# **Contact Information**

Institute for Sustainable Energy and the Environment (ISEE)

MSC 213 700 University Blvd. Kingsville, TX 78363 361-593-3046 kudh2003@tamuk.edu



### Texas A&M University - Kingsville

Frank H. Dotterweich College of Engineering MSC 188 700 University Blvd. Kingsville, TX 78363-8202 361-593-2799 katdg00@tamuk.edu

## ville gineering TEXAS A&M UNIVERSITY KINGSVILLE JAVELINAS

### Texas A&M University - Kingsville

Environmental Engineering MSC 213 700 University Blvd. Kingsville, TX 78363 361-593-4330 kaca001@tamuk.edu

Lower Rio Grande Valley-Texas Pollutant Discharge Elimination Systems Storm Water Task Force

MSC 213 700 University Blvd. Kingsville, TX 78363 361-593-4330 kujg2004@tamuk.edu





Lower Rio Grande Valley 18<sup>th</sup> Annual Water Quality Management & Planning Conference

Program

May 16 - 20, 2016

Isla Grand Resort South Padre Island, Texas



Texas A&M University-Kingsville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 33033-4097: Telephone number 404-679-4501) to award bachelor's, master's and doctoral degrees.



FRANK H. DOTTERWEICH COLLEGE OF ENGINEERING ENVIRONMENTAL ENGINEERING 700 UNIVERSITY BLVD., MSC 213 KINGSVILLE, TX 78363-8202 PH 361/593-2187 • FAX 361/593-2069

May 16, 2016

Greetings,

On behalf of the Institute for Sustainable Energy and the Environment (ISEE), housed in the Frank H. Dotterweich College of Engineering at Texas A&M University-Kingsville, along with the Lower Rio Grande Valley Texas Pollutant Discharge Elimination System (TPDES) Storm Water Task Force and our partners, welcome to our 18<sup>th</sup> Annual *Lower Rio Grande Valley Water Quality Management & Planning Conference* 

ISEE is a sustainability-based environmental research institute at Texas A&M University-Kingsville. ISEE focuses on research topics germane to South Texas and the U.S.-Mexico border region. It is our goal to develop team-based and research inspired programs to train and educate our future engineers. Working with our partners, we have brought together representatives from academia, private industries, environmental groups, research communities and state and federal agencies to be a part of a team exchanging ideas concerning environmental issues impacting coastal and semi-arid regions and the Rio Grande Valley, and transferring that information to the decision makers and stakeholders who influence the economic, social and physical infrastructure along the border region.

ISEE has hosted several key topical conferences with the Lower Rio Grande Valley TPDES Storm Water Task Force. It is my hope that this conference serves as a platform for discussing sustainability issues that are both important and relevant to the Rio Grande Valley. This year the conference topics include the new TPDES MS4 Phase II permit, the Arroyo Colorado Watershed Protection Plan Update, low impact development, the stormwater runoff flow reduction strategies, RESTORE, academia research topics, and many other interesting themes. **Our conference also consists of many estuary topics, a result of the recently formed Laguna Madre Estuary Program.** We hope you consider participating in this event and hope you have an enjoyable and stimulating time at the conference.

Sincerely,

Kim Jones, P.E., Ph.D. Director, ISEE Texas A&M University-Kingsville MSC 188, 700 University Boulevard Kingsville, Texas 78363 Phone: (361) 593-2187 Fax: (361)593-2069 email: <u>kfkdj00@tamuk.edu</u>



### **Conference Schedule**

Monday, May 16, 2016 – Federal Grant Writing Workshop. Separate registration required.

		PARADISE
12:00–5:00 (30 min lunch)	Course I	"Federal Funding Grant Writing Workshop" facilitated by Adele Cardenas-Malott, P.E. Senior Policy Advisor & Henry Brewer Environmental Protection Specialist Water Quality Protection Division EPA Region 6, Dallas, TX *Lunch included

Tuesday, May 17, 2016 – TFMA Course and Exam & Low Impact Development Design Course. Separate registration required. Must join TFMA to sit in during Exam.

9:00–4:00 (30 min lunch)		SUNDIAL	
	Course II	Floodplain Management Review Course*	
		Thomas W. Mountz, PE, D.WRE, CFM	
		Project Manager - Water Resources	
		Texas Floodplain Management Association (TFMA)	
		6 CECs/6 PDUs	
		*Lunch included	
5.20 8.00	Exam	CFM Exam	
5:30-8:00	Endin	Register at <u>www.tfma.org</u>	
	Course III	CONCH	
8:30am– 5:00pm (30 min lunch)		Funded by IBWC, Texas Clean Rivers and the EPA and TCEQ Clean Water Act NPS 319 Program Low Impact Development (LID) Planning & Design Course* Beverly Storey, P.LA. Texas A&M Transportation Institute College Station, TX	
		& KI DI DE DD	
		Kim D. Jones, P.E., Ph.D. Institute for Sustainable Energy & the Environment (ISEE) - Directo	
		Kim D. Jones, P.E., Ph.D. Institute for Sustainable Energy & the Environment (ISEE) - Directo Texas A&M University-Kingsville	
		Kim D. Jones, P.E., Ph.D. Institute for Sustainable Energy & the Environment (ISEE) - Directo Texas A&M University-Kingsville 4 CECs (TFMA CFM)/8 PDUs	
		Kim D. Jones, P.E., Ph.D. Institute for Sustainable Energy & the Environment (ISEE) - Directo Texas A&M University-Kingsville	
6:30 pm-8:00		Kim D. Jones, P.E., Ph.D. Institute for Sustainable Energy & the Environment (ISEE) - Directo Texas A&M University-Kingsville 4 CECs (TFMA CFM)/8 PDUs	

6–7:00 pm	Destature	PALM GRAND BALLROOM RECEPTION AREA (2nd Floor)		
	Registration	Early Registration, 2 <sup>nd</sup> floor		
6:00 pm	•	BOARDROOM		
		High School Track – Volunteer Meeting, 2 <sup>nd</sup> floor		
		WINDJAMMER'S BEACHFRONT CAFÉ (2 <sup>nd</sup> Floor)		
7:00 pm	Dinner	EPA - TAMUK - TASK FORCE DINNER EVENT		
Conferenc	e begins.			
		016 – Plenary – Conference Theme		
		ers, Key Topics and Keynote Speakers		
7:00 am -		FOYER		
8:00		Breakfast		
Group		ROYAL MAJESTIC		
Session 0 8:00-10:15		Stormwater 0 - Plenary, Welcome, and Keynote		
0.00-10.15	Vice-	Chair: Kim D. Jones, Ph.D., P.E., Director, ISEE, TAMUK Chair: Jose Hinojosa, Santa Cruz Irrigation District #15, Chairperson		
		Lower Rio Grande Valley TPDES Storm Water Task Force		
		"Celebrating 18 years of Water Research in the		
		Lower Rio Grande Valley"		
Plenary		Kim D. Jones, P.E., Ph.D., Director		
Welcome 8:00-8:15		Institute for Sustainable Energy and the Environment Frank H. Dotterweich College of Engineering		
0.00-0.15		Texas A&M University-Kingsville		
	"The I	RGV Stormwater TPDES Task Force – History and Beyond"		
Plenary	Inc I	José Hinojosa, REM		
Theme		Chairperson		
Speaker	Lower Rio Gr	Lower Rio Grande Valley (LRGV) Texas Pollutant Discharge Elimination System		
8:15-8:30	(TPDES) Stormwater Task Force Founded 1998			
		Tauga Elandulain Manananant Association Initiations"		
		"Texas Floodplain Management Association Initiatives" Thomas W. Mountz, PE, D.WRE, CFM		
Plenary		Project Manager - Water Resources		
Guest		Texas Floodplain Management Association (TFMA)		
8:30-8:45		State Board of Directors – Treasurer		
	"Lov	ver Rio Grande Valley Low Impact Development Program"		
Plenary		Augusto Sanchez-Gonzales, MS, CFM		
Theme Speaker		Research Engineering Associate I Texas A&M University-Kingsville		
8:45-9:05		Texas Activi Oniversity-Kingsvine		
Plonary		"Region 6 Water Priorities at EPA"		
Plenary Keynote		David Garcia, Deputy Director		
Speaker		Water Quality Protection Division		
9:05-9:35	EPA Region 6, Dallas, TX			

Plenary Speaker 9:35-9:45	Carlos A. Sanc Public Wo City of	<i>Yorks, Using TPWA as an Asset"</i> c <b>hez, P.E., CPM</b> rks Director McAllen
		sident
	State Board of Texas Public	Works Association (TPWA)
Plenary Speaker	Lucas Cast Civil Engineer University of Texas	ng Community through ASCE" <b>illo, Jr., P.E.</b> ing Department – Rio Grande Valley Civil Engineers (ASCE)
9:45-10:00		Valley Branch
7.45-10.00		sident
		&
	Dora Marin	-Robles, P.E.
		of Civil Engineers
		Valley Branch
	Branch Sec	tion Director
Plenary Keynote	The Honorable Eddie Lucio III State Representative District #38	
Speaker		l Resources, Land & Resource
1	Management, and Co	oastal Barrier System
10:00-10:15		
10:00-10:15		
10:00-10:15	Stormate Valley	
10:00-10:15	Sty Restande Villey	TEXAS A&M
10:00-10:15	Sterringwater	TEXAS ASM KINGSVILLE
10:00-10:15		TEXAS A&M KINGSVILLE
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10:00-10:13	Storede Wiley	YER ak, Exhibits and Posters
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10:15-10:30 Group Session I	Sterends villey Water FO Networking Coffee Bre	ak, Exhibits and Posters
10:15-10:30 Group	FO Networking Coffee Bre ROYAL	ak, Exhibits and Posters MAJESTIC
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10:15-10:30 Group Session I	FO Networking Coffee Bre ROYAL Stormwater Ia –TPDES, NPDES and Stormwater Management Chair: Ernesto Solis, Stormwater	ak, Exhibits and Posters MAJESTIC Stormwater Ib – Advanced Topics Chair: Tushar Sinha, Ph.D. Environmental Engineering, TAMUK
10:15-10:30 Group Session I	FO Networking Coffee Bre ROYAL Stormwater Ia –TPDES, NPDES and Stormwater Management Chair: Ernesto Solis, Stormwater Specialist, City of Alamo	ak, Exhibits and Posters MAJESTIC Stormwater Ib – Advanced Topics Chair: Tushar Sinha, Ph.D. Environmental Engineering, TAMUK Vice Chair: Lee Clapp, P.E., Ph.D.
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	"MS4 Evaluations in Oklahoma"			
	Carrie Evenson, P.E., Ph.D.	"Numerical modeling of Hidalgo County		
	Oklahoma Department of	Drainage Canal water quality transport"		
	Environmental Quality	<b>Jungseok Ho, Ph.D.</b> Civil Engineering Department		
	Oklahoma City, OK	Univ. of Texas - Rio Grande Valley		
	"CBP3 - Community Based Public	Edinburg, TX		
	Private PartnershipPrince George	"Doutomumon Tostino of Consulants to		
	County successes and lessons	"Performance Testing of Coagulants to Reduce Stormwater Runoff Turbidity"		
	learned, paying for GI"	Beverly Storey, P.LA.		
	Adele Cardenas-Malott, P.E.	Texas A&M Transportation Institute		
	Senior Policy Advisor	College Station, TX		
	EPA Region 6, Dallas, TX	-		
0.15 1.15	SABAL	PARADISE		
2:15-1:15	MC: Joe Hinojosa			
Lunch		Manager		
		ation District #15		
2:30-12:45		f the Coastal Bend Estuary Program		
Keynote		anagement Planning"		
Speaker		Allen end Bays & Estuaries Program		
-		Christi, TX		
Group	ROYAL	MAJESTIC		
Session II	Stormwater II – Est	uary Panel Discussion		
1:15-3:00		eath, Delgado, Acosta LLP, Austin, TX		
		staff Heath Delgado Acosta LLP, Austin, TX		
		RE ESTUARY PROGRAM		
		SCUSSION		
	PRESE	NTERS:		
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		duction"		
		Mendez		
		Delgado, Acosta LLP in, TX		
	"Laguna Madre	"Laguna Madre Estuary Program"		
		E., Ph.D., Director		
		nergy and the Environment		
		College of Engineering		
	Texas A&M Uni	versity-Kingsville		
	"Galueston Ray Estuary Droavary A or	talyst for partnerships and collaboration"		
		hardt, Ph.D.		
		Manager		
		Environmental Quality		
		Estuary Program		
		ogram Means for You"		
		Jacobson		
		Regional Program Manager		
		Regional Program Manager		
		Region 6		
	Dalla	as, TX		
		Texas: Vehicles of Action		
	for Society and			
		uthrie, Ph.D.		
		ector		
	Surface Wa	ater Division		
	T 117 D			
	Texas Water De	evelopment Board		

	"I maragin	Pasauraas with			
	"Leveraging Resources with National Estuary Programs"				
	Brian Koch				
	Regional Watershed Coordinator				
	e	Water Conservation Board			
		rton, TX			
		itated by:			
		l Mendez			
	Bickerstaff, Heath, Delgado, Acosta LLP				
	Austin, TX				
3:00-3:15		FOYER			
~	Networking Coffee B	reak, Exhibits and Posters			
Group Session III	ROYAL	MAJESTIC			
3:15-5:00	Stormwater III – Arroyo Colorado Watershed Protection Plan Update Panel Discussion Chair: Emily Rogers, Attorney, Bickerstaff Heath Delgado Acosta LLP, Austin, TX Vice Chair: David Mendez, Bickerstaff, Heath, Delgado, Acosta LLP, Austin, TX				
		RADO WATERSHED			
	PROTECTION PLAN UPDATE				
	PANEL DISCUSSION				
	PRESENTERS:				
	"EPA's Role in Watershed Protection Plan Development				
	Under the Nonpoint Source Program"				
	Mike Bira				
	EPA NPS Program				
	EPA Regio	n 6, Dallas, TX			
	& Henry Brewer				
		Protection Specialist			
	Water Quality Protection Division EPA Region 6, Dallas, TX				
	"Watershed Planning in Texas"				
	Ashley Wendt				
	NPS Project Manager				
	Texas State Soil and Water Conservation Board				
	Temple, TX				
	"Arroyo Colorado Water Quality and Watershed Protection Plan Update"				
	Tim Cawthon				
	NPS Project Manager				
	Texas Commission on Environmental Quality NPS Program, Austin, TX				
	"Arroyo Colorado Water Quality and Watershed Protection Plan Update"				
	Jaime Flores, P.G.,				
	Arroyo Colorado Watershed Coordinator				
	Arroyo Colorado Watershed Partnership, Weslaco, TX				
	Facil	itated by:			
		gers, Attorney			
	Bickerstaff Heath Delgado Acosta LLP				
	A.11	tin TX			

Social 5:30-6:00

Dinner 6:00-8:00

#### PALM GRAND BALLROOM

Networking/Fellowship

### "Engineering Education, Technology Development and New Initiatives in the Valley"

MC: Kim D. Jones, P.E., Ph.D. Director, Institute for Sustainable Energy and the Environment Frank H. Dotterweich College of Engineering Texas A&M University-Kingsville

"Water Quality Education and Research at Texas A&M University-Kingsville" Lee Clapp, Ph.D., P.E. Chairperson Environmental Engineering Frank H.. Dotterweich College of Engineering Kingsville, TX

"Prosperity by Design: Increasing Engineering Capacity in the Rio Grande Valley." Maria Oralia De Los Reyes, Ph.D. Frank H.. Dotterweich College of Engineering Kingsville, TX

> "We Are One: Building a Sustainable and Resilient Community in the Lower Rio Grande Valley" Andrew Ernest, Ph.D., P.E., BCEE, D.WRE Chairperson Civil Engineering Department The University of Texas-Rio Grande Valley Edinburg, TX

"Local Educational Engagement and Experiential Learning in Stormwater Management" Frank J. Dirrigl, Jr., Ph.D. Associate Professor of Environmental Science The University of Texas-Rio Grande Valley Edinburg, TX

"South Texas College's STEM Initiatives and Leadership in the Rio Grande Valley" Ali Esmaeili, Ph.D. Dean of Math, Science, and Bachelor's Degree Programs South Texas College McAllen, TX

Thursday,	May 19, 2016 - TPDES, LID	, Research and Funding
7:00 - 8:00	FOYER	
	I	Breakfast
	ROYAL	MAJESTIC
Group Session IV 8:00-10:00	Chair: Emily Rogers, Attorney, Bick	onal Initiative Panel Discussion erstaff Heath Delgado Acosta LLP, Austin, TX taff, Heath, Delgado, Acosta LLP, Austin, TX

### VALLEY-WIDE INTEGRATED MONITORING AND FORECASTING FOR FLOOD RESPONSE AND ECONOMIC DEVELOPMENT

PRESENTERS:

"Introduction - What is the Valley-Wide Integrated Monitoring and Forecasting for Flood Response and Economic Development" Andrew Ernest., P.E., Ph.D., BCEE, D.WRE Chairperson Civil Engineering University of Texas-Rio Grande Valley

> "National Water Model" Tim Whiteaker, Ph.D. Research Scientist Center for Research in Water Resources The University of Texas at Austin

"Cyberinfrastructure for Regional Water Monitoring and Modeling" Andrew Ernest., P.E., Ph.D., BCEE, D.WRE Chairperson Civil Engineering University of Texas-Rio Grande Valley

"The Rivers & Estuaries Observation Network" Christopher Fuller, Ph.D. Research, Applied Technology and Education Services Potsdam, NY

"Conjunctive Surface Water-Groundwater Management, and Potential Flood Control with GMS Modeling" Chu-Lin Cheng, Ph.D. Civil Engineering Department Univ. of Texas – Rio Grande Valley Edinburg, TX

> "Analysis and Forecasting of Flood Events in South Texas" Tushar Sinha, Ph.D. Environmental Engineering Texas A&M University-Kingsville Kingsville, TX

"Lower Laguna Madre Coastal Flow Circulation Model" Jungseok Ho, Ph.D., P.E. Civil Engineering Department University of Texas Rio Grande Valley, Edinburg TX

"Disaster Mitigation and Warning System" William Donner, Ph.D. Sociology Department Univ. of Texas – Rio Grande Valley Edinburg, TX

"Final Remarks" Andrew Ernest., P.E., Ph.D., BCEE, D.WRE Chairperson Civil Engineering University of Texas-Rio Grande Valley

Facilitated by: Emily Rogers, Attorney Bickerstaff Heath Delgado Acosta LLP Austin, TX

	FOYER			
10:00-10:15	Networking Coffee Break, Exhibits and Posters			
Group Session V	ROYAL	MAJESTIC		
10:15-12:00	Stormwater Va – Estuary Topics Chair: Paula Rodriguez, City Planning and Community Development Director, City of La Feria Vice Chair: Raul Garcia, Stormwater, City of Los Fresnos	Stormwater Vb – Regulatory Topics Chair: Rudy Garza, CPM, Public Works Director, City of Alton Vice Chair: Raul Gomez, Administrative Assistant to the Honorable David Garza, Cameron County Commissioner		
	"Trash Free Waters" Douglas Jacobson Gulf of Mexico Program Regional Program Manager National Estuary Program Regional Program Manager EPA Region 6 Dallas, TX	"Multi Sector General Permit" Rebecca Villalba Team Leader Stormwater & Pretreatment Team Water Quality Division Texas Commission on Environmental Quality Austin, TX		
	"Over 30 Years of Freshwater Inflow Research in the Lower Laguna Madre Estuary" <b>Caimee Schoenbaechler</b> Environmental Flows Specialist Bays & Estuaries Program	"A City's Liability for Flooding" Emily Rogers Attorney Bickerstaff Heath Delgado Acosta LLP Austin, TX		
	Texas Water Development Board "You're more connected than you think: Promoting Water Quality Awareness in Galveston Bay" Sarah Bernhardt, Ph.D. Program Manager Texas Commission on Environmental Quality Calveston Bay Estimation	"A Legislative Preview" Claudia Russell Attorney Bickerstaff Heath Delgado Acosta LLP, Austin, TX		
Lunch	Galveston Bay Estuary Program SABAL	PARADISE		
12:00-1:15 12:15-12:45 Keynote	Former Mayor, C	d Rec Department Director City of Port Isabel		
Speaker	Ron Curry, Regional Administrator EPA Region 6, Dallas, TX			
Group Session VI	ROYAL	MAJESTIC		
1:15-3:15	Stormwater VIa – MS4 Topics Chair: Jose Figueroa, Stormwater Division, City of Brownsville Vice Chair: Robert Valenzuela, City of San Benito	Stormwater VIb – Stormwater Topics Chair: David Salinas, CFM, Public Utilities Director, City of San Juan Vice Chair: Israel Gaona, CFM Engineer, Planning Department City of Weslaco		
	"On-line Data Management" <b>Ty Garmon</b> CBI Systems LJA Engineering, Inc. & George Culver Director of GIS LJA Engineering, Inc.	"The EPA Approach to Water Quality Protection Through Watershed Management" <b>Mike Bira</b> EPA NPS Program EPA Region 6, Dallas, TX		

3:15-3:30	Networking Coffee Bro	"Using Green Infrastructure in new housing developments in the LRGV to create active public spaces." Hugo Colón Acevedo Senior Design Manager, buildingcommunityWORKSHOP & Nick Mitchell-Bennett Executive Director, Community Development Corporation of Brownsville, TX "City of Laredo's Illicit Discharge Detection and Elimination Program for TPDES Compliance" Ivan Santoyo Environmental Services Department City of Laredo	
	POSTER WINNER ANNOUNCEMENTS		
Group Session VII	ROYAL	MAJESTIC	
3:30-5:00	Stormwater VII – Funding Panel Discussion Chair: David Mendez, Bickerstaff, Heath, Delgado, Acosta LLP Vice Chair: Emily Rogers, Attorney, Bickerstaff Heath Delgado Acosta LLP		
	STORMWATER FU PANEL D PRESE "EPA Funding Opportunities i Henry Environmental P EPA, Region "LID Cost Sav Marl Clean Water SRF	VELOPMENT BOARD JNDING PROGRAMS ISCUSSION ENTERS: <i>n the Lower Rio Grande Valley</i> " <b>Brewer</b> rotection Specialist <i>n</i> 6, Dallas, TX <i>vings Incentives</i> " <b>x Evans</b> Program Coordinator ment Board, Austin, TX <sup>6</sup>	
	Project	& <b>dnar, CFM</b> Manager ment Board, Austin, TX	
	Ashle NPS Proj Texas State Soil and Water C Tim C NPS Proj Texas Commission on Envir	nurce Grant Program" y Wendt ect Manager onservation Board, Temple, TX & Cawthon ect Manager ronmental Quality, Austin, TX	
	David	t <b>ated by:</b> Mendez do, Acosta LLP, Austin, TX	

	KEY LARGO ROOM- FIRST FLOOR           6th Annual Javelina Engineering Alumni Social	
Alumni		
Social 5:30 –	Alumni Social	
8:00pm	MC: Justin A. Muñoz	
otoopiii	Director, Alumni Affairs	
	Texas A&M University-Kingsville	
8:00 -	OUARTERDECK BAR	
10:00pm	Hammerhead Deck	
	Luau Outdoor Party – Food and Music	
• ·	ay 20, 2016 (7 am-12 noon)– Laguna Madre Tour (Charter	
Boat) - Ho	osted by Lower Laguna Madre Estuary Program – For more	
information and May 1	on, please sign up at the Registration Table between May 16 9.	
T · 1 14	ay 20, 2016 (7 pm) – Social, Fish Fry – Beach side of Resort.	
Friaay, M	uy 20, 2010 (7 pm) – Social, Fish Fry – Deach state of Reson.	
Friday, M	Boardroom	
Saturday,	Boardroom	

### INSTITUTE FOR SUSTAINABLE ENERGY AND THE ENVIRONMENT (ISEE)

ISEE provides increased access to B.S., M.S. and Ph.D. programs offered at Texas A&M University-Kingsville in environmental engineering to U.S. citizens and permanent residents; moreover, ISEE promotes research opportunities for undergraduate and graduate students on the sustainability of semi-arid coastal areas.

ISEE enables hands-on experience with state-of-the-art instrumentation and methodologies in laboratories and at various field sites.

ISEE serves as a major source of research on the environmental sustainability of the semi-arid coastal areas, integrates the research with continuing education, transfers findings to the public domain and serves as a major resource partner with institutions along both sides of the US/Mexico border.







### Frank H. Dotterweich College of Engineering Texas A&M University-Kingsville

The Frank H. Dotterweich College of Engineering has a long history of preparing topquality engineers for a rapidly changing profession. Research opportunities at the undergraduate and graduate level help train students for careers in engineering and small class sizes give students personal interaction with faculty members.

The College maintains ties with the corporate and industrial world and provides valuable internship experiences that can translate into job offers once students complete their degrees. Most departments offer scholarships for qualified students and student chapters of professional organizations help students learn while they make valuable contacts for their future. The College offers bachelor's and master's degrees through six departments: civil and architectural engineering, chemical and natural gas engineering, electrical and computer science, environmental engineering, industrial management and technology, mechanical and industrial engineering was added to our offerings in 2002 and in Sustainable Energy Systems Engineering added in 2015.

Our programs are located in four building including the Engineering Complex, which opened ten years ago. Our facilities house modern laboratories and computer facilities that help increase our graduates' knowledge and experience. The undergraduate engineering programs in and mechanical engineering in the College are accredited through the Engineering Accreditation Commission of ABET, Inc. The undergraduate program in industrial management and technology is accredited by the Association Technology, Management, and Applied Engineering.



## **NOTES**

### Members of the LRGV TPDES Stormwater Task Force Founded in 1998



#### **Speakers**

Ray Allen Nick Mitchell-Bennett Mike Bira Sarah Bernhardt, Ph.D. Lacev Bodnar Mehmet Boz. Ph.D., P.E., M.ASCE Henry Brewer Adele Cardenas-Malott, P.E. Lucas Castillo, P.E. Tim Cawthon Rebecca Chavez, P.E., Ph.D. Chu-Lin Cheng, Ph.D. Lee Clapp, P.E., Ph.D. Hugo Colón **Ron Curry** Frank J. Dirrigl, Jr., Ph.D. William Donner, Ph.D. Maria De Los Reves, Ph.D. Andrew Ernest, P.E., Ph.D. Ali Esmaeili, Ph.D. Mark Evans Christopher Fuller, Ph.D. Carrie Everson, Ph.D., P.E. Jaime Flores, P.G. Ty Garmon **David Garcia** Craig Gonzales, P.E. Carla G. Guthrie, Ph.D. Jose Hinojosa, REM Jungseok Ho, Ph.D. **Douglas Jacobson** Kim D. Jones, Ph.D., P.E. Jihoon Kang, Ph.D. Martin Knecht Brian Koch Eddie Lucio III Adele Cardenas Malott, P.E. **Dora Marin-Robles** David Mendez Tom Mountz, P.E., CFM John Porter **Emily Rogers** Claudia Russell Augusto S. Gonzalez, MS Carlos A. Sanchez, P.E., CPM Ivan Santovo **Caimee Schoenbaechler** Tushar Sinha, Ph.D. Nelly Smith **Beverly Storey, PLA** Javier Vélez-Arocho Rebecca Villalba Ashley Wendt Tim Whiteaker, Ph.D.

Coastal Bend Bays & Estuaries, Corpus Christi TX Exec. Dir., Comm. Develop. Corp. of Brownsville, TX NPS Program, EPA Region 6, Dallas, TX **Galveston Bay Estuary Program Texas Water Development Board, Austin, TX** Civil Practice Leader, KCI Tech., San Antonio, TX EPA, Region 6, Dallas TX EPA, Region 6, Dallas TX **ASCE-RGV Chapter President** Project Mgr., TCEQ Nonpoint Source Team CP&Y, Inc., Austin, TX Civil Engineering, University of Texas - RGV Texas A&M University-Kingsville Planning/Design Associate, BC Workshop Regional Administrator, EPA Region 6, Dallas, TX Environmental Science, University of Texas - RGV Sociology Department University of Texas - RGV Dir. of Operations, TAMUK RGV Initiative, Weslaco, TX Civil Engineering Chair, University of Texas - RGV Dean, South Texas College, McAllen, TX **Texas Water Development Board, Austin, TX** Research, Applied Tech. and Educ. Services, Potsdam, NY **Oklahoma Department of Environmental Quality** Arrovo Colorado Watershed Coordinator CBI Systems, LJA Engineering, Inc. Deputy Director, Water Quality, EPA Region 6 Urban Infrastructure Group, Inc., Donna, TX **Texas Water Development Board, Austin TX** General Manager, Santa Cruz Irrigation Dist. #15 Civil Engineering, UT-RGV, Edinburg, TX EPA Region 6. Dallas TX Texas A&M University-Kingsville Environmental Sci. Prgm., UT-RGV, Edinburg, TX **Engineering Instructor, South Texas College** Regional Watershed Coord., TSSWCB, Wharton, TX State Representative, District #38 Sr. Policy Advisor, Region 6, EPA, Dallas, TX **Branch Section Director, ASCE RGV Chapter** Atty, Bickerstaff Heath Delgado Acosta LLP, Austin, TX TFMA, Austin, TX **Environmental Services Department, City of Laredo** Bickerstaff Heath Delgado Acosta LLP, Austin, TX Bickerstaff Heath Delgado Acosta LLP, Austin, TX Texas A&M University-Kingsville Publ. Wks. Dir., City of McAllen, State Dir., TPWA **Environmental Services Department, City of Laredo** Texas Water Development Board, Austin, TX Texas A&M University-Kingsville EPA, Region 6, Dallas, TX Texas A&M Transportation Insti., College Station, TX EcoStahlia Environmental Consultants. San Juan, PR Team Leader, Stormwater & Pretreatment, TCEO NPS Project Manager, TSSWCB Temple, TX Center for Research in Water Resources, UT-Austin

#### Program Moderators

Kim D. Jones, Ph.D. Augusto Sanchez, MS Joe Hinoiosa **Emily Rogers David Mendez** Ernesto Solis Paula Rodriguez **Omar Cano, P.E.** Jose Figueroa **David Salinas Raul Garcia** Raul Gomez **Rudy Garza** Israel Gaona **Robert Valenzuela** Melisa Gonzalez Joe Vega Tushar Sinha, Ph.D. Lee Clapp, P.E., Ph.D.

Texas A&M University-Kingsville Texas A&M University-Kingsville Santa Cruz Irrigation District #15 Bickerstaff Heath Delgado Acosta LLP, Austin, TX Bickerstaff Heath Delgado Acosta LLP, Austin, TX City of Alamo **City of La Feria** City of Edinburg **City of Brownsville** City of San Juan City of Los Fresnos **Cameron County** City of Alton City of Weslaco City of San Benito **City of Alamo Cameron County** Texas A&M University-Kingsville Texas A&M University-Kingsville

### **Conference Planning Team**

<u>Chairperson</u> Javier Guerrero, E.I.T., MS

Committee

Kim D. Jones, P.E., Ph.D. Augusto Sanchez, MS, Joaquin Martinez **Denise Hornsby** Jungseok Ho. Ph.D. **Omar Cano, P.E.** Juan De La Garza Jacinto Hinojosa **Robert Valenzuela** Ernesto Solis Jose Figueroa **David Salinas** Xavier Cervantes, AICP Rov Jimenez Joe Hinojosa Paula Rodriguez **Rudy Garza, CPM** Raul Garcia Augustin Lopez Javier Mendez Israel Gaona Hector Lerma Isidro Venecia Juan Rios

Texas A&M University-Kingsville Texas A&M University-Kingsville Texas A&M University-Kingsville Texas A&M University-Kingsville **Civil Engineering, UTRGV** City of Edinburg City of Mission City of San Benito City of San Benito City of Alamo **City of Brownsville** City of San Juan City of San Juan **City of Donna** Santa Cruz Irrigation District #15 City of La Feria City of Alton City of Los Fresnos City of Los Fresnos City of Primera City of Weslaco **Cameron County Drainage District #1** City of La Joya City of La Jova

Texas A&M University-Kingsville

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## **Office of the President**

**Dr. Steven H. Tallant** became the 19th president of Texas A&M University-Kingsville in October 2008. He immediately focused on building a leadership team, increasing enrollment, enhancing university facilities and increasing the visibility of the campus through a wider marketing initiative.

These efforts resulted in an enrollment increase of more than 12 percent for Fall 2010 and an investment of approximately \$80 million in new construction and renovations on campus, including two new residence halls, a new recreation center and a new dining facility. In addition, plans for a third residence hall are well underway. This expansion was accompanied by development of a campus master plan to guide growth and construction over the next 50 years. Tallant also placed an emphasis on research at the university with tremendous results. In 2010, the university received \$23 million dollars in research and sponsored programs. That amount is a record high for the university, up three million dollars from 2009, and up more than 56 percent in two years. Prior to joining the university, Tallant served as provost and vice chancellor for academic affairs at the University of Wisconsin-Eau Claire where he was responsible for all undergraduate and graduate academic programs. He also provided leadership in several restructuring initiatives, including the creation of the College of Education and Human Sciences and the College of Nursing and Health Services. He also has 20 years of military service and served as chief of Air Force Family Research at the Pentagon from 1991-1994. President Tallant earned his B.A. (Sociology) from the University of Florida, his M.S.W. (Social Work) from the University of Utah and his Ph.D. (Social Welfare) from the University of Wisconsin-Madison.

## **Office of the Dean**



**Dr. Stephan J. Nix** was born in Forest, Mississippi and grew up in south Florida, graduating from South Dade High School in 1970. He attended the University of Florida where he received a Bachelor of Science in Engineering Science, a Master of Engineering in Environmental Engineering Sciences, and the Doctor of Philosophy in Environmental Engineering Sciences. Dr. Nix has served on the civil and environmental engineering faculties, and held several administrative positions, at Syracuse University (1983-1994), the University of Alabama (1994-1997), Northern Arizona University (1997-2001), and Florida Atlantic University (2001-2004). From 2004 to 2009, he served as the Director of the School of Engineering at the University of North Florida.

Dr. Nix's principal research interests are in environmental systems modeling and urban stormwater management. He has conducted research projects for the National Science Foundation, the AWWA Research Foundation, Alabama Power Company, Niagara Mohawk Power Corporation, the US EPA, Arizona Department of Environmental Quality, and several other public and private organizations. He has also been a consultant to nearly 20 companies and agencies in the area of urban stormwater management and modeling, combined sewer overflow abatement, and general watershed modeling. Dr. Nix has been the Dean of the Frank H. Dotterweich College of Engineering at Texas A&M University-Kingsville since 2010.



#### Dr. Kim D. Jones, P.E.,

### Director, The Institute for Sustainable Energy and the Environment

Education - Ph.D., Environmental Engineering, Georgia Institute of Technology, 1997 - M.S., Environmental Engineering, Georgia Institute of Technology, 1994 - M.S., Petroleum Engineering, University of Texas at Austin, 1981 - B.S., General Engineering, USMA, West Point, NY, 1974

#### **Research Interest**

Natural Systems engineering applications for solid and hazardous waste treatment; Environmental biotechnologies for air and water treatment; Geochemical interactions between organic pollutants and soils and sediments, characterization of natural organic matter extracted from soils, sediments and natural waters, Constructed wetlands, Vapor phase biofiltration for air toxics, water reuse applications, Fate and transport of contaminants in subsurface systems. Solid and hazardous waste management.



#### Oralia De los Reves, Ph.D.

Director of Operations for Texas A&M Rio Grande Engineering Initiative Frank H.. Dotterweich College of Engineering, Kingsville, TX

Dr. Oralia De los Reyes is the Director of Operations for Texas A&M Rio Grande Engineering Initiative. As the director, she oversees the day-to-day operations of the program. Dr. De los Reyes has 14 years of experience in higher education in the areas of learning communities, faculty development, research and assessment. In addition, Dr. De los Reyes has twelve years of experience in the manufacturing sector. Her research interests are in the areas of student retention, student engagement, and assessment, particularly in evidence-based student success initiatives. Dr. De los Reyes has a bachelor's degree in Industrial Engineering from Matamoros Institute of Technology; a Masters degree in Business Administration from the University of Texas at Brownsville and a Ph.D. in Educational Administration from The Community College Leadership Program at The University of Texas at Austin.



#### The Honorable Eddie Lucio III State Representative, District 38

Representative Eddie Lucio III was born and raised in Brownsville, Texas, where he practices law and lives with wife, Jaime Barrera Lucio. They welcomed their first child, Olivia Rose, in August of 2009 and their second, Eduardo Andres "Luc" Lucio III, in June 2013. Rep. Lucio is the son of State Senator Eddie Lucio, Jr. & Mrs. Herminia Lucio.

He attended Texas Tech University on an athletic scholarship and later received a B.B.A. from the University of Texas at Austin. In 2005, he received his Doctorate of Jurisprudence from the University of Texas School of Law, Rep. Lucio is an attorney with The Lucio III Group, PLLC (www.TheLucioIIIGroup.com) practicing in the areas of Water law, General Business law, and Contract law, Additionally, he is Of Counsel to Beatty, Bangle, Strama P.C. In 2006. Lucio was elected to the Texas House of Representatives. District 38, and was overwhelmingly re-elected in 2008. 2010, 2012, and 2014. District 38 is composed of the southwest region of Cameron County. During his five sessions in the Legislature, Rep. Lucio has worked diligently to attain passage of significant legislation that not only benefits his district and the Rio Grande Valley, but the entire State of Texas, while serving on prestigious committees. His accomplishments pertain to areas that are extremely essential to the development and long-term interests of South Texas. He was instrumental in establishing a medical school in South Texas. He authored legislation to empower foster children by giving them a voice in their placement. He fought to secure passage and funding of the State Water Plan. Rep. Lucio authored and passed legislation creating cost-neutral pre-kindergarten for Cameron County school districts. He worked to keep families and victims of domestic violence safe. Most recently, Rep. Lucio passed legislation creating a regulatory system for the desalination of seawater to aide in securing Texas' water future. Rep. Lucio currently serves as Vice Chairman of the Calendars committee and is a senior member of the Natural Resources Committee and the Land and Resource Management Committee. Through his work and support of his constituents, Rep. Lucio is extremely humbled by the faith and support of the people of District 38 and is committed to continue bringing about progress for the Rio Grande Valley.

### Ron Curry, Administrator for EPA's South Central Region (Region 6)



Ron Curry was appointed as US EPA Region 6 Regional Administrator in September 2012. He has more than 36 years of management experience in local, state and federal government, as well as the private sector. Most recently, Curry worked with the University of New Mexico on the development of their Energy/Water/Environment Nexus Studies program. Prior to that, he spent eight years serving in former New Mexico Governor Bill Richardson's administration as cabinet secretary of the Environment Department and Natural Resource Trustee. In the position as secretary, he oversaw the regulation of the Los Alamos and Sandia National Laboratories and the implementation of standards to protect the air, water and land of New Mexico. He also lead the Governor's initiative to join the Western Climate Initiative and lead the climate change implementation state team in New Mexico. He developed the Environmental Justice Executive Order signed in November 2005 by

Governor Richardson. As trustee, he successfully negotiated a \$13 million ground water consent decree in 2010. He has extensive experience working closely with the EPA, the U.S. Department of Energy and the U.S. Department of Defense, as well as industry. He also served as administrator for the Village of Los Ranchos and as a city manager in Santa Fe. Earlier in his career, Curry was a senior public affairs specialist for Gram Inc. and worked on a site-wide environmental impact statement for Los Alamos National Laboratory; and vice president of CEI Enterprises, a manufacturing firm. He has over 20 years of experience in private business including 10 years owning a small business franchise started with his father. His interest in the environment grew during his manufacturing career while marketing products into the South Coast Air Quality District in California. He brings to the EPA a keen understanding of federal environmental regulations impacts on business owners and entrepreneurs as well as state and local governments.



Adele Cardenas Malott, P.E., Chemical Engineer Senior Policy Advisor, EPA Region 6, Dallas, TX

Adele Cardenas Malott is a senior environmental engineer with over 20 years experience in EPA Region 6. She currently holds a position as a Senior Policy Advisor for the Water Quality Protection Division and Regional Administrator's Office regarding a special project pertaining to the Asbestos NESHAP. She is the Urban Water's Coordinator for Region 6 as well as the lead region representative for this topic. She also manages the US/Mexico Global Environmental Fund (GEF) Rio Bravo project approved and awarded recently in the Winter of 2010 by the United Nations GEF. She is the Technical Advisor for the Rio Bravo Project for the United States. She was previously the Decentralized Coordinator for the Water Quality Protection Division, and an active member of the Water Division's U.S. Mexico Border Team. She also held the position of the River Navigator for the Rio Grande under the 1998 American Heritage River Initiative (AHRI). As the River Navigator, she was lead for the 18 federal agencies charged with coordinating and assisting communities along the Rio Grande in implementing projects related to the three AHRI objectives of economic revitalization, historic and cultural preservation, and environmental protection. She has also served a two-year detail as the Special Assistant for the Regional Administrator, Gregg Cooke. Previous experience also includes positions in the EPA programs dealing with Title V air permits, NPDES permits, public water supply issues and innovations activities in Region 6. Adele has also been the environmental engineer with Chaparral Steel Company in Midlothian, Texas and Kraft Food Ingredients in Sherman, Texas. Adele is currently a registered professional engineer in the State of Texas and holds a B.S. in Chemical Engineering from Texas A & I University in Kingsville, Texas.



J. Douglas Jacobson Gulf of Mexico Program Coordinator National Estuary Programs Coordinator EPA Region 6, Dallas, TX

J. Douglas Jacobson has a B.A. from The University of Texas at Austin and a J.D. from St. Mary's University in San Antonio. He works for the U.S. Environmental Protection Agency Region 6 in Dallas as the Gulf of Mexico Program Coordinator, representative to the Gulf of Mexico Alliance, and Regional Program Manager for the three National Estuary Programs located in Region 6. Mr. Jacobson works on many other coastal policy issues, including the Deepwater Horizon Oil Spill recovery. He is EPA's representative on the Texas's NRDA Trustee Implementation Group and is a member of EPA's RESTORE team. He co-led FEMA's Long Term Disaster Recovery Planning Team for Hurricane Ike. Prior to joining EPA, Mr. Jacobson worked for the cattle industry and was as a Legislative Assistant in the U.S. Senate.



Henry Brewer Environmental Specialist EPA Region 6, Dallas, TX

Henry K. Brewer began his career with the U.S. Environmental Protection Agency (USEPA) Region 6 in Dallas, Texas as an Environmental Protection Specialist (Grants Project Officer) for the §319 Nonpoint Source (NPS) Grant Program in 2009. Other grant programs currently or previously managed include: Community Action for a Renewed Environment (CARE) and Gulf of Mexico Regional Partnerships. Henry currently serves as the Region 6 NPS Grants Coordinator, the Region 6 Grants Reporting and Tracking System (GRTS) Coordinator, the NPS contact for the Region 6 Agriculture Committee, and most recently, as a contact for the Region 6 Green Project Resource Center. Henry completed the EPA Leadership Development Program (LDP) in 2014, and subsequently he and his team received the Suzanne E. Olive Award for Exemplary Leadership in National EEO—Non-Managerial due to the Diversity Training Program they developed. The team was also nominated for a Dallas-Fort Worth Federal Executive Board Salue to the Stars Public Service Award in 2015. He received his Bachelor of Science in Biology (Ecology, Evolution and Behavior) and completed the McCombs School of Business Foundations Program at the University of Texas in Austin. He is a native of Laredo, Texas and likes to spend as much time outdoors as possible. Following this conference, he will be celebrating two birthdays with his three "rambunctious" godchildren in Austin.



Nelly Smith

Municipal Stormwater Coordinator Permits and Technical Assistance Section NPDES Permits and TMDLs Branch, EPA Region 6

Nelly Smith has a master's degree in Chemical Engineering from the University of South Alabama. Nelly worked for the Alabama Department of Environmental Management (ADEM) as a Remedial Project Manager for both the Superfund and the Resource Conservation Recovery Act (RCRA) programs for five years. Since 2006, she has worked for the Environmental Protection Agency (EPA) Region 6 in the Water Quality Standard, Non-point Source, and the National Pollutant Discharge Elimination System (NPDES)/Stormwater management programs. She is leading a watershed based permit project in the Middle Rio Grande, New Mexico initiated by the EPA Head Quarter - Office of Water. She is currently the Municipal Stormwater Coordinator for EPA Region 6.



Mike Bira NPS Program Manager EPA Region 6, Dallas, TX

Michael R. Bira is with the U.S. Environmental Protection Agency Region 6 Water Quality Protection Division, in the Watershed Section. Mike graduated from the University of Tampa with a BS degree in Marine Biology and Chemistry. He then earned his MS in Aquatic Biology from Southwest Texas State University. After college, Mike worked for five years as an Aquatic Biologist/Field Investigator for the Texas Water Commission (now Texas Commission on Environmental Quality), performing inspections and sampling of domestic, municipal, industrial, and agricultural wastewater dischargers, and coordinating the Commission's North Central Texas surface water monitoring program. Mike began his career with EPA as an Environmental Scientist at Region 6 in Dallas in 1988. As a Hazardous Waste Enforcement Coordinator, his duties included coordination of Federal enforcement actions against violators of regulations under the Resource Conservation and Recovery Act (RCRA). Since 1990 Bira has been in the Water Quality Protection Division and worked in the Clean Lakes Program, Nonpoint Source Program, water quality standards, watersheds, nutrient criteria development, and water quality outreach.

As Volunteer Monitoring Coordinator for the region, Bira has been actively involved with citizen monitoring programs and assisting states and communities with addressing water quality problems through education and the watershed protection approach. He has helped conceptualize and develop volunteer water quality monitoring programs in Texas, Oklahoma, Louisiana, and Arkansas. He has assisted with training of State personnel and volunteer monitors and has assisted with federal financial support for citizen monitoring efforts. Bira's current responsibilities for EPA Region 6 include Nutrient Coordinator, Volunteer Monitoring Coordinator, and Technical Lead for Nonpoint Source Program implementation in the State of Texas.



Tim Cawthon Natural Resources Specialist NPS Program, Austin, TX Texas Commission on Environmental Quality

Graduated from Baylor University in 2004 with degree in Geography and minor in Environmental Studies. Graduated from Texas State University with Master of Science in Geography with a focus on Fluvial Geomorphology. Thesis was studying channel change and large woody debris on the San Antonio River. Have worked as a project manager for TCEQ NPS Team for over 4 years and have managed projects in the Lower Rio Grande Valley for over four years.



**Rebecca L. Villalba** Water Quality Division Texas Commission on Environmental Quality

Since July 2011, Rebecca L. Villalba is the Team Leader for the Stormwater & Pretreatment Team. She has been working at the TCEQ since August 1996 in the Wastewater Permitting Section of the Water Quality Division. In her current position, she is responsible for supervising pretreatment coordinators and permit writers that implement the pretreatment, stormwater (construction, industrial, and municipal), and quarry programs and their associated permitting activities and overseeing the stormwater processing center.

Ms. Villalba's prior position was Sr. Pretreatment Coordinator in the Stormwater & Pretreatment Team providing oversight for numerous Texas Pollutant Discharge Elimination System (TPDES) pretreatment programs. Her oversight activities included performing pretreatment program audits, industrial user categorical determinations, reviewing publicly owned treatment works (POTW) permit applications for appropriate pretreatment requirements, reviewing pretreatment program modifications to include technically based local limits calculations, and drafting POTW permits. She is a TCEQ Aspiring Leaders Program alumni (class of 2010-2012) and has participated in the TCEQ's Border Initiative and partnership efforts with the Mexican government related to the pretreatment program providing training and technical assistance. In 2001, Ms. Villalba completed the five-day Environmental Management Systems (EMS) Lead Auditor Training Course and for over 10 years represented the Water Quality Division in the EMS team involved in developing and implementing the TCEQ's EMS program.

Ms. Villalba has a B.S. degree in Chemistry with Chemical Engineering and Spanish minors from the University of Houston. Prior to joining the TCEQ; she worked at an international chemical company in the area of industrial solid and hazardous waste management and at NASA-Johnson Space Center in the water laboratory conducting experiments and research to support the Space Shuttle and Space Station water disinfection projects.



Sarah P. Bernhardt, Ph.D. Program Manager Galveston Bay Estuary Program (GBEP).

operation of the GBEP, including coordination of the Galveston Bay Council and its subcommittees. Sarah has a Bachelor's from Miami University, Ohio focused on marine ecology; an M.S. in Zoology from Texas A&M University; and a Ph.D. in Urban and Regional Science from Texas A&M University.

Her research and field experience includes long term benthic monitoring at Stetson Bank, part of the Flower Garden Banks National Marine Sanctuary (FGBNMS), coastal flood planning, and coastal and marine protected areas management plan evaluation. Her work experience includes teaching undergraduate biology classes, research consulting for NOAA, education and outreach at the FGBNMS, and research assistant at Texas A&M University



Brian Koch

Texas State Soil and Water Conservation Board Regional Watershed Coordinator

Brian Koch received his Bachelor of Science Degree in Range and Wildlife Management from Texas A&M University Kingsville in 2003. After a short stint in the commercial nursery business, Brian joined the Texas State Soil and Water Conservation Board in 2005 as the Regional Watershed Coordinator serving TSSWCBs Wharton Regional Office service area covering 47 counties in Southeast and South Central Texas. As Regional Watershed Coordinator, Brian has aided in the development of several WPPs and TMDL I-plans, including; Plum Creek, Geronimo Creek, Bacteria Implementation Group, Cedar Bayou, Double Bayou, Mission and Aransas Rivers, and Upper San Antonio River, and is currently assisting development of several more. Brian also represents the agency on the Coastal Coordination Advisory Council, Galveston Bay Council, and Coastal Bend Bays and Estuaries Program.



Ashley Wendt currently serves as a Nonpoint Source Project Manager at the Texas State Soil and Water Conservation Board (TSSWCB) supporting implementation of the agricultural and silvicultural (forestry-related) components of the Texas Nonpoint Source Management Program and administration of the Clean Water Act §319(h) Nonpoint Source Grant Program. Ashley has served in this position for four and a half years. Headquartered in Temple, Texas, the TSSWCB is the lead agency responsible for planning, implementing, and managing programs for preventing and abating agricultural and silvicultural nonpoint sources of water pollution. The TSSWCB also administers a water supply enhancement program to increase available surface and ground water through the targeted control of water-depleting brush in areas in need of water conservation; works to ensure the State's network of 2,000 flood control dams is protecting lives and property; and facilitates the Texas Invasive Species Coordinating Committee. Ashley graduated from James Madison University, in Harrisonburg, Virginia, with her Bachelors of Science in Integrated Science and Technology concentrating in Biotechnology and Environmental Science in May 2008. While at James Madison in 2006, she interned with Honeywell International Inc. as an Environmental Engineer Intern. In August 2008, she moved to College Station, Texas to attend Texas A&M University, graduating in August 2010 with her Masters in Water Management. Prior to joining the TSSWCB as a project manager in 2010, she worked as a substitute teacher for College Station Independent School District and was a graduate assistant for Texas A&M University's College of Geosciences Dean's Office under the Director of Recruitment.

# Texas Water

Clean Water SRF Program Coordinator Texas Water Development Board Austin, TX

Mark Evans

Mark Evans has been the Program Coordinator of the Clean Water State Revolving Fund (CWSRF) in Texas since 2013. Mark serves as the Texas Water Development Board (TWDB) subject matter expert for the CWSRF program by providing knowledge and services on program administration, state and federal laws, legislation, rules, and regulations pertaining to the program. Mark specializes in outreach and education on all TWDB financial assistance programs as well. He also manages the intended use plan (IUP) process for the CWSRF program including developing the solicitation package and preparing the draft IUP for the U.S. Environmental Protection Agency and Board approval. Prior to becoming the CWSRF Program Coordinator, Mark served for four years as the TWDB Project Lead over all CWSRF projects overseeing and directing cross-functional project teams in analyzing, closing, and overseeing the construction of CWSRF projects. Mark received his Bachelor of Business Administration in Finance from the University of Texas at Austin.



Carla G. Guthrie, Ph.D.

Director Surface Water Division Texas Water Development Board

*Dr. Carla G. Guthrie* is a trained ecologist who has worked on freshwater inflows issues for 11 years. She has been a member of the Galveston Bay Council, an advisory committee to the Galveston Bay Estuary Program, since 2006. She is the TWDB's newly appointed representative to the Nucces Estuary Advisory Council and to the Texas RESTORE Act Advisory Board. She also regularly assists various stakeholder and technical committees focusing on environmental flows and is a long-time member of the Ecological Society of America and the Coastal and Estuarine Research Federation. She has degrees from Baylor University (B.S.), Texas Tech University (M.S.), and The University of Texas at Austin (Ph.D.).



Caimee Schoenbaechler

Coastal Ecologist /Environmental Flows Specialist Bays & Estuaries Program Texas Water Development Board

Caimee Schoenbaechler, Coastal Ecologist, has nine years of scientific work experience in coastal and marine ecosystems and is passionate about bridging the gap between environmental science, management, and policy. Her role at the TWDB is to evaluate the environmental flow needs of Texas estuaries while providing technical and administrative support to scientists, stakeholders, and resource managers across the state who are working to maintain productive estuaries. She is a Certified Ecologist accredited by the Ecological Society of America, and is an active member of the Coastal and Estuarine Research Federation. She received a Bachelor of Science degree in Ecology from The University of Texas at Austin and a Master's degree in Environmental management from Duke University.



Lacey Bodnar, CFM Project Manager Texas Water Development Board Austin, TX

Lacey is a project manager at the Texas Water Development Board. She also worked for nearly four years as a drainage engineer in Houston Texas. Her educational background is in water resources engineering and water science. She is a certified floodplain manager (CFM), and an advocate of low-impact stormwater management.



#### Dr. Ali Esmaeili Dean of Mathematics, Science, Bachelor's Degree Programs and University Relations South Texas College

Dr. Ali Esmaeili currently serves as the Dean of Mathematics, Science, and Bachelor Degree Programs and University Relations for South Texas College and has 26 years of experience in higher education. He has served as a Mathematics Instructor, Department Chair for Mathematics, Division Director, Campus Administrator, Professional Development Coordinator, and Associate Dean for Bachelor's Degree Programs. Dr. Esmaeili was instrumental in the development, implementation, and evaluation of four unique bachelor's degree programs at South Texas College. Under his leadership Quality Enhancement Plan (QEP) and Accelerating Developmental Education programs have been developed and implemented at South Texas College. He serves as a Board Member for the National Community College Baccalaureate Association (CCBA) and the Rio Grande Valley Council of Teachers of Mathematics.

Dr. Ali Esmaeili has earned a Doctorate in Education, Master of Science in Agricultural Mechanization, Master of Education in Adult Education, and a Bachelor of Science Degree in Agricultural Mechanization (all) from Texas A&M University-Kingsville, Texas. He holds Certification in DACUM and Emotional Intelligence. He is a member of the Competency-Based Education Network, the Texas Affordable Baccalaureate team (TAB.LAB), and is an Honorary Member of National Institute for Staff and Organizational Development (NISOD) for several years. Dr. Esmaeili has presented at several conferences including: NISOD, the League for Innovations, and the Community College Baccalaureate Association.

During his tenure at South Texas College, Dr. Esmaeili has developed his division into a strategic embodiment of South Texas College's Mission and Vision.



Ray Allen Executive Director Coastal Bend Bays & Estuaries Program Corpus Christi, TX

Ray Allen is the Executive Director of the Coastal Bend Bays & Estuary Program, a non-profit organization created to implement the Coastal Bend Bays Plan. The Estuary Program is implementing a variety of projects to protect and restore the health of the bays and estuaries in the Corpus Christi area. Ray was twice appointed by the Governor of Texas as the coastal citizen to the Coastal Coordination Council. He served on the Policy Committee of the Corpus Christi Bay National Estuary Program and was the founding Chairman of the Coastal Bend Bays Foundation. Prior to his position with the Estuary Program, Ray was employed by Central Power and Light Company in Corpus Christi as an environmental consultant dealing with issues ranging from endangered species concerns, water and air discharge permits, transmission line routing and the company's environmental stewardship program. Ray holds a both a Bachelors and Masters degree in Marine Biology from what is now Texas A&M University at Corpus Christi.

## THE LOWER RIO GRANDE VALLEY TPDES STORMWATER TASK FORCE

The LRGV TPDES Stormwater Task Force. In 1998, facilitated by Texas A&M University–Kingsville (TAMUK), a coalition of thirteen (13) Lower Rio Grande Valley (LRGV) local governments joined to form the LRGV TPDES (Texas Pollutant Discharge Elimination System) Stormwater Task Force (LTSTF) in a joint effort to develop a proactive regional approach to comply with the TPDES Phase II Municipal Separate Stormwater Sewer System (MS4) rules. TAMUK and the LTSTF developed a regional stormwater management plan (SWMP) adopted by the membership. The SWMP includes Best Management Practices (BMPs) that are required as part of the six (6) Minimum Control Measures (MCMs) of the State's TPDES program. Today the LTSTF is comprised of seventeen (17) local governments.

**Organization and Mission of the LRGV TPDES Stormwater Task Force**. The LTSTF project idea was born from a 1998 local stormwater brainstorming round table held in La Feria, Texas. Several preliminary meetings continued at various cities until the coalition was formally organized. Local government officials and qualified professionals representing various communities in the LRGV region attended these meetings. The group agreed to develop a way to achieve a regional SWMP to comply with the TPDES regulations. The group formalized the organization by contractually empowering TAMUK to facilitate the group and by developing a system of by-laws that included election of board members and officers.

The LTSTF uses a unique, collaborative regional approach to involve various levels of government, including the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA), in developing cost-effective solutions that will achieve compliance with the TPDES rules. The LTSTF project embodies the spirit of the mutually beneficial relationships between local governments and embellishes this relationship with academia and regulators. After seventeen (17) years, although the impact of this organization has translated into a regional collaboration movement not seen anywhere else in the State, the overall impact of this organization has yet to be fully realized.

The primary goal of the LTSTF project in 1998 was to develop and implement a regional SWMP to comply with Phase II regulations. In 2002, LTSTF participants began entering into local government interlocal agreements with TAMUK, which outlined the desire to address stormwater quality issues on a regional basis and named TAMUK as its facilitator. In executing these interlocal agreements, emphasis was placed on developing programs that study existing successful programs, addressing community goals, providing technical assistance and training, and promoting regional approaches.

In 2006, the LTSTF modified its mission to include stormwater quality management approaches to address broader water quality and watershed issues, particularly those associated with the Arroyo Colorado Watershed Partnership (ACWP), a local Total Maximum Daily Load (TMDL)-related organization. The LTSTF project has already enjoyed side benefits of increased communication and cooperation, and created a collaborative process for discussing water quality issues in the LRGV's four-county region. In addition, this collaboration and others like it, has enabled the participating communities and TAMUK to successfully secure many grant funding opportunities since the Task Force's inception.

TAMUK is providing facilitation and management assistance for the LTSTF project, initiating this effort through a National Science Foundation (NSF) grant, other grants, and from annual membership fees collected from the member-local-governments. The funds provide resources for staff to facilitate the group's efforts in formulating LTSTF project goals and developing LTSTF programs. Funds, in part, are also used to host workshops, expert panel discussions, conferences, seminars and training sessions.

In 2008, during a Task Force meeting held in Mission, TX, the organization formed several committees: ordinance, grant, scholarship, outreach, training, housekeeping, construction, and others. TAMUK worked closely with the committees in developing the SWMPs by responding to recommendations and suggestions posed by these committees. Recently, these committees have been replaced with work groups which now work with TAMUK in facilitating the organization and implementing the SWMPs. One key workgroup, responsible for luring millions of dollars worth of grant funding to the Valley, is the Low Impact Development (LID) workgroup. The LRGV LID Outreach, Education and Demonstration program is a highly regarded project in the region that resulted from collaboration efforts within this workgroup.

**New Paradigm.** The new stormwater paradigm presents many questions to local governments in the LRGV. What is a stormwater management program, what will it cost, who will fund the program, is it needed, and how much will it cost? The LTSTF realizes a regional program is a key part of a successful regional storm water program. But, regulators and academia do not have a firm grasp of the costs associated with developing and implementing such a program. Although the average citizen often takes for granted the services municipalities provide, the stormwater services are nonetheless expected. The region now requires that local governments provide a stormwater runoff pollution protection service. This new paradigm requires the development of infrastructure and funding strategies to support providing this service.

Storm Water Quality is Now a Municipal Responsibility. This is not the first time local governments have been confronted with environmental water quality regulations that affect the manner that cities allocate funds. TMDL regulations recently started developing new performance measures for local governments, and LRGV communities have become very familiar with the Arroyo Colorado TMDL studies. Based on these studies, the drafters of the Arroyo Colorado Watershed Protection Plan (ACWPP), which included members of the Task Force and TAMUK, concluded that urban stormwater runoff is contributing to the impairment of the Arroyo Colorado. Thus, the timing of the formation of the Task Force could not have been better. Local governments typically tend to procrastinate when it comes to addressing non-mandated environmental issues, usually because of lack of resources and lack of expertise and understanding rather than due to a non-proactive attitude. Still, finding funds to implement a regional SWMP program is a huge responsibility for any local government. Cost effectiveness and revenue potential were major considerations for our local governments when developing this Task Force.

In the LRGV, the communities share similar demographics and similar environmental concerns, Most residents live in low- or fixed-income households and cannot afford to pay fees to support the environmental-related requirements. Thus, there is a strong case for any type of collaboration that would keep costs down. In the LRGV, each community is contiguous to other communities, with some cities bordered by four (4) other cities. Thus, the LRGV appears as one urbanized metropolitan region. Although all these communities experience similar TPDES stormwater problems, none had in place a TPDES stormwater program or related ordinance. Since the creation of the LTSTF, stormwater tasks were generally viewed as "add-on" responsibilities for departments and staff that have other primary responsibilities. To varying degrees, with the exception of McAllen and Brownsville, the communities had existing staff (such as sanitary sewer, code enforcement, or road department personnel) handling stormwater operations, maintenance, regulation and enforcement. None of the communities could maintain a person, much less a department, to handle stormwater administration, planning, design, and engineering; water quality planning and monitoring; and capital improvements and expenditures. The regional approach taken by the LTSTF allows the LRGV communities to share these responsibilities, which results in a much more cost-effective program for addressing stormwater issues. Also realized in time, the LTSTF network provides a vitally important link to these small communities when new employees take on storm water related duties after key employee turnover. The LTSTF project will recognize its seventeenth (17th) year of existence, and the organization is determined to continue evolving and to continue strengthening its partnership in the future.

