## **BULLETIN** Corpus Christi Geological Society



and

### Coastal Bend Geophysical Society



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### CORPUS CHRISTI GEOLOGICAL SOCIETY P.O. BOX 1068\* C.C.TX. 78403 2018-2019

www.ccgeo.org

|--|

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### **GEOLOGICAL SOCIETY COMMITTEES & CHAIRPERSONS**

### MEMBERS PLEASE NOTE COMMITTEES CONTINUE TO FUNCTION WITHOUT A NAMED CHAIR, ALL ARE WELCOME TO ANY COMMITTEE THAT SUITES YOUR INTERST

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Type Logs	OPEN		



### COASTAL BEND GEOPHYSICAL SOCIETY P.O. BOX 2741\*C.C. TX. 78403 2017-2018

#### **OFFICERS**

President Vice President Secretary/Treasurer Golf Chairman Scholarship Chairman Education

Dr. Subbarao Yelisetti	3
Lonnie Blake	3
Matt Hammer	3
Lonnie Blake	3
Ed Egger	3
Dr. Robert Schneider	3
	1

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# Visit the geological web site at www.ccgeo.org

### CCGS/CBGS JOINT MEETING SCHEDULE 2018-2019

September							October						November							
S	Μ	T	W	Th	F	S	S	Μ	Т	W	Th	F	S	S	Μ	Т	W	Th	F	S
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23 30	24	25	26	27	28	29	28	29	30	) 31	-			25	26	27	28	29	30	

Wednesday Sept. 19th at 5:30 BBQ <u>Kickoff</u> at Hoegemeyers Barbeque Barn. Meet/greet our special guest, Dr. Satinder Chopra\* \*One of the most widely published geoscientists of our day. 11:30am-1:00pm Speaker Dr. Jeremy Meyer, Senior Vice President GeoMechanics. "The application of Geomechanics to Unconventional Development"

	December								Ja	nuar	y			February							
S		Μ	Т	W	Th	F	S	S	Μ	Т	W	Th	F	S	S	Μ	Т	W	Th	F	S
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	23	<b>2</b> 4	25	5 26	27	28	29	27	28	29	30	31			24	25	26	27	28		
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No meeting

11:30am – 1:00pm Speaker: Hongliu Zeng research scientist Bureau of Eco. Geology, Jackson School of Geosciesnces, The Univ. of Tx. Austin. "Seismic Sedimentology Talk" Collegiate Month

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March									L	April				Мау						
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### CCGS/CBGS Joint Meeting Schedule 2018-2019

No meeting

To be announced

To be announced

### **Calendar of Meetings and Events**

### **Calendar of Area Monthly Meetings**

Corpus Christi Geological/Geophysical Society	Third Wed.—11:30a.m.
SIPES Corpus Christi Luncheons	Last Tues.—11:30a.m.
South Texas Geological Society Luncheons	Second Wed—noon San Antonio
San Antonio Geophysical Society Meetings	Fourth Tuesday
Austin Geological Society	First Monday
Houston Geological Society Luncheons	Last Wednesday
Central Texas Section of Society of Mining, Metalllurgy & Exp	2 <sup>nd</sup> Tues every other month in
	San Antonio

### **SPONSORS**







CCGS President's Letter

SPACE, the final funtier

People of the Earth, hear my words. Lately, I am surrounded by space events and have begun to internalize them. Yes, there is great space between my ears that is not being utilized to its fullest extent. I might put in a bedroom or garden... well, never mind, back to Space.

So the Chinese have found something no one else but Pink Floyd thought about. Go where no one else is digging around. You know what this means. By the time we find gold or diamonds on the back side of the moon, we won't be able to pronounce any of the places because they are all Russian or Chinese names.

NASA (my second favorite Federal agency) has finally left the room with the New Horizons spacecraft to zoom into TNO's and KBO's (Don't know what that is? Keep up. Trans Neptunian Objects {like Pluto} and Kuiper Belt Objects (like comets and large chunks of ice and rocks). As of Oct. 2018, there are 528 numbered TNO's and more than 2000 unnumbered ones (how hard can that be?). And there are subgroups known as cubewanos, plutinos, twotinos, SDO's, ESDO's EDDO's and sednoids (probably a college science elective in there). Remember how tough it was to remember 9 planets? I'm glad there are only 8 left, but astronomers have a lot to do, just to number these guys. I mean, Sirius-ly, who's gonna count all the dirt in the solar system? And the naming convention – you come up with 2000 names (I bet the Chinese could). And that last one, New Horizons visited (#UltimaThule ) looks like a blurry dumbbell that Zeus left in the sky.

And now, everyone's heroes, Billionaires without Borders (Elon Musk, Jeff Bezos, Richard Branson) want to take one way trips to Mars and launch rockets willy nilly. At least a functional and useful task is bringing back supersonic flight. I mean, sit in a plane for 12-18 hrs. just to get to Thailand, and you will pay the price for a supersonic 3 hr. flight instead. Especially, now, we need to be pals with China and visit more often to have a face to face (Trump style).

Everyone is landing on asteroids, Japan, EU, US. And India has a Mars orbiter. The Bolivian Space agency is the first to launch an Alpaca into space. And who knew that the WHOLE WORLD would rely on Russia to get us back up to the ISS. Soyuz, a reliable space vehicle, that's Putin us in our place.

Ah, What? Excuse me the mother ship is calling in, I must go.

Frank G Cornish

Benevolent Overlord

**CORPUS CHRISTI GEOLOGICAL SOCIETY** 

### **2nd Annual Spring Golf Tournament**

NorthShore Country Club April 5, 2019 12:30 p.m. Shotgun Start Four-Person Scramble 100 Player Limit \* Sign up Early

Contact: Fermin Munoz, fmunoz04@hotmail.com, 361-960-1126

Name						
Email						
Company Name						
Address	<u>Sponsorships</u>					
City, State, Zip						
Phone	# Beverage Sponsor \$500 ea					
Yes, Please Place on a Team	# Hole Sponsor \$200 ea					
I want to be on a Team with: (list below)	# Longest Drive \$100 ea					
Player 2:	# Closest to Pin \$100 ea					
Player 3:	Door Prize Sponsor \$					
Player 4:	General Sponsor \$					
\$100 per Golfer	Total Sponsorship \$					
\$400 per Team (4 players)						
Sponsorship Total						
TOTAL AMOUNT DUE						
PAYMENT INFORMATION	NorthShore Country Club					
Check Enclosed	801 E. Broadway St.					
Make Checks payable to:	Portland, TX 78374					
Corpus Christi Geological Society	Entry Fee Includes:					
Mail check to:	➤ Green Fees					
CCGS Golf Tournament	➢ Range Balls					
Fermin Munoz Jr.	> Carts					
619 E. Broadway	Beverages on the Golf Course (limited)					
Portland, TX 78374	Door Prizes					
	> Dinner					

# Corpus Christi Geological Society Golf Tournament 4-Person Scramble April 5, 2019 12:30 p.m. Shotgun Start At NorthShore Country Club Portland, Texas

Golf Prizes Door Prizes Beverages Dinner

Contact: Fermin Munoz <u>Fmunoz04@hotmail.com</u> <u>361-960-1126</u>

Capiton all and





### **CBGS President's Letter**

### CBGS Board 2018-2019

Dr. Subbarao Yelisetti- President Lonnie Blake- Vice President Matt Hammer- Secretary/ Treasurer Dr. Robert Schneider- Continuing Education Lonnie Blake- Golf Chair Ed Egger- Scholarship Chair

### **CBGS Scholarships**

The board awarded three scholarships of \$2,000 each to undergraduate geophysics majors from Texas A&M University-College Station, University of Houston and Texas A&M University-Kingsville in 2017-2018. We will be awarding the scholarships again this year.

The following criteria is followed in awarding the scholarships.

- 1. Must be a citizen of the USA
- 2. Must have declared Major Geophysics at the main campus of the receiving university
- 3. Must have GPA 3.0
- 4. Must be in good standing with the school

5. Must make effort to attend a Coastal Bend Geophysical Society Meeting in Corpus Christi Texas after being awarded a scholarship to be recognized by the society.

News

- U.S. crude futures dropped from a near four-year high of \$76.90 a barrel in early October 2018 to an 18-month low of \$42.36 in December 2018 as reported by Scott DiSavino on reuters.com.
- At the time of writing this report, U.S energy firms cut 21 oil rigs in the week to Jan. 18, 2019 bringing the total count down to 852, the biggest decline since February 2016, as drillers reacted to the 40 percent plunge in U.S. crude prices late last year.
- Analysts at Simmons & Co predict that the average oil and natural gas rig count will fall from 1,032 in 2018 to 999 in 2019. Forecasts indicate that it will rise to 1,087 in 2020.

### **CBGS Business**

CBGS currently has 60 active members, 4 honorary members, and 60 student members.

### CBGS workshops/talks

- As part of the annual Kickoff Bar-B-Q, CBGS hosted Dr. Satinder Chopra on Sep 19, 2018 at the EOG conference center. His talk was entitled "Seismic reservoir characterization of Utica-Point Pleasant shale with efforts at quantitative interpretation a case study".
- CBGS offered a land seismic acquisition workshop on Dec 5<sup>th</sup> in EOG conference center with the following talks.

Talks:

- 1. A Brief Introduction to Seismic Acquisition (Students & New Professionals Encouraged) by Lonnie Blake, EOG
- 2. A Comparison of Long, Short, and Slip Sweep 3D Data Image Volumes Acquired And Constrained By Equivalent Source Time (KWP Phase I) by J. W. (Tom) Thomas, Kevin Werth, Tom Phillips, Chris Lindsey Dawson Geophysical Co.
- 3. A Comparison of 3D Multi-Component (9C) Data Image Volumes Acquired With Conventional and Simultaneous Source Techniques Also With Adequate Spatial Resolution For Compressive Sensing Investigation (KWP Phase 2) by J. W. (Tom) Thomas, Kevin Werth, Tom Phillips, Chris Lindsey Dawson Geophysical Co.
- 4. SAExporation More, Recent Advances in Onshore Seismic Data Acquisition Methods by Howard Watt, SAExporation, Houston

CBGS is looking forward to offer many such workshops in the future. Topic/speaker suggestions are welcome. Email your suggestions to <u>Lonnie\_Blake@eogresources.com</u> or <u>Subbarao.Yelisetti@tamuk.edu</u>

### **Golf Tournament**

CBGS organized its annual **Golf Tournament** to fund its scholarship program in the first week of October, 2018 at Northshore Country Club. Raised ~\$4,000 for the scholarship fund.

If you are interested in our next Golf Tournament, please contact Lonnie Blake at 361-887-2665 or Lonnie\_Blake@eogresources.com

### New Degree Tracks at TAMUK

- Texas A&M University-Kingsville (TAMUK) started its first cohort of MS Petrophysics program in Fall 2018. If you are interested in joining this program in Spring 2019, please contact the graduate coordinator for MS in Petrophysics, Dr. Subbarao Yelisetti at <u>Subbarao.Yelisetti@tamuk.edu</u>.
- **BS degree in Geophysics, Minor in Geophysics and Certification in Geophysics** offered at Texas A&M University-Kingsville from Fall 2017. Interested students can

contact Dr. Subbarao Yelisetti (<u>Subbarao.Yelisetti@tamuk.edu</u>) for additional information.

### Seismology class

**PHYS 5385 Seismology** is offered in Spring 2019 at Texas A&M University-Kingsville. This is available for the professional community as well as our students. You can sign up as a "transient" student in order to take classes without actually enrolling in the school. If anyone in the professional community wishes to sign up for this, please contact the instructor, Dr. Subbarao Yelisetti <u>Subbarao.Yelisetti@tamuk.edu</u>.

### **SEG Distinguished Lecture**

CBGS and TAMUK SEG student chapter organized 2018 SEG Distinguished Lecture in January, 2018. We wish to organize many more lectures in the future.

### **Education/Events**

### -<u>SEG</u>

SEG 2019 annual meeting will be held in San Antonio, TX from Sep 15-20<sup>th</sup>. Abstract deadline is April 1, 2019. See <u>https://seg.org/Annual-Meeting-2019</u> for additional details.

See <u>https://seg.org/Education/Lectures/Distinguished-Lectures</u> for information about upcoming SEG distinguished lecture in Houston and other locations.

See <u>https://seg.org/Education/Lectures/Honorary-Lectures</u> for SEG honorary lecture locations in Texas.

### -AAPG

2019 AAPG annual convention and exhibition will be held in San Antonio, TX from May 19-22, 2019.

### https://ace.aapg.org/2019

### -AGU

2019 Fall AGU annual meeting will be held in San Francisco, CA from December 9-13<sup>th</sup>, 2019. <u>https://fallmeeting.agu.org/2018/future-meetings/</u>

### -GSA

The Geological Society of America's 131<sup>st</sup> annual meeting will be held in Phoenix, AZ from 22-25<sup>th</sup> September 2019.

http://www.geosociety.org/GSA/Events/Annual\_Meeting/GSA/Events/gsa2019.aspx

### **Monthly Saying**

"Energy forecasting is easy. It's getting it right that's difficult" - Graham Stein, 1996

### **Monthly Summary**

Texas Oil and Gas Info	Current Month	Last Month	Difference	
Texas Production	MMBO/BCF	MMBO/BCF	MMBO/BCF	
Oil	114.8	122.1	-7.3	September
Condensate	12.9	14.1	-1.2	September
Gas	681.5	723.8	-42.3	September
	Yr to date - 2018	Yr to date - 2017	Yr to date - 2016	
Texas Drilling Permits	13307	12600	8113	December
Oil wells	3356	3183	2252	December
Gas wells	819	722	429	December
Oil and Gas wells	8201	7887	4919	December
Other	123	188	122	December
Total Completions	10986	6914	10468	December
Oil Completions	8588	5394	7813	December
Gas Completions	1813	1022	2129	December
New Field Discoveries	23	29	23	December
Other	40	22	52	December

Subbarao Yelisetti President, CBGS



CORPUS CHRISTI GEOLOGICAL SOCIETY COASTAL BEND GEOPHYSICAL SOCIETY



### LUNCHEON MEETING ANNOUNCEMENT

### February 20, 2019

Location:	Water Street Events (Previously the Seafood Company Restaurant) 300 Block N. Water Street, CC, TX 78401		
Student Sponsor:	Imagine Resources, Nye Exploration, Viper Exploration, Ltd.		
Bar Sponsor:	Sponsorship Opportunities Available!!!!!!		
Time:	11:30 am Bar, Lunch follows at 11:45 am, Speaker at 12:00 pm		
Cost:	\$25.00 (additional \$10.00 surcharge without reservation; <u>NO SHOW</u> may be billed and non-RSVP attendees cannot be Guaranteed a lunch); FREE for students with reservation (discounted by our generous sponsors)!		
Reservations:	Please RSVP by 4PM on the FRIDAY before the meeting! E-Mail: <u>arrangements@ccgeo.org</u>		
Please note that luncheons RSVPs are a commitment to the Water Street			

Please note that luncheons RSVPs are a commitment to the Water Street Events and must be paid even if you can't attend the luncheon.

### SPONSORSHIPS OPPORTUNITIES ARE AVAILABLE! IF YOU WOULD LIKETO SPONSOR, PLEASE CONTACT US AT: <u>arrangements@ccgeo.org</u>



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Imagine Resources, LLC

### 2019 COLLEGIATE MONTH

### February 20, 2019

This month has been dedicated to our local college professors and students to make presentations and report about the geological and geophysical research, as well as the educational programs and opportunities ongoing at our local colleges. Those local area college students and professors desiring the opportunity to present during lunch or conduct poster sessions beforehand are encouraged to e-mail CCGS Vice President Casey Mibb at <u>clmibb@yahoo.com</u> no later than 4:00 pm the Friday before the meeting.









### Corpus Christi Geological Society Scholarship Application Guidelines 2019 Summer/Fall Semester (Must be postmarked by March 24, 2019)

- 1. Applicant must be currently attending a college in the local area AND planning to attend Field Camp for the summer of 2019 or to be enrolled in the Fall semester.
- 2. Applicant must have a 2.5 GPA overall AND a 3.0 GPA in Geology courses.
- 3. Applicant must be recommended by your faculty for this scholarship. *NEW*!
  - a. Ask a faculty member to fill out the Faculty Recommendation Form. No need for two letters of recommendation, just this form from one faculty member.
- 4. Complete the Scholarship Application.
- 5. Write a short essay explaining your geologic career goals.
- 6. Provide a school transcript; make sure it has your name on it. A web printout is acceptable.
- Applications must be postmarked by: March 24, 2019
   Mail completed application to: Dawn Bissell, CCGS Scholarship Committee Chairman, 253 Circle Drive, Corpus Christi, TX 78411

Email **bissells@swbell.net** once you've mailed your application. If I do not receive an email, I won't be able to notify you if you've been selected. *Award notifications will be sent via email!!!* 

Please read requirements carefully and submit only complete applications. Applicants who have received a CCGS scholarship in the past <u>are</u> eligible to apply again.

Scholarships will be awarded based on merit and need.

Award recipients will be recognized at the monthly luncheon April 17, 2019 and are encouraged to attend.

Board Members: Dawn Bissell Brent Hopkins - Treasurer

Frank Cornish, CCGS President B.J. Thompson

1 / 11211		pplicat	ion Guid Semester	•	
Last Name:	Last Name:First Name:				
Mailing addre	ess: be mailed if you are unable to	attend the award	presentation)		
City:		State:	Zip Code:		
Active Email	:				
e e	ations will be sent vid tted your application.		<u>nail <b>bissells</b>@</u>	<u>swbell.net</u>	<u>once</u>
Daytime Phor	ne:	Alternate	e Phone:		
University Cu	rrently Attending:				
Department:		Major:			
University Ho	osting Field Camp:				
Have you Ap	plied to Field Camp?	Yes No; I	Have you been	Accepted	? Yes N
Scholarship is	s for class level (circle	e one):			
Freshman	Sophomore	Junior	Senior	Graduat	e Student
Total Hours C	Completed:	Overall (	GPA (Minimur	m 2.5):	
<u>Total Hours -</u>	Geology:	Geology	<u>GPA(Minimu</u>	m 3.0)	
Prior recipien	t of CCGS Scholarsh	ip?	Yes	N	0

Applicant Signature

Date

Mail application, along with essay, faculty recommendation form, and transcript to: Dawn Bissell, CCGS Scholarship Committee Chairman 253 Circle Drive, Corpus Christi, TX 78411 Must be postmarked by March 24, 2019. Email <u>bissells@swbell.net</u> once you've mailed your application. Award notifications will be made via email!!!



## Corpus Christi Geological Society Scholarship Application Guidelines

2019 Summer/Fall Semester (Must be postmarked by March 24, 2019) Faculty Recommendation

Student's Last Name:F	First Name:	
University Currently Attending:		
University Hosting Field Camp:		
Faculty Name:		
Has the student been Accepted to Field Camp	? Yes	No
Do you recommend this student for this schola	arship? Yes	No
Comments:		

Faculty Signature

Date

University

Mail/Email to Dawn Bissell, CCGS Scholarship Committee Chairman 253 Circle Drive, Corpus Christi, TX 78411 **by March 24, 2019. Email** <u>bissells@swbell.net</u>

### Am <u>/</u> Becoming an Environmental Whacko? Texas Plastic Pollution Symposium: Report & Review

By Randy Bissell

The 1<sup>st</sup> ever Texas Plastic Pollution Symposium was held in Corpus Christi, Texas, on Tuesday, October 30, 2018. This conference brought together scientists and advocates to present and discuss topics related to plastic in the environment. The day-long seminar was held at the Del Mar Center for Economic Development on Staples Street, near Del Mar College. In the evening, the Surf Museum hosted a get-together for participants to socialize and discuss their day.

The Texas Plastic Pollution Symposium was sponsored and underwritten by:

- The University of Texas Marine Science Institute
- Mission Aransas National Estuarine Research Institute
- Texas Parks & Wildlife
- Sea Grant Texas at Texas A & M University
- Surfrider Foundation

Registration was required for the participants, but the seminar was free. Lunch and refreshments were provided and the talks were strictly 15-minute each. Looking across the 130 or so attendees, there was quite a bit of diversity in the crowd with surfer, scientists, community activists, and many others. However, there was one common theme that was palpable in the crowd – the love and respect for the coastline habitat and concern for the quantity of plastic in our marine environment. For example:



Trash on the Beach at Mustang Island State Park

continued on page 21





Now, I *think* I was the only member of the Corpus Christi Geological Society in attendance. It also seemed that I was one of very few geologists there. But most certainly it felt as if I was the only oil & gas guy within 1000 yards. Priceless was the face of one participant who asked if I had a business card to share and was then aghast at seeing "Headington Energy." Thank goodness we recently rebranded from Headington Oil! I softly and reassuringly told her that our company only focuses on "natural gas," plentiful from the earth. "It's 100% natural for your home." She *seemed* satisfied - but suspicious.

#### Why I Went

Before Hurricane Harvey hit, Dawn and I had been discussing how to get more out of living in deep South Texas. I led the Geomorphology Field Trip in the spring and through scoping out those sites, I grew to really love beaches from the Packery Channel to Newport Cut and Mustang Island State Park. Our almost weekly Sunday afternoon trips involved have involved picking up seashells and beach trash. Over the past 18 months, we've developed our habit (or ritual) to cover about two miles of beach mostly on or near the State Park. Anyone who spends time on our South Texas beaches has encountered our overwhelming and shaming litter issue. We <u>do</u> have a problem. But instead of casting blame, or just accepting being demoralized and disgusted, I have resolved that we can simply help one pickle bucket at a time.

As a concerned citizen, a nature acutalist\* and scientist, the symposium seemed a great opportunity to learn more about what's being done, what are the long-term consequences of the problem, and the perceived solutions. (\**a sober combination of uniformitarianism and catastrophism*).

### **Politics & Perceptions**

As I encountered with my moment of business card exchange, there are politics and perceptions at the core of any environmental "issue." There is an obvious tension between "us" and "them." I tried to disarm suspicions of my participation by mentioning my personal litter campaign, then my adjunct teaching at the University, and finally my membership in the Geological Society. Being civil, gentle, and showing compassion evoked responses in kind and I had several good conversations with folks that I expected to hate-me-to-my-core for being a petroleum geologist. I left the symposium encouraged by the civility and earnestness of our local beach advocates.

### **The Plastic Problem**

Like many pro-industrialists, business owners, political conservatives and social libertarians, I bristle at the thought of more regulation to address a problem as simple as littering. Besides, littering in Texas is illegal and already carries a hefty fine. Only stupid and inconsiderate people litter. I mean, "Don't mess with Texas!"

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Because of my worldview, it would seem that laws such as plastic bag bans are silly and useless. Most friends sharing my political and worldview would agree that the real problem is personal responsibility. Why punish everyone because of the habits of the few? Why should law-abiding and responsible people have to give up anything, including plastic bags? Do I need to feel bad about using a plastic fork to eat my kale salad?

What is still humorous to me is the quasi-religious piety of many "environmentalists." Atonement is expressed and achieved by self-denial of otherwise useful plastic items like bottles, straws, and cutlery. Bans seem the attempt to regulate and enforce an atoning "self-denial of plastic." Is this an admission that many people (or most people/some people) have so little self-control that access to the things they wantonly discard must be prohibited? So there is this strong "feel-good-environmentalism" movement to self-deny and prohibit the use of plastic tableware, straws, cups, bags, bottles, plates – and Styrofoam. Good Lord, Styrofoam is *the worst*! B..but..but...I like Styrofoam!

Yes, these materials are found in my informal survey of the trash I collect on the beach. But also in there are plastic toys, toothbrushes, buckets, and every other conceivable plastic thing scattered across our beaches. The problem is not plastic, <u>it is people</u>. And the problem is not a specific item, although some items, like straws, bags, and 6-pack holders, have direct consequences on wildlife. The greater problem is simply quantities of plastic in the ecosystem. So, the problem with bags *is not bags*. The problem with water bottles *is not water bottles*. The problem with plastic *is not plastic*. I can go on. <u>The problem is people who throw stuff out the window or discard their trash haphazardly</u>.

Volumetrically, my informal survey of materials indicates that plastic containers, including bottles and their caps, are the most common component of the trash. Secondly, clear sheet plastic and bags are pretty common. The prevalence of plastic trash matches well with the 95% number reported by many presenters in the Symposium. However, drinking straws are relatively rare on our beaches and often surpassed by toothbrushes and sandals (go figure) in their frequency.

### The <u>Real</u> Plastic Problem

Beyond the visual nuisance, granular plastic is a growing component of the sedimentary system. The breakdown of plastics by constant UV bombardment and wave energy results in "micro-plastic" and "nanno-plastic" particulates and fibers. Herein lies the most legitimate concern for all of us.

An inspection of almost any swash zone on Padre Island will often reveal the presence of granule and smaller sized grains of plastic as detritus amongst the mineral and organic material. Because of the low density and irregular shape of the plastic grains, they mimic natural organic material and micaceous minerals. Given the breakdown rates of plastic, months to several years, granular plastic is an end product of most all plastic washed into the system. It has become a sedimentological component.

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4805 Westway Park Blvd. Houston, TX 77041 p: 832.554.4301 www.seimaxtech.com Perhaps more alarming is that finer grained and fibrous plastic mimic organic material. Thusly, organisms that harvest in the pelagic realm and graze the littoral and sublittoral environs ingest this material along with organic nutrients. This begins the process of concentration in fish and wildlife...affecting the things that <u>we</u> hunt, harvest, and eat.



Micro-plastic incorporated in sediments on Mustang Island.

It is this incorporation of plastic as a counterfeit component of the ecosystem that deserves more legitimate research and understanding by geologist and biologists. Plastic is not really an inert material, so there is some reasonable concern for the release of toxic or biochemically reactive components as it is entrained into the geological and biological system.

### The Solution

It is an obvious conclusion that there need to be reductions in the volume of plastics introduced to the natural environment – especially from an emotional perspective of fear, alarm, nuisance, or disgust. But it is equally apparent that plastic usage will rise as the more nations emerge in the standard of living and realization of the convenience and utility of plastic materials.

This author finds "selective self-denial" and regulatory bans on specific products limited in effect towards a world-scale volumetrically significant reduction of plastic in our environment. On a positive note, communities that have implemented a bag ban with an awareness campaign document a visible reduction in offensive plastic trash. There may be logical places to ban certain products. For example, not giving away plastic straws at establishments located on or near beaches. In contrast, the demonizing of plastic straws (or bags or spoons) in all contexts is purposeless and only serves to foment the "us" versus "them" condescension which is, unfortunately, the stereotypical characterization of so many proclaimed environmentalists.

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#### **My Solution**

From the evocative film, "STRAWS," the author of <u>BLUE MIND</u> made an excellent point worth quoting. Wallace Nichols asked, **"What's your water?"** His point is that each of us has a "water" that is important to us as a part of our memory and experience. That water, our water, is an engine for our happiness. "Water quiets all the noise, all the distractions, and connects (us) to our own thoughts."

For each of us, <u>our</u> water is worth fighting for. I, too, offer that the proper emphasis is to make the focus the water, <u>not</u> the plastic. The prevalence of plastic in the environment is a social, economic, and behavioral problem - not a material problem. Admittedly, it is a cultural characteristic coincident with poverty. Quite simply, people who are living in poverty seem to think little about the consequences of their personal environmental pollution. Yes, some pollution along the Texas Coast results from our cultural acceptance of pollution from our up-current neighbor to the south, Mexico. Thinking over the magnitude of our Texas Coastal problem puts "selective self-denial" of a plastic fork or straw in its actual context. The key to real reductions in ocean plastic is the consequential awareness of pollution within 2<sup>nd</sup> and 3<sup>rd</sup> World cultures and communities.

**I know "my water."** Thankfully it surrounds me. So my commitment is to protect my water – to be the citizen who, by all means necessary, addresses the issues I can. Picking up trash at the beach or in the bay is an active strategy. Reducing personal consumption of problem products is a component of my personal plan, too. And finally, assisting, respecting, and affirming those individuals and organizations working towards the same broad goal of protecting "my water" get my tolerance in political differences, but my support.

**Plastics are** <u>not</u> the enemy. Plastic manufacturers are <u>not</u> the enemy. Oil Companies are <u>not</u> the enemy. Although historically useful to incite action, actually there is <u>no enemy</u> in pollution, but there are consequences and victims. Plastic or any pollutant in our environment is a barometer of our collective sense of responsibility and stewardship of our planet. Each of us can decide how we're doing and if we want a role in improving humanity's currently failing scorecard.

My role involves a bucket.

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