have lasting benefits to the species and the people who depend on them.

Open daily, the Nimbus Fish Hatchery Visitor Center in Folsom on the American River provides fun, educational activities about Chinook salmon for children and adults of all ages. A nature trail along the American River gives an opportunity to view wildlife along the river. The hatchery fish rearing ponds are also open to visitors. School groups are welcome. More information is available at: www.wildlife.ca.gov/Fishing/Hatcheries/Nimbus.
October

Weekends (Oct-Feb) - Sandhill Crane Preserve Tours - LODI
www.wildlife.ca.gov/regions/3/crane-tour

Oct 5 - Sacramento Century Challenge - SACRAMENTO
www.sacramentocentury.com

Oct 11-13 - Bass Derby - RIO VISTA
www.bassfestival.com

Oct 19 - Heart of the Delta - BETHEL ISLAND
www.bethelisland-chamber.com/heart-of-the-delta-festival

Oct 20 - Clarksburg Country Fair - CLARKSBURG
www.eventbrite.com/e/clarksburg-country-fair-tickets-73282771743

Oct 24 - Delta Stewardship Council Meeting - SACRAMENTO
www.deltacouncil.ca.gov/council-meetings

Oct 25 - Buck for Ducks - DAVIS
www.yolobasin.org/bucks-for-ducks

November

Nov 1-3 - Sandhill Crane Festival - LODI
www.craneislandfestival.com

Nov 14-17 - Central Valley Bird Club Symposium - STOCKTON
www(cvbirds.org/events/symposium

Nov 21 - Delta Protection Commission Meeting - WEST SACRAMENTO
www.delta.ca.gov/commission/meetings

Nov 21 - Delta Stewardship Council Meeting - WEST SACRAMENTO
www.deltacouncil.ca.gov/council-meetings

Nov 28 - Rio Vista Turkey Trot - RIO VISTA
www.runsignup.com/Race/CA/RioVista/RioVistaTurkeyTrot

December

Various dates and locations in Dec - Lighted Boat Parades
www.visitcadelta.com/calendar/2019-12

Weekends in Dec - Holiday Weekends at the Wineries - CLARKSBURG
www.oldsugarmill.com/Holidayweekends2019.html

Dec 5 - The Haggin Museum’s Winter Diversity Mixer - STOCKTON
www.hagginmuseum.org/events/diversity-mixer

Dec 7 - Holiday Home Tour - RIO VISTA
www.facebook.com/events/2303819873163572

Dec 9 - Delta Conservancy Board Meeting - WEST SACRAMENTO
www.deltaconservancy.ca.gov/board-meeting-materials

Dec 14 - River City Marketplace - WEST SACRAMENTO
www.rivercitymarketplace916.com

Dec 19 - Delta Stewardship Council Meeting
www.deltacouncil.ca.gov/council-meetings