Region 10. Lower Colorado-Lavaca Flood Planning Group
Executive Committee Meeting
February 8, 2021
1:00 PM
Virtual Meeting

Meeting will be conducted via webinar at:
https://lcra-org.zoom.us/j/84787634860?pwd=NzI5OGM5V3IwSVJYOFpVbG5YaGlRZz09

If you cannot access the meeting via the link above, go to https://www.zoom.us/join and enter the following webinar ID and passcode:

Meeting ID: 847 8763 4860
Passcode: 3030
Call In: +1 346 248 7799

Agenda:

1. Call to Order
2. Welcome
3. Public comments– limit 3 minutes per person
4. Consideration of a recommendation to the full RFPG for the appointment to fill the vacant voting position in the river authorities interest category
    a. Discussion, nomination, and consideration of an individual to fill the river authorities interest category position
5. Public comments– limit 3 minutes per person
6. Adjourn

If you wish to provide written comments prior to or after the meeting, please submit your comments online at www.LowerColoradoLavacaFlood.org or email your comments to LowerColoradoLavacaFlood@lcra.org and include “Region 10 Lower Colorado-Lavaca Flood Planning Group Meeting” in the subject line of the email.

If you choose to participate via the webinar link below, you WILL have an opportunity to provide comments during the designated portion of the meeting.
https://lcra-org.zoom.us/j/84787634860?pwd=NzI5OGM5V3IwSVJYOFpVbG5YaGlRZz09

If you choose to participate in the meeting using the conference call number below, you will NOT have the opportunity to provide comments during the designated portion of the meeting. The conference call phone number is provided for LISTENING PURPOSES ONLY. Telephone conference call phone number: +1 346-248-7799

Additional information may be obtained from: Lauren Graber, Lower Colorado River Authority, 512-578-7085, LowerColoradoLavacaFlood@lcra.org, 3700 Lake Austin Blvd., Austin, TX 78703.

Region 10 Lower Colorado-Lavaca Regional Flood Planning Group
Member Nomination Form

Nomination for member representing river authorities

Date: 1/11/21

Nominee Name: Kelly D. Payne, PE

Nominee Phone: 512-578-3251 Nominee Email: kelly.payne@lcra.org

Nominee Mailing Address: LCRA, PO Box 220, Austin, Texas 78767

County in which the nominee resides: Travis

Nominee Occupation: Vice President, Water Operations, LCRA

Brief bio and summary of qualifications of the nominee:

Mr. Payne's more than twenty years' experience as a registered Professional Engineer, combined with a specific and deep understanding of LCRA's current and historical water-related activities, make him an ideal candidate for the Regional Flood Planning group. In his current role as the VP of Water Operations at LCRA, Kelly leads a talented team of hydrologists and engineers who manage floods in the lower Colorado River basin. Other relevant experience includes: project manager for the consultant preparing the first Regional Water Plan for the Coastal Bend Region (Region N); experience leading and performing numerous hydraulic and hydrologic system analyses and modeling efforts; and stormwater management program development.

General type of flood-related knowledge, experience, and approximate number of years being involved in flood-related issues:

Throughout Mr. Payne's over 25 years of work in engineering, he has worked on multiple flood mitigation projects and flood studies. Please see his attached resume for a sampling of these projects. Additionally, in his current role as LCRA's VP of Water Operations, he led the team that managed the Highland Lakes during historic flooding in October 2018 as well as other smaller floods during his tenure.

OPTIONAL: Please list any additional attachments (resume, CV, etc.):

resume attached

Name and Email of person submitting this form (Nominator may be the same as nominee):

John B. Hofmann; Executive VP Water, LCRA john.hofmann@lcra.org

Nominations due by 5:00 PM, Thursday, January 14, 2021
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG Executive Committee, c/o Lauren Graber at lauren.graber@lcra.org

Region 10 Lower Colorado-Lavaca Regional Flood Planning Group
Member Nomination Form

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Date: 1/12/21

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Nominee Phone: 512-578-3251 Nominee Email: kelly.payne@lcra.org

Nominee Mailing Address: LCRA, PO Box 220, Austin, Texas 78767

County in which the nominee resides: Travis

Nominee Occupation: VP, Water Operations, Lower Colorado River Authority

Brief bio and summary of qualifications of the nominee:

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OPTIONAL: Please list any additional attachments (resume, CV, etc.):

Resume, Kelly Payne, P.E

Name and Email of person submitting this form (Nominator may be the same as nominee):

Patrick Brzozowski, P.E., GM Lavaca-Navidad River Authority

Nominations due by 5:00 PM, Thursday, January 14, 2021
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG Executive Committee, c/o Lauren Graber at lauren.graber@lcra.org

Kelly D. Payne, P.E.

As the Vice President of Water Operations for the Lower Colorado River Authority (LCRA), Kelly Payne is responsible for leading the teams at LCRA who: operate six dams (known as the Highland Lakes) for water supply, hydroelectric power generation, and flood operations; mange LCRA's water supplies; operate agricultural water delivery systems in the lower basin (the primary crop is rice); and maintain lake safety, marina permitting and private dock standards on the Highland Lakes. Our basin covers roughly 18,300 square-miles (about the size of Maryland and Massachusetts combined) and 600 river miles from the Texas Hill Country to the Texas Gulf Coast. We provide water for more than 1.4 million users, including communities, businesses, industries, agriculture and the environment.

LCRA is a quasi-governmental agency of the state of Texas. Quasi-governmental means that we were created by the state, but we receive no revenue from the state. We operate from the revenue from the services we provide: water, power generation, and power transmission.

This broad scope of responsibility is a direct reflection of Kelly's twenty plus years' experience as a registered Professional Engineer combined with a specific and deep understanding of LCRA's current and historical water-related activities. Kelly's technical expertise includes computer modeling and analysis of large river and reservoir systems; water rights evaluation; computer modeling of groundwater/surface water interaction; hydraulic and hydrologic systems modeling; stormwater management; analysis of raw water transmission facilities; financial planning and project development; water/wastewater system analysis, planning, permitting and design; and water distribution system analysis.

In addition to his engineering expertise, Kelly is skilled at leading teams to assess current state and future needs as they relate to the LCRA mission and objectives followed by achieving consensus with detailed action plans for execution. Kelly has developed strong personal and professional relationships within LCRA's CFO, Water, and Engineering organizations that allow him to tackle difficult issues with respect and an understanding for multiple perspectives. Outside of LCRA, Kelly has maintained strong ties to local and national water and engineering associations and has served in staff and committee supervisory roles as well as mentoring younger colleagues.

Significant Achievements

- Leads a team of over one hundred water operations staff that provide water supply, hydroelectricity, flood management, and lake safety to the customers and populous living in the LCRA basin
- Manages a 16 to 18 million dollar operations budget to ensure efficient delivery of the services LCRA Water Operations provides
- Led the development of an annual average capital budget of $66.9 million (average of combined capital budgets of Raw Water, Water/Wastewater Utility, Irrigation, and Hydro) – FY13 through FY18
- Led the development and execution of an annual average capital budget of $14.7 million (average capital budget for WTC) – FY08 through FY12
- Provided engineering support to LCRA Water Resources for high-visibility projects:
    - Brushy Creek Reclaimed Water Pipeline Routing Study

    - Off-Channel Reservoir Evaluation – White Stallion
    - Supplemental Water Supply Analyses, 2011-15 Drought
    - New Regional Water Supply Projects
- Facilitated the transfer of engineering documents, records, and studies during the divestiture of the West Travis County Regional Water and Wastewater System
- As a project manager and engineer of record for LCRA Water/Wastewater, managed the design of numerous waterline extension projects, elevated storage improvements, and a water treatment plant project designed by LCRA Water and Wastewater engineering staff
- As an acknowledged LCRA water systems expert, provided strategic evaluations and guidance for long-range master plans for specific utility systems and to develop and update impact fee studies per Chapter 395 of the Texas Local Government Code

Work Experience

Lower Colorado River Authority
Austin, Texas
2006 – present

- **Vice President, Water Operations, 2018 to present**
- Asset Manager, Principal; 2017 - 2018
- Asset Manager, 2011 - 2017
    - Technical responsibilities included:
        - Maintained 10-year Capital Improvement Plans for all business units under the purview of the Executive Vice President, Water
        - In coordination with Capital Budgeting and other subject matter experts, led the development of LCRA's annual business and capital plan for an assigned portfolio of assets (primarily water and hydroelectric)
        - Conducted detailed financial evaluations of initiatives and projects primarily related to Water and provided strategic guidance based on understanding the costs and benefits of proposed work as it related to the LCRA mission and objectives
        - Led teams to determine fiscal viability and define desired outcomes for proposed work, including providing expertise regarding budget and schedule estimates
        - Performed complex business case and/or feasibility analysis on a multitude of utility assets. Assisted with research for, and development of, cost benefit analysis for various maintenance, rehabilitation, and/or replacement options for specific utility assets or groups of assets
        - Led risk management analysis with facility subject matter experts to determine appropriate timing and prioritization of facility equipment overhauls and inspections, including responsibility for quantifying the business risk exposure associated with specific facilities based on both the likelihood and consequence of asset failure
        - Led teams in condition assessment activities to determine remaining useful life estimates for capital and larger O&M assets, including recommendations for appropriate future actions, e.g. timing and scope of replacement or repair
- Senior Engineer, Water/Wastewater Planning and Engineering; 2006 - 2011

    <u>West Travis County (WTC) Regional Water and Wastewater System, Regional Engineer</u>
    Technical responsibilities included:
    - Oversight of all development activities in the region

- Support of LCRA water and wastewater operations staff in troubleshooting system performance issues
- Support of the LCRA WTC Regional Manager in long- and short-term planning and development, including development of the annual LCRA business and capital plan for the region
- Engineering support to the LCRA Project Management Office for capital construction projects in the region
- Liaison with West Travis County customers
- Mentoring and directing work of junior staff engineers

LCRA Capital Improvements Planning, Regional Engineer

Planning activities that support the long-term operation of the WTC Regional Water and Wastewater Systems include:

- Review and update of predicted future service needs within the WTC water and wastewater systems.
- Evaluation of existing system component capacities (i.e. wastewater lift stations, wastewater collection systems, wastewater treatment plants, water transmission mains, water storage, water treatment plants, and water booster pump stations) and comparison of capacities to expected growth projections. These evaluations forecast the need for expansion of existing facilities and/or needs for additional facilities. These evaluations are performed using water modeling programs and other analysis tools.
- Development of future projects needed to ensure reliable water and wastewater service for the existing and future customers of the WTC Regional System.

LCRA Capital Improvements Projects, Project Engineer

Provided engineering support on behalf of LCRA for the following:

- Uplands Water Treatment Plant Expansion
- County Line Pump Station (CLPS) Expansion
- WTC Wastewater System, 12-inch Force Main Extension
- WTC Wastewater System, Regional Lift Station Expansion
- Southwest Parkway Pump Station Expansion
- Highway 71 1280 Elevated Storage Tank
- West Travis County 20-inch Transmission Main from the Uplands Water Treatment Plant to the Southwest Parkway Pump Station
- West Travis County Wastewater System Master Plan
- West Travis County, Regional Wastewater System Impact Fee Study

Alan Plummer Associates, Inc.

Austin, Texas

- Senior Engineer, 2004 to 2006
  Technical responsibilities included planning, design, and oversight of water and wastewater infrastructure construction; analysis of water transmission facilities; and activities related to planning, design, and permitting for effluent reuse systems. Clients included municipalities and river authorities.

HDR Engineering, Inc.
Austin, Texas

- Management Team Member, 2000 - 2004
- Project Manager, 1997 - 2004
- Assistant Project Manager, 1995 - 1997
- Graduate Engineer, 1992 - 1995
  General responsibilities included staff supervision and department-level budget preparation. Technical responsibilities included computer modeling and analysis; water rights evaluation; computer modeling of groundwater/surface water interaction; hydraulic and hydrologic systems modeling; stormwater management; financial planning and project development; and permitting and design of raw water systems. Clients included municipalities, water districts, river authorities, independent electric power producers, railroad companies, regional water planning groups, and the Texas Water Development Board. A list of relevant projects is attached to the end of this resume.

Cornell University
Ithaca, New York

- Graduate Assistant, 1989 - 1991

E20 Consultants
College Station, Texas

- Drafter, 1988 to 1989

Kimley-Horn and Associates, Inc. (formerly PAWA-Winkelman and Associates, Inc.)
Dallas, Texas

- Summer Intern – Drafting, 1988
- Summer Intern – Surveying, 1985 - 1987

Education and Certifications

eCornell Change Management Certificate, 2020
LCRA Edge Leadership Program, 2018
LCRA Management and Leadership Certificate Program, 2015

Professional Engineer (Texas), 1997

Master of Science, Civil and Environmental Engineering
Cornell University, 1995

Bachelor of Science, Civil Engineering
Texas A&M University, 1989
Magna cum Laude

- Tau Beta Pi, national engineering honor society, 1988
- Chi Epsilon, national civil engineering honor society, 1987

Publications and Presentations

Central Texas Section of the Water Environment Association of Texas; 2008
“Membrane Bioreactor Wastewater Treatment Plants in Texas; Lessons Learned”

Master's Thesis
Cornell University, 1995
"Characterization of Emergency Response Times to Highway Accidents for Use in Hazardous Materials Routing Analysis"

The investigation and results of the thesis were used by a PhD student who developed a routing model for trucks transporting nuclear waste from power plants in the east to the federal depository in the west.

American Society of Civil Engineers – Water Resources Planning and Management
Proceedings of the 21st Annual Conference, 1994
"Regional Wastewater Reuse in the Nueces Estuary"

Professional Activities

American Society of Civil Engineers

Austin Branch

- Vice President 1993 - 1995
- President 1996 - 1997
- Co-Chair Hosting Committee for Spring 2000 Texas Section Meeting
- Honors Committee Chair, 1997 to 1998
- Practitioner Advisor, Student Chapter, University of Texas, 1995 - 2000

Texas Section

- Board of Directors
  - Vice President - Education, 2003 - 2005
  - Director-at-Large, 1998 - 2000
- Committee for Governmental Affairs, Chair/Co-Chair, 2001/2002
- Civil Engineering Brochure Committee, Chair, 1997
- Austin Branch CE Brochure Insert Committee Chair, 1998

National ASCE

- Committee on Student Activities, 1997 - 2002 and 2004 - 2007
- ASCE 150th Anniversary National Student Conference (2002), Conference Co-Chair
- Educational Activities Committee (EdAC), Chair, 2004 - 2008
- Committee on Global Principals for Professional Conduct, 2007 - 2009

Water Environment Federation

Water Environment Association of Texas, Central Texas Section

- Vice President, 2007 to 2008
- President-Elect, 2008 to 2009
- President, 2009 to 2010

American Water Works Association, member

AACE International, member

Honors and Awards

American Society of Civil Engineers

- 2002 National ASCE Educational Activities, ExCEEd Leadership Award
- 2002 Austin Branch, Civil Engineer of the Year
- 2001 Texas Section, ASCE, Professional Service to Students Award
- 2000 National ASCE Edmund Friedman Young Engineer Award for Professional Achievement

Texas Society of Professional Engineers

- 1998 Young Engineer of the Year, Travis Chapter

Relevant Project Experience

Water Supply Planning

Coastal Bend Regional Water Planning Group. Project Manager. As part of the state-wide regional water planning effort established by the Texas Legislature, sixteen regional water planning groups were established. Mr. Payne served as the Project Manager for the Coastal Bend (Region N) Regional Water Planning Group technical consultant team. Region N, as defined during the SB 1 Regional Water Planning administrated by the Texas Water Development Board, included an 11-county region around the City of Corpus Christi, the major demand and population center for the region. As Project Manager, Mr. Payne managed the efforts of the HDR Austin staff as well as two technical subconsultants and one public relations subconsultant. As part of the planning process, the technical consultants evaluated over 20 water management supply options, developed a groundwater model of the Texas Gulf Coast Aquifer (panning multiple regions), and produced a siting and costing evaluation procedure for analyzing brackish groundwater and seawater desalination along the Texas Coast. The study was a two and one-half year process that resulted in a two volume Regional Water Management Plan that was submitted to the Texas Water Development Board on January 5, 2001.

Lavaca-Navidad River Authority and City of Corpus Christi, Texas. Project Engineer. Modified existing computer model of the Lower Nueces River Basin to evaluate six water supply alternatives as part of the Trans-Texas Water Program. Modifications included the modeling of diversions from the Nueces River, pipelines between reservoirs, the purchase of existing water rights, changes in operating policies of the existing Choke Canyon Reservoir/Lake Corpus Christi System, and the operation of a proposed reservoir (R&M Reservoir). Additional endeavors included modeling the proposed McFaddin Reservoir in the Guadalupe/San Antonio River Basins involving diversions from the Guadalupe and San Antonio Rivers and calculation of firm yields at the reservoir.

Lavaca-Navidad River Authority and City of Corpus Christi, Texas. Project Engineer. Modified existing computer model of the Lower Nueces River Basin and Estuary to evaluate eleven water supply alternatives as part of the South Central Trans-Texas Water Program Study, Phase II. Modifications in Phase II included modeling groundwater recharge and recovery options, operation of new reservoirs and evaluation of alternative operation policies for the existing Choke Canyon Reservoir/Lake Corpus Christi System. Evaluation included the computation of summary bay and estuary flow statistics and Nueces Bay salinity statistics.

Edwards Underground Water District. Project Engineer. Developed recharge rate relationships for four dam sites in the Guadalupe-San Antonio River Basins over the Edwards Aquifer Recharge Zone. Made modifications to the existing Guadalupe-San Antonio River Basin model to operate these potential recharge structures simultaneously on a daily time step. Daily recharge reservoir operations

included simultaneous solutions for reservoir recharge, spills and releases, and evaporation. Daily simulations were used to refine estimates of recharge enhancement to the Edwards Aquifer due to the proposed projects.

Edwards Underground Water District. Project Engineer. Developed recharge rate relationships for six potential recharge dam sites in the Nueces River Basin over the Edwards Aquifer Recharge Zone. Existing structures in the watersheds for Salado, Parkers, San Geronimo, and Middle Verde creeks were analyzed and used to refine methodologies applied in computing recharge rates for the proposed sites. In addition, modifications were made to the existing Nueces River Basin Model to operate five potential recharge sites on a daily time-step. Daily reservoir operations included simultaneous daily solutions for reservoir recharge, spills and releases, and evaporation. Daily simulations were used to refine estimates of recharge enhancement to the Edwards Aquifer due to the proposed projects.

Edwards Underground Water District. Project Engineer. Updated the existing Nueces River Basin Model to operate multiple recharge reservoirs simultaneously on a daily time-step. Results were used to refine estimates of the impact of the proposed recharge reservoir program to the city of Corpus Christi's water supply lake system downstream.

Edwards Underground Water District. Project Engineer. Performed statistical analysis on streamflow, precipitation, and well level data to investigate correlations between streamflows in the Nueces and Frio Rivers and Edwards Aquifer levels. Results helped to better define the volumes of recharge that the Aquifer can accept.

City of Corpus Christi. Project Engineer. Modified existing computer model of the Lower Nueces River Basin to evaluate the impacts of various alternative operating policies for the Choke Canyon/Lake Corpus Christi System. Comparison of bay and estuary flows were made to find a policy that meets bay and estuary inflow needs while increasing firm yield of the system. Work ultimately lead to new bay and estuary releases agreement between the City of Corpus Christi and the governing state agencies.

San Patricio Municipal Water Supply District. Project Engineer. Developed hydrology, e-a-c tables for existing and proposed water supply ponds, net pond evaporation sets, and demand distributions for the analysis of water supply alternatives for the Northshore Country Club (NSCC) in San Patricio County, Texas. Daily reservoir operations were simulated for several alternatives involving the system operations of Green Lake, existing NSCC water supply ponds, and proposed ponds under a variety of flow scenarios. In addition, the effects to the Choke Canyon/Lake Corpus Christi System of diverting wastewater from Nueces Bay were evaluated. (See summary in Hydraulics and Hydrology section for additional work performed in this project.)

Hydrology and Hydraulics

City of Austin. Project Manager. Evaluated the impacts of providing additional capacity at the Joe Tanner Lane Low Water Crossing at Williamson Creek. The analyses included coordination with TxDOT and their planned improvements to Williamson Creek in conjunction with the U.S. 290 expansion.

City of Jacksboro. Project Engineer. Developed a reservoir operations model of Johnson Lake, near Jacksboro, Texas. Developed e-a-c tables, evaporation sets, streamflow sets, and spillway rating tables for the existing lake. Analyzed several scenarios to provide a basis for determining the impacts

of a new wastewater treatment plant discharge permit on the lake. Developed stage frequency curves for each of the scenarios.

Atchison, Topeka, and Santa Fe Railway Company. Site manager. Performed hydrologic and hydraulic studies of 21 railroad bridges in Texas and 7 sites outside Texas scheduled to be replaced as part of the 1994, 1996, and 1997 Bridge Renewal Programs. Studies included site reconnaissance, survey coordination, flood frequency analysis, ungaged watershed hydrologic analysis, and the computation of water surface profiles using HEC-2, WSPRO, or HEC-RAS. Also, provided surveying support operating a data collector and total station on 18 ATSF sites to provide information necessary to perform hydraulic analysis and produce top-of-rail drawing.

Texas Department of Transportation, District 15. Site manager. Performed bridge scour studies of four sites (including 17 bridges) on Leon Creek around the San Antonio, Texas, area. Studies included site reconnaissance, survey coordination, hydrologic analysis, computation of water surface profiles and hydraulic properties using WSPRO, and calculation of contraction, pier, and abutment scour at each bridge.

Union Pacific Railroad Company. Site manager. Performed hydrologic and hydraulic studies for eight railroad bridges in Texas. Analysis included computing 50-year and 100-year flood flows and evaluating the existing hydraulic conditions at the site. A replacement structure was recommended which would provide an economical design and satisfy Union Pacific Railroad (UPRR) hydraulic criteria. The hydraulic analyses were performed using HEC-2 and WSPRO. In addition, initial permitting contacts were made on behalf of the UPRR to the appropriate agencies. Provided surveying support operating a data collector and total station on more than 20 UPPR sites to provide information necessary to perform hydraulic analysis and produce top-of-rail drawing.

Edwards Underground Water District. Project Engineer. Developed the areal precipitation data sets for the Guadalupe-San Antonio River Basin model. Performed a literature review and compiled the data on low-flow studies and miscellaneous measurements made in the basins by the U.S.G.S.

Stormwater Management

Tenaska Gateway Generating Station, Texas. Project Manager. Prepared a 100-year flood plain delineation of Billy Ditch and a major tributary on the proposed site of a new 840MW power generating station in East Texas for Tenaska, Inc. The project involved the development hydrology and a hydraulic model as well as preparation of 100-year flood plain boundary delineations on electronic aerial topographic maps.

City of Temple, Texas. Assistant Project Manager for a drainage basin study for the City of Temple, Texas. The project involved the development of a Drainage Criteria and Design Manual for the City of Temple and a study of existing and future drainage problems associated with stream flooding in the Temple area. Provided coordination of hydrology development for nine watersheds in the study area. Evaluated historical rainfall data and runoff patterns to calibrate the hydrologic models to the historical rainfall temporal distribution patterns for the Temple Area.

South Texas Water Authority. Project Engineer. Developed areal daily precipitation data sets for the Lower Nueces River Basin and used these data to develop runoff using the Texas Water Development Board's rainfall/runoff model, TxRR. This simulated runoff was used to evaluate the potential effects of storm water diversion into the Nueces Delta area on the firm yield of the Choke Canyon Reservoir/Lake Corpus Christi System.

San Patricio Municipal Water Supply District. Project Engineer. Developed a hydrologic model of the Green Lake drainage area near Portland, Texas, in San Patricio County using HEC-1. Evaluated the rainfall/runoff characteristics of the Green Lake watershed under current and future development conditions. Developed e-a-c tables for Green Lake and used them to evaluate flood control and water supply options. Performed flood frequency analysis on the Green Lake spillway modification options and provided support in the computation of alternative spillway ratings. (See summary in Water Supply section for additional work performed in this project.)

Lake Leon Flood Control Group. Project Engineer. Performed hydrologic and hydraulic study on Leon Reservoir in Eastland County, Texas. Developed historical inflow hydrographs to the reservoir, performed frequency analyses on reservoir storage, and routed the historical inflow hydrographs through the reservoir to evaluate the impact of several spillway capacity improvement scenarios on reservoir peak stage.