



SPN SURVEYOR

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SPN changes leaders

LTC Rayfield replaces LTC Morrow

COMMANDER'S CORNER

Important work you do contributes to the mission

By Lt. Col. Travis J. Rayfield
San Francisco District Commander

I know I haven't had the opportunity to meet all of you yet, so let me take this opportunity to again introduce myself and let you know how excited I am about leading the San Francisco District. I've only been commander since the end of June but in the time since, so many of you have welcomed me while I begin to get up to speed on all of the important work you are doing for the Bay Area and the nation.

I came to the district having last served as a professor of military science just down the road at UC Santa Barbara, and I sought out this assignment after hearing about the San Francisco District's great reputation. I want to get to know all of you and what you think I can do to make this an even better place to work -- and to make sure you know that the important work you do every day is making a meaningful contribution to the mission.

In this issue of Surveyor, you'll read about many of those extraordinary contributions -- from our debris-removal crews working around the clock this past



winter to keep our federal channels in the Bay Area clear of navigational hazards to our Regulatory team responding to the countless requests for emergency permits as a result of historically wet winter conditions here in California. Our water managers did an outstanding job keeping a vigilant watch over water levels at our two dams at Lake Sonoma and Lake

Mendocino and making the right decisions about when to release water and how much with an eye on forecasted weather changes.

These are just a few examples of the incredible work you do day in and day out. We have no shortage of complex and challenging missions in the San Francisco District, and I am confident that you -- our employees -- will rise to every occasion.

So if I haven't done so already, don't be surprised if I stop by your workspace to introduce myself, and to learn what issues are important to you. As I begin this assignment, I want to know what we can do together to make this an even greater district during my coming years as commander in San Francisco.

Finally, I'd like to take a moment to recognize our district employees who have answered the call, joining hundreds of volunteers from across USACE, in responding to the devastating hurricanes in Texas, Florida and Puerto Rico. Many others are now gearing up to assist communities in our own backyard as they deal with the aftermath of deadly fires that consumed many parts of northern California. Thank you for your service to this great nation.

SPN SURVEYOR

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SPN provides emergency lifeline to outpost

By Nick Simeone
District Public Affairs

Twenty six nautical miles west of the Golden Gate Bridge lie the Farallon Islands, a ragged, wind-swept and inhospitable speck of land, home to the largest seabird colony in the United States but uninhabited by humans except for a crew of conservation scientists who monitor wildlife.

While officially part of the city and county of San Francisco, very few locals have ever set foot on the Farallones, Spanish for "cliffs" or "rocky peak" which have been blamed for multiple shipwrecks over the centuries. Lore has

it that their peril became so widely known that sailors used to refer to them as "the devil's teeth" because of the danger they posed to maritime traffic.

The islands, surrounded by shark infested waters, have no food or potable water. All supplies have to be transported from the mainland.

And so it was in April when a scheduled resupply ship broke down that the



Crewmembers offload supply boxes from the deck of the M/V Dillard for researchers at the Farallon Islands. (Photo by Larry Quintana)

San Francisco District's command and control vessel, the Dillard, set sail for the Farallones on an emergency resupply mission for resident scientists from

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SPN News

District launches Corps Radio



Beach
Wayne Brandt, SPN security officer, is the voice behind the Corps Radio station.

By Nick Simeone
District Public Affairs

The San Francisco District has become the first within the Corps to start a radio station designed to deliver public service announcements about water safety at Corps recreation facilities via streaming audio and low power radio.

Designed by Operations and Readiness Chief Mike Dillabough and Security Officer Wayne Brandt, Corps Radio is a low cost method of delivering water safety messages to help prevent drownings at USACE facilities. It is being run by Brandt out of the Sausalito office in conjunction with park rangers.

"Wayne volunteered to tackle the many different technical and legal issues centered on how to effectively use radio," said Dillabough, who along with Brandt said the programs, intended for anyone visiting Corps recreation facilities, will not only provide life safety messages but will also tell the Corps' story.

The idea first came about in the mid 2000's and gained traction in response to a directive from USACE headquarters that districts help reduce water fatalities by half. The San Francisco District decided a good way to get that message out to the largest group considered at risk -- young males -- was to leverage radio. "I suggested we develop our own

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On the cover



Arijs Rakstins, U.S. Army Corps of Engineers San Francisco District chief of Programs, Projects and Management Division, prepares to pass the district flag to Lt. Col. John C. Morrow, right, outgoing district commander. Lt. Col. Morrow, commander since 2014, relinquished his command June 30, 2017, passing the flag to Col. D. Peter Helmlinger, left, South Pacific Division commander, who in turn presented the flag to Lt. Col. Travis J. Rayfield, second from left, making him the 53rd San Francisco District commander. (Photo by Larry Quintana)

CLEANING UP THE BAY

District's debris team removes navigation dangers

By Nick Simeone

District Public Affairs Office

Every day, commercial and recreational vessels and mariners of all shapes, sizes and abilities ply the San Francisco Bay, often challenged by strong tides, rough winds and blinding fog.

On the water with them most days is Joe McCormick, captain of the U.S. Army Corps of Engineers debris removal vessel, the M/V Raccoon, a 76-year-old refurbished Navy ship that is one of the oldest working commercial boats on the Bay. Since 1960, the vessel with its usual crew of six has been scouring the waterway and its tributaries ensuring that busy shipping lanes are clear of navigational hazards.

It's a task left entirely to the U.S. Army Corps of Engineers, one that is shared with the Raccoon's multi-purpose sister ship, the M/V John A. B. Dillard, Jr. It doesn't bother McCormick that the mission is something most Bay area residents are largely unaware of. "A lot of boaters know, but the general public doesn't," he said. "The reason why we're not in the news is because we're successful at completing our mission and preventing accidents."

On a voyage in 2016 that was typical of the daily routine, the Raccoon and her crew set sail from their sleepy berth in Sausalito, Calif., and began a slow push through calm morning waters into the Bay, maneuvering past scores of commercial vessels, recreational boats and kayakers out enjoying a sunny, fogless day. All of them -- whether they knew it or not -- were relying on the Raccoon to spot and remove dangerous de-



Beach

The M/V Raccoon, one of San Francisco District's two debris removal vessels, ensures the San Francisco Bay federal navigation channels are clear of debris that could obstruct maritime traffic.

bris before they collided with it.

What's pulled from the water can include everything from stray logs and runoff from storms, to boats that are no longer seaworthy, as well as broken piers and dead animals -- even wind-blown objects that fall from vehicles crossing the Bay Bridge overhead. Anything in the federal shipping channels capable of disrupting safe sea traffic has to be removed. While the Bay generally sees less debris in summer, Mc-

Cormick, who has captained the Raccoon for over 20 years, says winter storms can bring a deluge.

"During the El Nino of 96 and 97, the Bay was inundated with debris and boats could not get in or out of pier 39 Marina, and shipping and ferry speeds were restricted. The debris fields were as large as football fields." The 1989 earthquake in

Continued next page



Photo Feature

Petaluma boy gets first-hand look at debris operations

DJ Woodbury, 12, along with his dad, David, became a media sensation earlier this year when it was reported the duo had hauled out more than 2,200 pounds of garbage from the Petaluma River as part of DJ's school service project. Hearing of the news, the M/V Raccoon crew invited sixth-grader DJ and his dad, an avid boater in Petaluma, for a May 4 tour of the Bay and a first-hand look at SPN's debris removal operations.

[Left] DJ, at the helm, gets pointers from Joe McCormick, captain of the Raccoon.

[Right] Following the tour, DJ displays the USACE flag, middle, a gift from crewmembers.



-- Reporting by Brandon Beach

AROUND THE DISTRICT

SPN leadership changes hands in June ceremony

By Nick Simeone

District Public Affairs Office

Leadership of the U.S. Army Corps of Engineers San Francisco District changed June 30 when Lt. Col. Travis J. Rayfield was sworn in as the district's 55th commander.

At a morning military ceremony at the Bay Model Visitor Center here, Lt. Col. John C. Morrow relinquished command of the district he has led since 2014. Rayfield assumed command after having most recently served as the Professor of Military Science at the University of California, Santa Barbara. Recent operational assignments have included platoon leader and executive officer in the 14th Engineer Battalion, Fort Lewis, WA; battalion logistics officer and com-



photos by Quintana

[Above] Lt. Col. Travis Rayfield stands at attention before the color guard during a San Francisco District change of command ceremony at the Bay Model June 30. [Below] Rayfield, right, accepts the district's colors.

mander of the Bay Area since 1866, providing support for 22 federal shipping channels and the region's \$68 billion annual maritime industry, and is the federal agency responsible for keeping the



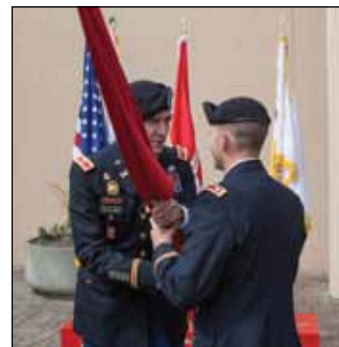
Col. D. Peter Helmlinger, South Pacific Division commander, provides remarks during the ceremony.

mander in the 1st Engineer Battalion, 1st Brigade, 1st Infantry Division, Fort Riley, Kansas. His military experience also includes deployments to Iraq and Afghanistan. Rayfield holds a Master of Engineering in Environmental Engineering Sciences.

At the ceremony, South Pacific Division Commander Col. D. Peter Helmlinger credited Morrow and his team for significant improvements in the San Francisco District during his three years as commander.

"The district executed nearly half a billion dollars' worth of engineering construction

across Northern California. This has reduced flood risk, it has ensured navigation and it has restored the environment." All of this, Helmlinger said, "was done in one of the most diverse and economically important and environmentally sensitive areas of the country."



and is the federal agency responsible for keeping the

PAST COMMANDERS	
MAJ Robert G. Wilkerson 1969-1971	COL John E. Harrel 1987-1990
MAJ George H. Maxwell 1971-1988	COL John A. Harman 1982-1983
CPT Joseph E. Hahn 1988-1989	COL Robert H. Allen 1983-1986
COL Charles E. Hahn 1989-1991	COL Frank C. Sanger 1988-1989
COL William H. Hahn 1991-1997	COL Charles R. Roberts 1989-1993
LTC John Baker 1997-1999	COL James L. Lammie 1975-1976
COL Thomas R. Rose 1991-1997	COL Henry A. Fleetham Jr. 1976-1977
COL William H. Hahn 1971-1976	COL John M. Acker 1977-1988
COL Charles L. Finner 1976-1982	COL Peter Beckwith Jr. 1980-1982
COL Herbert G. Gault 1982-1985	COL Edward H. Lee Jr. 1982-1984
MAJ John W. H. Schuler 1985-1987	LTC Andrew Perkins Jr. 1984-1987
COL Tim Jackson 1987-1989	COL Galen H. Humphreys 1987-1989
MAJ W. H. Rippey 1988-1991	COL Stan G. Phelan 1989-1992
LTC A. Fred 1989-1992	LTC Leonard E. Carlson 1982-1994
LTC A. Fred 1992-1998	LTC Leonard E. Carlson 1994-1998
MAJ R.C. Hunter 1992-1995	LTC Richard G. Thompson 1994-1998
COL R.E. Hahn 1995-1997, 4th Lt. 2002	LTC Peter E. Crane 1998-2000
COL E.M. George 1997-1998	LTC Timothy G. (Tim) Kelly 2000-2002
COL James D. Andrews Jr. 1992-1995	LTC Michael S. Conroy 2002-2004
LTC Frank E. George 1995-1998	LTC Phyllis T. Fair 2004-2008
COL George Meyer 1998-2001	LTC Craig H. Hahn 2008-2009
COL R. W. Hahn 1987-1989	LTC Leonard M. Ford 2008-2010
COL Frederick S. Sandy 1998-2002	LTC Steve A. Drake 2010-2012
COL Henry Harrel 1982-1983	LTC John E. Baker 2012-2014
COL A. J. Goodwin 1982-1984	LTC John C. Brown 2014-2017
COL W. F. Cassidy 1984-1984	
COL John A. Galt 1984-1987	

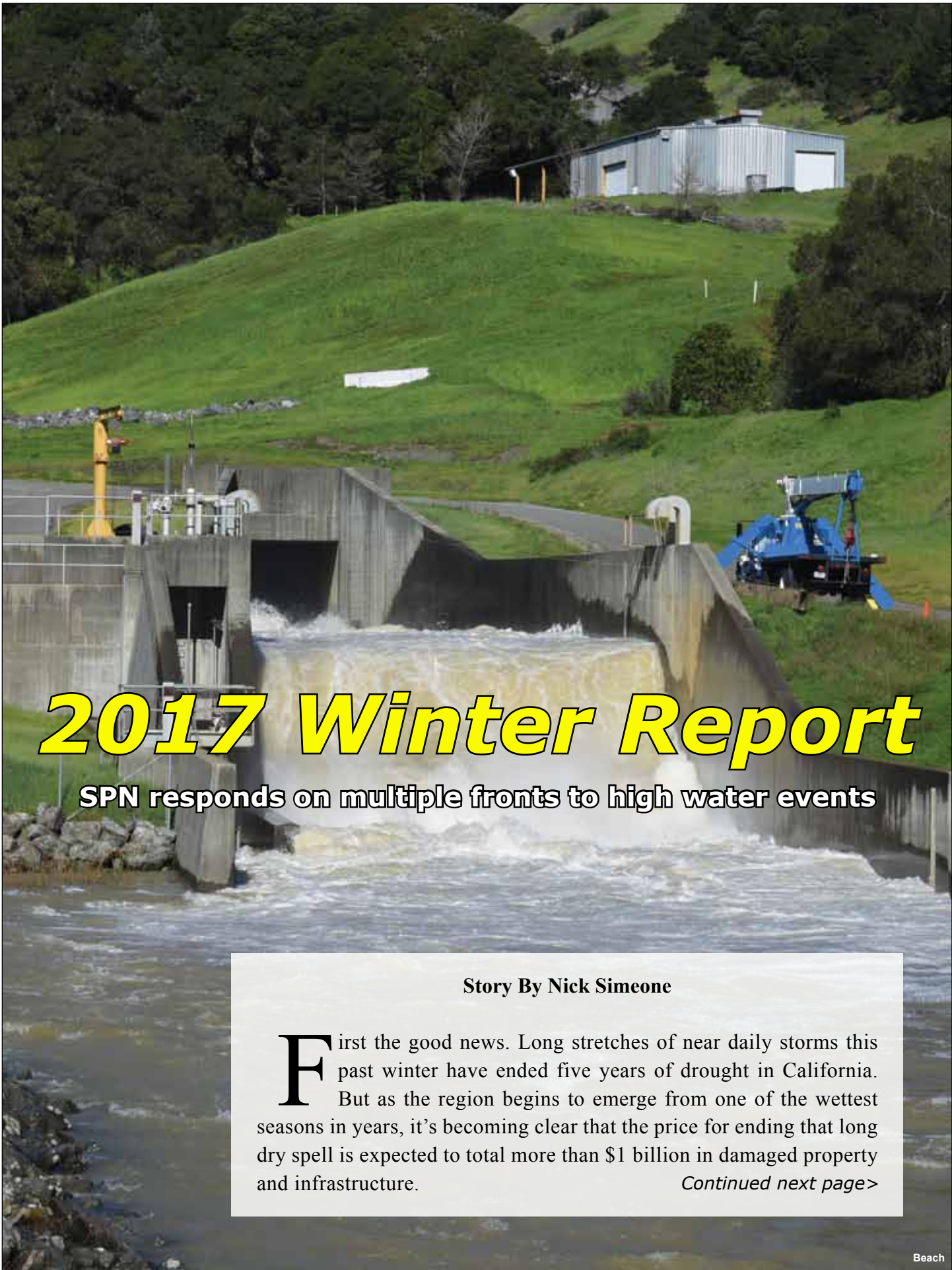
Raccoon continued ...

the Bay Area triggered a similar avalanche of debris.

Nothing seems too large for the Raccoon to lift from the water. The drift collection vessel is equipped with an on-board crane that can lift objects weighing as much as 20 tons and like a basking shark with its mouth open, the 104-foot, twin diesel engine scavenger ship deploys a net that gobbles up all debris that it encounters on the surface in front of it as it moves forward. "There's nothing this boat can't handle," said chief engineer Joe Rakstins.

Built at the Mare Island Navy Yard in Vallejo, the Raccoon was first known as the "Seaplane Wrecking Derrick" while in service of the Navy beginning in 1940. Twenty years later, the vessel was transferred to the Corps' San Francisco District and renamed the Raccoon. With its hull completely replaced and on a fourth set of engines, the ship is still going strong. "The age and great condition are a direct reflection of the crew and navigation section leadership," said McCormick.

The Raccoon recently returned to the job after spending five months in dry dock for routine maintenance. Even as she approaches age 80, McCormick thinks the Raccoon still has a long life ahead of her. "The Raccoon will last for another 25 to 30 years of service."



2017 Winter Report

SPN responds on multiple fronts to high water events

Story By Nick Simeone

First the good news. Long stretches of near daily storms this past winter have ended five years of drought in California. But as the region begins to emerge from one of the wettest seasons in years, it's becoming clear that the price for ending that long dry spell is expected to total more than \$1 billion in damaged property and infrastructure.

Continued next page>

Winter continued ...

It was supposed to be the winter of 2016, not this year, in which an epic El Nino would drop a deluge, but for some reason that didn't happen. "This year's rainy season caught a lot of the state by surprise since this season was supposed to be the La Nina year as opposed to an El Nino year," said former San Francisco District Commander Lt. Col. John C. Morrow. Instead, Mother Nature decided, El Nino or not, this would be the year that she would drop twice the amount of winter precipitation on Northern California as we normally receive. And that left multiple teams within the Corps' San Francisco District keeping a close eye on everything from dams, to debris removal, to the issuing of emergency, storm-related permits. But Morrow said the district was not caught off guard, and despite the fact that forecasters were not warning of an extremely wet 2017 winter "we had solid plans in place to respond to heavy rainfall even though we really didn't think we would have to exercise those this season. I have been extremely impressed with how everyone on the team has responded."

Dams have been a particular focus. "It's been very busy with our reservoir and dam missions," said Derrick Dunlap, the district's deputy chief of operations and maintenance. Warm Springs Dam in Sonoma has seen its wettest year in two decades.



Beach

These two photos of the marina at Lake Sonoma illustrate the drastic changes in water levels from Jan. 12, 2017 (above) to April 20, 2017 (right).



Leeson

Crews from the California Department of Transportation work to repair the Pfeiffer Canyon Bridge near Big Sur following storm damages. In response, SPN issued an emergency permit to Caltrans to begin the work.

Coyote Valley Dam further north in Ukiah saw levels rise this past winter to the flood storage pool stage. But unlike the dam at Oroville, neither experienced any water-related stress as they held back more than 100 billion gallons of water.

But the rainy winter didn't pass without Corps personnel being called on for emergency action. Just to the south in Big Sur, heavy rains damaged the Pfeiffer Canyon Bridge which carries scenic Highway 1 through mountainous terrain, leaving restaurants, state parks, hotels and hundreds of residents in the touristy town stranded.

In response, San Francisco District regulator Janelle Leeson issued an emergency permit to Caltrans to demolish and rebuild the structure. "We've

We've had more rain than California can handle, and we've seen emergencies all over the state.

Janelle Leeson
Regulatory Project Manager

had more rain than California can handle and we've seen emergencies all over the state and this is just one of the bigger ones we've seen," said Leeson, after one of her visits to the demolition zone. She spent much of the winter monitoring the project which is expected to cost the state \$20 million and

take as long as nine months to complete.

It's been a season of so much rain that Gov. Jerry Brown -- who just two years ago was in the Sierra Nevadas bemoaning the low snowpack level -- sent an urgent request to the Corps for help with what he expects will be over \$1 billion in spending on flood control projects across the state over the next two years. This will include expanding the inspection of all federal dams as well as updating federal operating manuals for California reservoirs. Chief of Engineers Lt. Gen. Todd Semonite said the Corps will do what it can to provide support.

Of course, much of that support is likely to be contingent on budgetary decisions, spending choices that are being weighed on the other side of the continent.


CORPSRadio continued ...

internet-delivered radio station with the hope that the music will cause them to listen to our public service announcements that address water safety," said Brandt.

Give Corps Radio a listen by visiting [facebook.com/Corps-Radio-648801351984353](https://www.facebook.com/Corps-Radio-648801351984353) and downloading the app.

STEM CORNER

HS students test robotic vehicle at L. Mendocino

Story & photos by Brandon Beach
District Public Affairs Office

Remember when summer break meant just that -- a break. Not so for several students from Pittsburg High School who spent much of their summer building a robot.

They had the chance to test out their invention, a robot car outfitted with a small video camera, in a real-world scenario Aug. 4 using it to inspect a drainage pipe at the base of Coyote Valley Dam at Lake Mendocino.

"We've been working on it all summer," said Jesus Barragan, a Pittsburg HS sophomore, "making it smaller, giving it more traction."

Focusing on traction was critical for maneuvering the robot through the mucky toe drain environment. Nearby the drainage pipe, students had set up a shade tent, table and chairs, along with laptops to display and capture video feeds, various coils of wire and a joy stick to operate the robot.

Personnel from the U.S. Army Corps of Engineers San Francisco District were also on hand to look over engineering drawings of the drain and offer advice. For the most part, though, it was left up to the students to figure out how to get the robot to work.

"I've always liked to put things together like this," said senior Catalina Vera.

The school's robotics program is run by teachers Beth Traub and Jack Gillespie, who is married to Lyn Gillespie, SPN's chief of Engineering and Technical Services Division. It was early discussions between the Gillespies and Mike Dillard, chief of Operations and Readiness Division, that led to the idea of using a robot to perform this type of inspection.

Throughout the school year, the team competes in various robotics tournaments. Spending the summer holed up in robotics lab may just give them a competitive edge.



[Above] Pittsburg HS senior Catalina Vera prepares to place a robot car into a toe drain at Lake Mendocino.



Jesus Barragan, above, and Jacob Hernandez, below, sophomores at Pittsburg High School, make adjustments to their robot, used to inspect a drainage pipe.



Jack Gillespie, Pittsburg HS robotics teacher

Dillard continued ...

the Point Blue Conservation Services. Along with Captain Kixon Meyer, Dillard and her crew, with a load of food, equipment and personnel became the lifeline that brought essentials to people who photographer Larry Quintana described as "living on a treeless rockpile."

Weather conditions and rough seas in the area gener-

ally make such missions too risky for smaller boats but "the Dillard is able to assist in emergencies to ensure the island operations are not disrupted and has provided key support for operationally crucial projects," said Meyer. Such support has included transporting equipment used to upgrade the Farallon's power grid as well as maintaining the major navigational light on the outpost.