

# 2018 FMA Annual Conference Awards Luncheon September 5, 2018



# Floodplain Manger of the Year Award

This award seeks to recognize outstanding individual or team efforts and contributions to floodplain management. The Floodplain Manager of the Year is designed to honor an individual or team responsible for the development or implementation of a distinguished local program or activity. This award is given by the Association to individuals or teams who are highly instrumental in carrying forward the goals and objectives of floodplain management.

#### Tim Washburn, Sacramento Area Flood Control Agency

Through Tim Washburn's vision and "all boats rise together" call to action, Sacramento is a much safer place to live. With Tim's leadership, tenacity and collaboration, SAFCA has developed a comprehensive flood protection plan, numerous funding strategies, and ultimately implementation of a series of flood risk management efforts which will achieve higher than 200-year flood protection for the Sacramento area.

During his 29-years with SAFCA, Tim has been a key-player in the following list of nearly \$4.4 Billion in flood-risk reduction projects that have been completed, are being constructed, or will soon be implemented.

- American River Watershed Folsom Dam Modifications Project (Joint Federal Project)
- Updated Folsom Dam Water Control Manual
- American River Watershed Folsom Dam Raise
   (Raise Folsom Dam, New Bridge, Modification of the Temperature Control Shutters)
- Folsom Dam Reoperation Agreement
- American River Watershed Common Features Project (American River Levee Reconstruction)
- Natomas Levee Improvement Program (constructed by SAFCA)
- American River Watershed Common Features Project- Natomas Basin
- American River Watershed Common Features Project General Reevaluation Report
   (Widen Sacramento Weir and Bypass, North Area and Sacramento River Levee Reconstruction, American and Sacramento River Erosion Control)
- South Sacramento Streams Group Project
- Sacramento Area Urban Levee Reconstruction Project
- North Area Local Project (constructed by SAFCA)
- Sacramento Bank Protection Projects in Sacramento Area
- Magpie Creek Project
- American River RM 0.5 Habitat Enhancement Project
- Site 18A Culvert Replacement and Fish Passage Enhancement Project
- Sankey Gap Overflow Control Project
- Bryte Landfill Cleanup
- Elkhorn Basin Project

# Award for Excellence

This award seeks to find and recognize outstanding floodplain management projects, programs and/or activities. Eligible entries include local, regional, and national government (such as cities, towns, counties, State, and Federal agencies), special districts, and private consulting engineers/firms. Eligible entries include either an overall program or a specific project or activity which epitomizes the best in floodplain management.

#### **Alameda Flood Control and Water Conservation District**

Alameda County Flood Control & Water Conservation District's (District's) updated Alameda County Hydrology & Hydraulics (H&H) Manual is a major development in defining standards of practice, required design criteria, and hydrologic computation techniques for drainage facilities in Alameda County.

The District maintains one of the most dense and long-lived rainfall and runoff data sets in the San Francisco Bay area, and possibly in all of California. The District built and calibrated a robust and accurate model based on more than 100 years of its and neighboring communities' data. The model is fully correlated to historical flooding conditions, as measured in stream gauges and observed in the field.

Rather than a "shopping cart" approach, where various methodologies are put together without knowing the runoff frequency, the District developed integrated guidelines and recommendations in its H&H Manual based on modeling results. The District determined that the Snyder Unit Hydrograph methodology was the most accurate in reflecting runoff conditions in Alameda County, particularly where significant amounts of water flow from steep hillsides to a flat Bayland.

The procedures presented in the H&H Manual provide an accurate representation of runoff resulting from various rainfall frequencies. This greater accuracy has given the District a high degree of confidence that it is spending limited taxpayer resources most judiciously.

Since issuing the manual in 2016 and updating it in 2017, the District has given presentations to many interested agencies and groups around the Bay Area. The manual has received widespread acceptance among Bay Area flood control and public works professionals

#### **Agriculture Floodplain Ordinance Task Force**

The Agricultural Floodplain Ordinance Task Force (AFOTF) is recognized for the efforts of its members and accomplishments affecting national change and awareness of agricultural sustainability in floodplains.

The 2012 Central Valley Flood Protection Plan highlighted the effect that FEMA's policies have on the sustainability of agriculture in floodplains. It recommended FEMA consider establishing a flood zone for agricultural communities and special, lower insurance rates for agricultural structures based on risk. Subsequently, Congressman Garamendi and Senator Feinstein requested the federal Governmental Accounting Office to assess the impact of federal floodplain regulations and insurance mandates on the agricultural industry.

The Task Force was formed in 2015 to pursue actions that could be approved within FEMA's administrative authority. It is composed of officials from FEMA, DWR, the CVFPB, levee and flood control agencies, county government, consulting engineers, farmers, and non-governmental agency representatives.

In December 2016, the AFOTF completed a technical memorandum presenting nine recommendations to FEMA for modifying its rules and practices under the NFIP to improve sustainability of agriculture in leveed SFHAs. The technical memorandum included proposed policy changes, levee relief cut guidance documents, a methodology for rating a non-accredited levee system's flood protection, and model floodplain management ordinances. The technical memorandum was supported in the 2017 CVFPP Update and is being considered by FEMA in developing updated guidelines for public review in the fall of 2018.

# Response to 2018 Montecito Mudflows, Thomas D. Fayram, Deputy Director of Public Works, Santa Barbara County

The events leading up to, and culminating with the Montecito January 9, 2018 Debris Flow thrust Thomas Fayram into a role that exemplifies his commitment to public safety and public service.

The Thomas Fire was immediately followed by an intense band of rainfall over the Montecito area of Santa Barbara County in the early morning hours of January 8, 2018. The rainfall resulted in a debris flow event—a violent act of nature the likes of which had not been witnessed before—that was visited upon the community with tragic results.

Mr. Fayram took a leadership role in the events leading up to and immediately following this devastating debris flow event. Working tirelessly in partnership with State and Federal partners, he communicated daily with the community in the immediate aftermath of the debris flow and led the Santa Barbara Flood Control District to press on with the mission of response and recovery. Mr. Fayram's actions were focused on advocating for the community and ensuring public safety. His experience, passion, and integrity made him the right man to lead the Flood Control District's efforts in the aftermath of the debris flows.

# **Communications and Outreach Award**

This award was established to acknowledge exemplary efforts in communications and outreach on the part of communications media (written and/or visual), the incorporation of new technologies, or the novel use of existing technologies to increase information and/or awareness of flood issues with the general public.

# Dawn Pimentel, Sacramento County Department of Water Resources

Dawn Pimentel, Assistant Engineer with Sacramento County Water Resources, is the lead engineer for the Sacramento County "Be Aware-Be Prepared" StormReady campaign. Mrs. Pimentel is also the lead for the public information component of Sacramento County's Class 2 Community Rating System Program. In this role, Dawn has developed effective written and online information that allows the public to understand their flood risk through online tools, encouraging the public to be aware of their flood risk and to be prepared.

Sacramento County is one of only six communities nationwide to have achieved a Class 2 Community Rating System classification saving residents up to 40% on their flood insurance if their property is in the special flood hazard area. The county's CRS public information outreach is comprehensive and includes billboards, radio spots, and mail-outs to property owners. The information provided, includes the county flood zone hotline, the county StormReady website, recommendations on flood insurance, tips to improve drainage, steps to protect property from flooding, and tips to protect life safety. Residents are encouraged to review the real- time stream and rain gage system and to sign up for county alerts.

# Gary Estes, Founder California Extreme Precipitation Symposium

Gary Estes of Auburn, California is the founding coordinator of the California Extreme Precipitation Symposium. The symposium began as the "California Weather Symposium" in 1994 and continued annually, until 2003. For many years, the Symposium was held at Sierra College east of Sacramento. The name was changed in 2004 to the "California Extreme Precipitation Symposium." FMA has been a sponsor of the event since 1994. From the initial gathering of 55 weather aficionados, attendance at the conference has grown to over 200.

Over the years, the primary focus has been on precipitation responsible for floods. Flooding is of primary concern to government agencies responsible for protecting life and property located in floodplains and the private sector professionals assisting them. Desired outcomes of the CEPS are to provide better information on the size of large floods for land use and flood risk management planning efforts, and to increase the warning time in advance of large floods.

Gary Estes along with Matt Fleming of the USACE Hydrologic Engineering Center were invited in 2015 to speak at the International Symposium on Extreme Precipitation in Tokyo, Japan. Gary also assisted in the planning and management of the March 2018 first ever Southwest Extreme Precipitation Symposium held in San Diego. Based on its initial success, it is planned to be an annual event. Gary's sustained leadership on the CEPS and SEPS is commendable and the symposiums have led to advancements in flood risk management and meteorological science.

#### Santa Barbara Independent

The Santa Barbara Independent is a news, arts, and alternative newspaper published every Thursday in Santa Barbara, Ca. The weekly paper was founded in November 1986, the result of a merger between The Santa Barbara News & Review (established 1973), and The Santa Barbara Weekly (established 1984).

Mere weeks after the largest wildfire in state history scorched the foothills of Montecito, disaster struck yet again, as devastating mudslides triggered by heavy rainfall reduced much of the coastal community to what officials described as a scene resembling a World War I battlefield.

The Santa Barbara Independent was on the scene publishing multiple articles describing the devastation to the community and the recovery that has taken place since. During all the tragedy, stories of miracles emerged through the deluge. The Santa Barbara Independent gathered and published personal accounts from people affected by the storms, bringing firsthand accounts of not only the desolation but the heroism and bravery that followed.

# Goddard Award for Outstanding Article in Floodplain Management

This award recognizes technical contributions to the FMA newsletter, which is published quarterly.

# **Dave Peterson, Peterson-Brustad Engineering Consultants**

In the August 2018 edition of the Floodplain Management Association Newsletter, an article titled "When Did Protecting Lives Become Optional? – is "Investment" the right word for protecting lives?" by Dave Peterson of Peterson-Brustad Engineering Consultants was featured. The article discusses and debates the question if repairs to life-protecting infrastructure should be considered an "investment" subject to benefit-cost ration (BCR) analyses. Examples where repair to life-protection infrastructure were repaired without a BCR analysis are mentioned. The article is a worthwhile read for water resources and infrastructure professionals who deal with repair and improvements to life-protection structures in areas that are experiencing sustained economic development in response to California's housing crisis and other development pressures.

# Andy Lee Award for Extraordinary Public Service for State Activities

This award is given to individuals who have made extraordinary proactive flood management contributions benefiting the public, especially in the area of encouraging multi-benefit projects and/or flood education. The award is given to honor public sector recipients. This award honors Andy Lee who retired from state service after 41 years and initiated and strengthened many California floodplain management programs, including the mapping and outreach programs.

# David Lawson, Supervising Engineer Water Resources, California Department of Water Resources

David Lawson is the epitome of a dedicated public servant. Dave began his career with DWR in 1977 as an engineering student assistant conducting traffic and recreation surveys in the Sacramento and San Joaquin Delta. In 1979, after graduation with a degree in civil engineering from UC Davis, Dave initiated his full-time career with DWR working on directly improving Delta levees and conducting Delta planning studies. Fast forward 39 years to June 2018 and Dave ended his DWR career as a supervising engineer working in the Delta Levees Subvention Program. During his 41-plus year career in Delta and Suisun Marsh programs, Dave worked on Delta emergency response, post-flood damage surveys, post flood levee repairs, post-flood cost recovery, seismic vulnerability studies, levee maintenance issues, USACE and state planning studies, and the Delta Levee Subventions Program. David Lawson demonstrated through his career a proud legacy of protecting and improving Delta and Suisun Marsh levees and the protecting the public and environmental benefits derived from these levee systems.

# David M. Mraz, Principal Engineer Water Resources, California Department of Water Resources

David Mraz retired in December 2018 after 30 years of state service. Prior to his career as a civil engineer with the Department of Water Resources, Dave was an officer in the United States Navy engineering corps. David began his career with DWR as a field engineer in the Division of Safety of Dams. During his 12 years working in dam safety, Dave conducted field inspections and dam design. After the Loma Prieta (1989) and Northridge (1994) earthquakes, Dave worked on the rehabilitation of Austrian Dam and Pacoima Dam, respectively.

In 2000, Dave moved to DWR's Central District to manage the Delta levees Subventions Program. Over the following 18 years, Dave managed the Delta Subventions Program and the Delta Special Projects and oversaw the integrated work of the Delta Levees Office including support and collaboration with the CalFed Levees Program, the Delta Protection Commission and the Delta Stewardship Council. Dave was the "incident commander" for the response to the 2004 Jones Tract levee failure in San Joaquin County and more recently worked on flood fights to prevent levee failures on Bradford and Brannon islands. After the 2017 highwater, Dave served as the Operations Chief of the emergency levee repairs program. During his tenure as a Naval engineering officer and 30 years of state service, working in dam safety and Delta levees, Dave Mraz demonstrated through his knowledge, management and leadership, an extraordinary dedication to public service.

# **Integrated Flood Management Award**

This award is given to individuals or project teams who have prepared and/or implemented a locally-approved, state-approved, or federally-approved multi-objective flood management plan. Candidate projects should demonstrate innovative advancements in water management as well as collaborative partnerships with community groups and the general public. Project outcomes should benefit many stakeholder interests such as environmental, flood control, recreational, and emergency planning and responsiveness.

# Gobernadora Creek Multipurpose Basin Project Santa Margarita Water District- County of Orange- Rancho Mission Viejo

Gobernadora Multipurpose Basin is a unique integrated flood management facility developed to maximize water resource beneficial uses to southern Orange County. The basin provides multiple functions including: (1) regional flood mitigation, (2) urban stormwater treatment, (3) stream stabilization and habitat restoration, (4) groundwater recharge, (5) groundwater recovery, (6) non-potable water reclamation, (7) water conservation, (8) wetlands and open water habitat and (9) regional train connection.

The 26-acre system is successful due to its state-of-the-art dynamic hydraulic operating system incorporating automated controls that can respond to both low-flow and high-storm flow conditions in Gobernadora Creek. Operational flexibility is facilitated through multiple hydraulic systems including a dry weather runoff diversion structure featuring a rubber inflatable dam system to divert flows into natural water quality treatment and infiltration cells, an elevated side weir to capture storm flows for peak flow storage, a secondary inflatable rubber dam for large flood flow water level control, sedimentation basin and fine straining, disinfection, and a pump station to transport treated flows for recycled water applications. The system accommodates a projected 350 to 800 AF of dry weather flow recovery and provides storm flow detention up to the 100-year storm event.

This project was developed through a unique public-private partnership involving collaboration by the Santa Margarita Water District (SMWD), the County of Orange, and Rancho Mission Viejo, which allowed their various water resource management interests to be addressed within a single facility and resulted in over 30% of the project costs paid by grant funding.

# **Lower Cosumnes River Floodplain Restoration Project - The Nature Conservancy**

The Lower Cosumnes River Floodplain Restoration Project (Project) was undertaken by The Nature Conservancy (TNC) at the Cosumnes River Preserve to restore approximately 500 acres of riparian floodplain habitat along the Cosumnes River in Sacramento County, California.

TNC selectively removed portions of a private levee system along the lower Cosumnes River in 2014 to improve connectivity between the river and its floodplain and facilitate process-based restoration. Since that time, TNC has been establishing native plantings in an experimental design to evaluate the efficacy of different restoration techniques. This summer (2018) is the last year of plant establishment (e.g., irrigation and weed control) in the Project area. The Project also offers a valuable opportunity to study restoration effects in an experimental design and at a scale that is large enough to accommodate ecologically-significant processes.

A scientific monitoring program, largely funded by California Department of Fish and Wildlife (ERP grant #E1120001), investigated a wide array of biotic and abiotic responses to the Project. Researchers at TNC, UC Davis Center for Watershed Science, Point Blue Conservation Science, UC Merced, and University of Idaho all helped monitor biophysical (groundwater, soil carbon, seed distribution, fluvial geomorphology), plant, fish, and bird responses to the Project. That monitoring program helped identify multiple benefits from this floodplain restoration including groundwater recharge, carbon sequestration, and habitat enhancement. Initial observations of this large-scale restoration Project have also offered significant insight into the efficacy of variable "restoration effort" and the importance of environmental processes like flood type/intensity.

# Mentorship Award

This award recognizes individuals who have contributed to the emerging professional community and/or academia.

# **Bruce Phillips, Pace Advance Water Engineering**

Bruce Phillips has dedicated his 37-year (and counting) career to the advancement of Hydrologic &Hydraulic engineering with a special focus on teaching and mentorship. Bruce has been a university instructor in H&H courses continuously since he completed his MSCE in Water Resources Engineering over 30 years ago. He has always put forth extra effort in his classes by applying real-world examples to his instructional materials through his personal experiences and through extensive subject-matter research. People frequently approach Bruce at professional industry conferences and events to say that he once taught a class he/she had taken and each time the feedback is very similar – they learned so much from his classes, they gave them practical information that they apply regularly in their jobs and that his teaching influenced their decisions to enter the H&H engineering field.

Additionally, he has volunteered countless hours to personally tutor students, lead workshops for industry organizations, as well as develop and lead PE review courses. He was also previously a California PE exam question writer. Additionally, Bruce feels strongly about the benefits of engineering internships and continuously mentors at least two student interns at a time, and usually several more during summer months, where he provides personal direction and teaching to provide invaluable experience to individuals considering H&H related engineering careers. Bruce also developed a unique physical hydraulic model that he transports to various classrooms and conference events to allow participants to see hydraulic principles in an interactive 3D format.