The Coastal Bend Regional Water Planning Group for the Senate Bill 1 Regional Water Planning Program will meet on March 12, 2015 at 1:30pm at the Johnny Calderon County Building 710 E. Main Street, Robstown, Texas 78380

(All meetings of the Coastal Bend Regional Water Planning Group are open to the Public)

The Executive Committee to review Industry Representative nominations will meet at 1:00 pm prior to the Regular Meeting

REGULAR MEETING AGENDA

I. Call to Order

II. Roll Call

III. ACTION ITEM: Consider Approval of Minutes of the 02/12/2015 Meeting of the Coastal Bend RWPG (Attachment A)

IV. ACTION ITEM: Consider Selection and Appointment of Person to Represent Industry (Attachment B)

V. ACTION ITEM: Discuss and Consider Approval of the Quorum Requirements for Approval of the 2016 Initially Prepared Plan (Attachment C)

VI. Discussion Item Preliminary Results of Select Water Management Strategy Evaluations (Attachment D)

VII. Discussion Item Updated Needs Analysis to Include Mary Rhodes Phase II in Current Supplies (Attachment E)

VIII. ACTION ITEM: Recommend Water Management Strategies for Water User Group Water Supply Plans for the 2016 Initially Prepared Plan (Attachment F)

IX. ACTION ITEM: Discuss and Consider Approval of the Process to Procure Technical Consultants for the 2021 Planning Cycle (Attachment G)

X. RWPG/TWDB Administrative and Other Issues

XI. General Public Comment

Citizens may address the Planning Group concerning an issue of interest that is not listed on the agenda. Agenda item comments must be made when the item comes before the board. The planning group may place a time limit on all comments.

XII. Confirm Next Meeting Date

XIII. Adjourn

FOR MORE INFORMATION, CONTACT: Nueces River Authority, Coastal Bend Division, 400 Mann St., Suite 1002., Corpus Christi, Texas 78401 361-653-2110 http://www.nueces-ra.org
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ATTACHMENT A

Agenda Item III

Minutes of the February 12, 2015 Coastal Bend RWPG Meeting
The meeting of the Coastal Bend Regional Water Planning Group (RWPG) was held at the Johnny Calderon County Building, 710 E. Main Street, Robstown, Texas 78380.

**Agenda Item I – Call to Order:** Ms. Carola Serrato called the meeting to order at 1:30 pm.

**Agenda Item II – Roll Call:** A visual attendance was noted. Voting members of the Coastal Bend RWPG in attendance included:

- Mr. Scotty Bledsoe
- Mr. Chuck Burns
- Ms. Teresa Carrillo
- Mr. Bill Dove
- Mr. Lavoyger Durham
- Mr. Andy Garza
- Mr. Robert Kunkel
- Mr. Martin Ornelas
- Mr. Charles Ring
- Mr. Lonnie Stewart
- Mr. Mark Sugarek
- Mr. Brent Clayton

Mr. Gary Eddins
Mr. Bill Hennings
Dr. Pancho Hubert
Mr. Lindsey Koenig
Mr. Gary Eddins
Mr. Bill Stockton
Mr. Jace Tunnell

Ms. Carola Serrato
Mr. Bill Stockton
Mr. Jace Tunnell

Mr. Andy Garza, Mr. Robert Kunkel, Mr. Martin Ornelas, Mr. Charles Ring, Mr. Lonnie Stewart, and Mr. Mark Sugarek had excused absences.

Mr. Brent Clayton was a proxy for Mr. Mark Scott.

A quorum was determined to be present.

Ms. Rocky Freund represented the Nueces River Authority (NRA).

Non-voting members in attendance included:

- Ms. Nelda Barrera, TDA
- Mr. Tomas Dominguez, NRCS
- Dr. Jim Tolan, TPWD
- Ms. Connie Townsend, TWDB

Guests included:

- Mr. Brian Bresler, Freese & Nichols
- Mr. Tom Callan, City of Rockport
- Mr. Sinoel Contreras, SOS
- Mr. Preston Dillard, APAI
- Mr. James Dodson, NEI
- Mr. Demetrio Duarte, City of Alice
- Mr. J. D. Head, Laboreitas Creek Ranch, L.P.
- Ms. Sandra Heatherly, LWV
- Mr. Rex Hunt, APAI
- Ms. Jennifer Kildies, TCEQ
- Ms. Nana Liu, TAMUCC
- Mr. Rudy Mora, City of Alice
- Mr. Bill Norris, NorrisLeal
- Ms. Barbara Reeves, City of Alice
- Ms. Kristi Shaw, HDR
- Mr. James Skrobarczyk, Coastal Area Properties
- Ms. Betty Stiles, Aransas County Commissioner
- Mr. Brice Thomas, TCEQ
- Mr. Marvin Townsend, City of Beeville
- Ms. Gaye White, Rep. Hunter
- Mr. Tony Wood, TAMUCC

**Agenda Item III – Approval of Minutes:** Ms. Serrato asked for approval of the minutes of the January 15, 2015 meeting of the Coastal Bend RWPG for the Senate Bill 1 Regional Water Planning Program. Ms. Townsend suggested two corrections. There was a motion by Mr. Bledsoe to approve the minutes as corrected. It was seconded by Mr. Durham. There was no further discussion and the minutes were approved by a unanimous voice vote.

**Agenda Item IV – Consider Authorizing NRA to Request that TWDB Conduct the “Socioeconomic Impacts of Not Meeting Needs” Analysis for the Coastal Bend Region for the 2016 Plan:** Ms. Shaw explained that TWDB will perform an analysis of the cost of not meeting needs for those entities with needs identified in the 2016 Plan. This is a request that authorizes TWDB to do the analysis. It will be done after the Initially Prepared Plan (IPP) is submitted in May. Mr. Burns made a motion to authorize NRA to send the
request. It was seconded by Mr. Koenig. There was no further discussion and the motion passed by a unanimous voice vote.

Agenda Item V – Consider Approval of Legislative and Regional Policy Recommendations to TWDB to be Included in the 2016 Plan: Ms. Serrato explained that the subcommittee to review the recommendations met just prior to the meeting. They used the recommendations that were included in the 2011 Plan as a starting point. Ms. Shaw reviewed the changes that were made to develop the recommendations for the 2016 Plan.

The changes included:

• **8.1.3 Desalination**
  - III Texas Legislature is urged to amend state laws governing the procurement of professional services by public agencies in order to allow municipalities, water districts, river authorities, smaller communities, and other public entities, provided that they have the expertise, to utilize **alternatives to the traditional “Design-Bid-Build” alternative delivery** methods for public work projects, including desalination facilities. For example, **most** some large-scale desalination facilities built in the past 10 years are constructed using “Build-Own-Operate-Transfer”are now constructed using **CMAR (Construction-Management-at-Risk)** method, allowing for a cost-effective transfer of project risks to the private sector.

• **8.1.4 Groundwater Management**
  - III. TWDB is urged to continue funding for updates to the groundwater availability models **at least on a five year basis**, specifically the **Gulf Coast GAM Groundwater Management Area 16 Groundwater Flow Model** covering the Coastal Bend Region.
  - IV. The **Texas Legislature is urged to require the** Texas Railroad Commission is urged to cooperate with TWDB and TCEQ to encourage oil and gas well drillers to furnish e-logs, well logs, and other information that might be available and require logging of shallow, groundwater bearing formations to facilitate the better identification of aquifer characteristics.
  - X. The TWDB is urged to consider local mining projects (such as natural gas from the Eagleford shale) when developing mining water demand projections in the future for regional planning. The TWDB is urged to **continue** to provide guidance on how planning groups should address local mining water projects, especially those associated with gas production from the Eagleford shale or other projects with variable, and often indeterminate production timelines.

• **8.4 Additional Recommendations**
  - These items were numbered and reordered with the original #11 becoming #1 and reading: **Support--The Texas Legislature is urged to support** studies of construction and implementation of pilot desalination plant to quantify and qualify impacts of operating a brackish desalination facility in the Coastal Bend Region.
  - The original #10 became #2 and reads: **The Texas Legislature is urged to support** studies to closely monitor discharges from sand and gravel operations in the Lower Nueces River.
  - The original items #1 through #6, now #3 through #8, remain unchanged.
Minutes of the February 12, 2015 Meeting of the Coastal Bend Regional Water Planning Group (Region N) for the Senate Bill 1 Regional Water Planning Program

- The original #7 became #9 and reads:
  Environmental studies of the segments of the Frio and Nueces Rivers downstream of Choke Canyon Reservoir and upstream of Lake Corpus Christi to the Calallen Pool intakes should be undertaken to fully evaluate the potential impacts of reduced instream flows, including groundwater recharge, associated with the option to construct a pipeline between the two reservoirs.

- The original #8 was removed:
  The Coastal Bend Region should work with Region P on environmental studies associated with the potential construction of Palmetto Bend Stage II

- The original item #9 became #10 and remains unchanged.

8.3 Identification of Sites Uniquely Suited for Reservoirs
Ms. Shaw will update this section to include information relevant to the 2016 Plan.

The rest of the document remained unchanged.

Dr. Tolan questioned why the reference to Palmetto Bend Stage II was removed. Ms. Shaw explained that the on-channel Stage II project is no longer being considered as a water management strategy for Region P and has been replaced with the Lavaca Off-Channel Reservoir project. Mr. Koenig commented that he is trying to find out information about a pipe insert for the ionization of irrigation water, to reduce salinity, from a company out of Arizona.

By consensus, the group approved posting the section on the FTP for further review by the group. Ms. Shaw explained that NRA has created the FTP site as a location for the group members to access sections of the Plan as they become available. Ms. Freund added that only members will have access to the site. The general public will have the opportunity to provide additional comments during the formal comment period that will take place after the IPP has been submitted.

Agenda Item VI – Consider Authorizing NRA to Execute the Initial NRA-HDR Subcontract for the 5th Round of Regional Water Planning for the 2021 Plan: Ms. Serrato explained that this item is premature. There will be a discussion and action item on the March 12, 2015 meeting agenda to consider the process for procuring the technical consultant for development of the 2021 Plan. No action was taken on this item.

Agenda Item VII – Preliminary Results of Select Water Management Strategy (WMS) Evaluations:
Ms. Shaw provided the review of the following WMSs:

Manufacturing Water Conservation & Nueces River Water Quality: Ms. Shaw reminded the group that TWDB requires that water conservation be the first water management strategy first for those areas having needs. Nueces and San Patricio counties have manufacturing needs.
- Water quality impacts the amount of water needed by industries
- Manufacturing water savings are obtained by lowering mineral content and minimizing salinity variability
- Chloride values double from Lake Corpus Christi to Calallen Pool
There are a number of completed or ongoing studies in the segment to evaluate and address the water quality:

- Lower Nueces Water Budget Study
  - Lake Corpus Christi Groundwater Surface Water Interaction
  - Lower Nueces Gain/Loss Study
- Recent studies to monitor Lower Nueces River water quality
  - Nueces River Watershed Protection Plan (TSSWCB, NRA, Corpus Christi, est. Sept 2015)
  - Texas Clean Rivers Program-2013 Basin Summary Report (NRA, 2013)
  - Nueces BBASC Nutrient Budget Analysis (TWDB, HDR, ongoing)

There are 14 Industrial BMPs to achieve manufacturing water conservation savings to be included in the Plan, which include:

- Industrial Water Audit
- Water Waste Reduction Plan
- Submetering
- Reuse and Recirculation of Process Water
- Others

A study has shown that reducing chlorides by roughly 50% (from 225 mg/l to 100 mg/l) results in a 6% to 8% reduction in water use. Waters from Lake Texana and the Colorado River have better water quality. The blending of the Nueces River and Lake Texana water results in a chloride reduction of 45% - 46%. Adding the Colorado River water will reduce chlorides by 56% - 59% total (or 11-13% more than with Lake Texana only). This will increase savings in the cooling water total to about 6,000 AF/yr compared to just using the Nueces River water.

Additional Manufacturing Water Conservation Strategies in previous plans included:

- Pipeline interconnection for Calallen Pool industries (5 MGD)
  - Pipeline distance: 1 mile
  - Assumes raw purchase water cost (from Corpus Christi): $360 per acft
  - No treatment included
  - Project Yield: 5,600 AF/yr
  - Raw Water Unit Costs: $381/AF/yr
- Outlet works to remove high Total Dissolved Solids (TDS) water
  - MGD siphon at up to 8 locations to remove poor quality water from pool bottom
  - Estimated to reduce chlorides by 15-20% (Nueces River)
  - Additional savings with Mary Rhodes Phase II (MRP2) online
  - Project Yield: 627 - 869 AF/yr
  - Raw Water Unit Costs: $330 - $458/AF/yr
- Modification of Existing Intakes and Outlet Works
  - Estimated to reduce chlorides by 5% (Nueces River)
  - Screened pipeline variable level intake (NCWCID#3); side stream intake (Corpus Christi; Flint Hills; Celanese). Outlet works/siphon system needed.
  - Additional savings with MRP2 online
  - Project Yield: 836 – 1,158 AF/yr
  - Raw Water Unit Costs: $718 - $995/AF/yr
Pipeline from Lake Corpus Christi to O.N. Stevens Water Treatment Plant (WTP)
- 234 MGD pump station to deliver 150,000 acft/yr with 1.75 peaking
- Yield based on reduced channel losses and increased manufacturing conservation
- 114” diameter, 21 mile pipeline
- Treatment costs of $369 per acft included
- Project Yield: 19,600 – 23,100 AF/yr
- Raw Water Unit Costs: $846 - $997/AF/yr
- Treated Water Unit Costs: $1,215 - $1,366/AF/yr

Plugging Leaky and Abandoned Oil Wells

Ms. Freund expressed concerns about the probable degradation of the water quality in the river if the pipeline from Lake Corpus Christi to the O. N. Steven WTP was built. Dr. Tolan added that it would also conflict with the findings of the Senate Bill 3 environmental flows studies. Treatment costs could possibly be lower because of the better water quality.

**Brackish Groundwater Desalination:** This is an update of the 2011 Plan strategy that looked at three potential well fields. Since these projects would exceed the current Modeled Available Groundwater (MAG), there would need to be coordination with the local GCD and Groundwater Management Area (GMA) to increase the MAG in order for them to be eligible for TWDB funding.

**Bee – San Patricio Project to O. N. Stevens WTP**
- 36 wells at depth of 800’ operating at 500 gpm; 90% operational time
- Raw water quality (est.) 1,050 mg/l TDS; 62% RO treatment and 38% raw blend
- Finished water quality (est.) 400 mg/l TDS
- Concentrate disposal pipeline: 32 miles to Copano Bay or 4 miles to deep wells
- 19 miles to O.N. Stevens
- Project Yield: 24,000 AF/yr
- Treated Water Unit Costs: $934 AF/yr (concentrate disposal to the bay) - $916/AF/yr (concentrate disposal to deep wells)

**Bee – San Patricio Project to SPMWD**
- 36 wells at depth of 800’ operating at 500 gpm; 90% operational time
- Raw water quality (est.) 1,050 mg/l TDS; 62% RO treatment and 38% raw blend
- Finished water quality (est.) 400 mg/l TDS
- Concentrate disposal pipeline: 32 miles to Copano Bay or 4 miles to deep wells
- 12 miles to SPMWD
- Project Yield: 24,000 AF/yr
- Treated Water Unit Costs: $879 AF/yr (concentrate disposal to the bay) - $916/AF/yr (concentrate disposal to deep wells)

**Nueces – Northwest Project to O. N. Stevens WTP**
- 30 wells at depth of 800’ operating at 500 gpm; 90% operational time
- Raw water quality (est.) 1,750 mg/l TDS; 77% RO treatment and 23% raw blend
- Finished water quality (est.) 400 mg/l TDS
- Concentrate disposal pipeline: 6 miles to deep wells (3,100 ft deep)
- 5 miles to O.N. Stevens
- Project Yield: 18,000 AF/yr
- Treated Water Unit Costs: $1,031 AF/yr
Nueces – South Central Project to Corpus Christi
- 20 wells at depth of 1,300’ operating at 500 gpm; 90% operational time
- Raw water quality (est.) 1,900 mg/l TDS; 79% RO treatment and 21% raw blend
- Finished water quality (est.) 400 mg/l TDS
- Concentrate disposal pipeline: 9 miles to Barney Davis Power Station
- 6 miles to Corpus Christi Delivery Point
- Project Yield: 12,000 AF/yr
- Treated Water Unit Costs: $1,133 AF/yr

Nueces – South Central Project to South Texas Water Authority (STWA)
- 20 wells at depth of 1,300’ operating at 500 gpm; 90% operational time
- Raw water quality (est.) 1,900 mg/l TDS; 79% RO treatment and 21% raw blend
- Finished water quality (est.) 400 mg/l TDS
- Concentrate disposal pipeline: 2 miles to deep wells (3,900 ft deep)
- 15 miles to STWA
- Project Yield: 12,000 AF/yr
- Treated Water Unit Costs: $1,252 AF/yr

WUG-Specific WMS Requested – City of Beeville: The City of Beeville has requested that the 2016 Region N Plan include a 1.3 mgd well field at Chase Field and a 0.3 mgd irrigation well in Veterans Park converted to municipal use.

Chase Field Groundwater Project
- Assumes groundwater purchase price of $101 per AF pumped per BDA agreement
- Assumes existing 14” pipeline to City of Beeville will be used for integrating into system
- 4 wells at depth of 560’ operating at 230 gpm; 75% operational time
- Capable of supplying seasonal peak rate delivery of 1.32x average rate
- Assumes no water treatment is needed, other than chlorine disinfection.
- If during drilling it is determined Fe/Mn pre-treatment is necessary, water unit cost will increase to $636 /AF.
- Project Yield: 1,457 AF/yr
- Water Unit Costs: $484 AF/yr

Irrigation to Municipal Well Conversion Project (for emergency use and possibly to supply Blueberry Hill)
- Well was installed in September 2014. No debt service payment on existing well.
- Assumes 20 HP pump in well is adequate to deliver water ~½ mile away.
- Assumes no water treatment is needed, other than chlorine disinfection.
- Project Yield: 340 AF/yr
- Water Unit Costs: $135 AF/yr

Mr. Townsend gave a brief history of why Beeville is pursuing these projects. He expressed the need to address the intakes and possible dredging at Lake Corpus Christi.

WUG-Specific WMS Requested – City of Alice: The City of Alice is currently developing a long-range water supply plan that includes brackish groundwater desalination, a potential connection to South Texas Water Authority (STWA), and potential reuse.
The brackish groundwater desalination includes:
- Proposed wells within Alice City Limits (preferred) or near Lake Findley (alternate)
- 2 Jasper wells at depth of 1,600-1,800 ft operating up to 1,390 gpm each (4 MGD total, max)
- Raw water quality (est.) 1,600 – 3,000 mg/l TDS; Finished water quality (est.) 300 mg/l TDS
- Treatment Process: Filtration pre-treatment and anti-scalant chemical dosing; 2.5 MGD reverse osmosis with energy recovery process; post-treatment for corrosion control
- Concentrate Disposal- 0.5 MGD discharge to San Diego Creek
- Costs provided by the City of Alice, Feb 6th 2015.
- Minor updates: Debt service interest at 5.5%, est. well pumping costs $77,000/yr
- Not included: land purchase costs; environmental and archaeological studies/mitigation; interest during construction
- Project Yield: 3,363 AF/yr
- Water Unit Costs: $880/AF/yr

The wells would be located outside of the Brush Country Groundwater Conservation District (GCD) jurisdiction. It is within Groundwater Management Area (GMA) 16 and there is enough capacity within the MAG for a project this size.

Mr. Norris explained that two wells in the Jasper will be able to produce as much water as 20-30 wells in the Evangeline. Dr. Tolan questioned the disposal of the concentrate and expressed concern about high TDS waters to the fresh water system. Mr. Norris said that disposal options include deep well injection, sending it to the wastewater treatment plant, or open discharge. TCEQ has to approve the disposal.

There was discussion about the existing 22 Evangeline wells that Alice used to use. They are no longer viable as they have been plugged and cannot be reworked.

The potential connection to STWA includes:
- Interconnection from STWA 12’ pipeline to Alice water treatment plant
- Facilities: 11.4 mile pipeline, a storage tank, and a booster pump station
- May require negotiations with City of Corpus Christi
- Minor updates: Debt service interest at 5.5%, O&M added for pipeline and storage (1.0%) and booster pump station (2.5%)
- Purchase water cost (from STWA): $2.75 per 1000 gallons ($896 per acft)
- Not included: land purchase costs or right-of-way (ROW) easements; environmental and archaeological studies/mitigation; interest during construction.
- Project Yield: 2,800 AF/yr (2.5 MGD)
- Water Unit Costs: $1,158/AF/yr

The City of Alice is considering reuse of non-potable water for industrial use. Ms. Carrillo expressed concern of reduced flow to San Fernando Creek and Baffin Bay. Ms. Serrato commented that conservation projects to reduce water loss need to be in the Plan in order to be eligible for SWIFT funding.

**SPMWD Industrial Water Treatment Plant Improvements:** This WMS is needed to fully realize the currently contracted amount from the City of Corpus Christi to meet future SPMWD customer treated water needs. It also addresses treatment capacity limitations. It assumes 70% of the water provided by SPMWD to San Patricio County industries is treated water.
SPMWD Transmission and Industrial WTP Improvements
- Includes pump station improvements of 9.4M.
- Purchase water cost (from Corpus Christi): $1.10 per 1000 gallons ($358 per acft)
- Provides additional 21.4 MGD WTP capacity to address shortages (sized with peaking of 1.3x average rate)
- Project Yield: 18,529 AF/yr
- Treated Water Unit Costs: $809/AF/yr

**Agenda Item VIII – RWPG/TWDB Administrative and Other Issues:** Ms. Townsend reminded the group of some upcoming deadlines: March 3, 2015 – 5th round application is due; May 1, 2015 – IPP is due; August 31, 2015 – contracts for initial funding must be executed.

**Agenda Item IX – General Public Comment:** Ms. Serrato asked for public comments. Mr. Clayton reported that the combined lake levels are near 30.6%. With no significant inflow, the level is expected to reach 30% around March 1, 2015. This will trigger the City’s stage 3 of the drought contingency plan. The primary changes are that irrigation lawn water will only be allowed once every two weeks and that the passthru requirement will go to zero.

**Agenda Item X – Confirm Next Meeting Date:** The next meeting is scheduled for March 12, 2015 at 1:30 pm at the Johnny Calderon County Building in Robstown, TX.

**Agenda Item XI – Adjourn:** Ms. Serrato adjourned the meeting at 3:20 pm.

Minutes prepared by: Ms. Rocky Freund.

Minutes Submitted by: Lonnie Stewart Secretary, Coastal Bend RWPG
ATTACHMENT B
Agenda Item IV
Consider Selection and Appointment of Person to Represent Industry

The Executive Committee will meet at 1:00pm prior to the regular meeting to discuss the nominations for an industry representative to take the slot vacated by Mr. Tom Ballou. They will make recommendation for the entire group to vote on.

The nominations and supporting documents are attached.
Rocky Freund

From: Bob Paulison <bobpaulison@gmail.com>
Sent: Thursday, January 22, 2015 7:13 AM
To: Rocky Freund
Cc: Tom Ballou; Bob Barger; Tom Russell
Subject: Regional Water Planning Group - Nomination of Mr. Michael Douglas as Industry Representative
Attachments: MBLDouglas CV 2015.doc

Rocky -

The member companies of Port Industries of Corpus Christi would like to nominate Michael Douglas of the Sherwin Alumina Corporation to fill the industry representative position on the Regional Water Planning Group coming open with the retirement of Tom Ballou.

Mr. Douglas's CV is attached. I think you will find that he's an extremely well qualified candidate.

Please let me know if you need any additional information.

Best Regards,

Bob

--
Bob Paulison
Executive Director
Port Industries of Corpus Christi
bobpaulison@gmail.com
361.563.2888 (mobile)
MICHAEL B.L. DOUGLAS
SHERWIN ALUMINA CO. LLC.
P.O. Box 9911, Corpus Christi TX 78476
Tel: 361-777-2618 (Office), (361) 765-3371 (Mobile)
E-mail: mbdo Douglas@sherwinalumin.com

EDUCATION

Executive MBA - NOVA SOUTHERN UNIVERSITY, Miami, Fl.
B.Sc. (Hons) Mechanical Engineering - UNIVERSITY OF THE WEST INDIES, Trinidad.

EXPERIENCE

34 Years

EMPLOYMENT HISTORY

01/12 - Present  Plant/Capital Engineering Manager, Sherwin Alumina Company
    Responsibility for development and execution of $25M-$85M annual Capital
    Investment program; strategic water supply program, property
    Administration, mud disposal facility management, power provider (NRG)
    Interface, plant engineering & electrical reliability.

08/08 – 12/11  Manager - Digestion Business Unit – Sherwin Alumina Co.
    Responsibility for operations & maintenance of Digestion Business Unit.

    Responsibility for energy improvement and implementation of Daily
    Management System in the refinery.

05/05 – 11/07  Business Development Director – West Indies Alumina Co.
    This was one of 6 senior positions reporting to the Managing
    Director. The Business Development Unit comprised of four departments:
    Capital, Port & Railway Services, Supply Chain and Agriculture.

    Responsibilities of the departments are as follows:

    • Capital - Implementation of $50M/year capital development program.
    • Port and Railway services – Responsibility for transportation of 1.26mta
      of alumina from two operating plants to port facility, shipping activities are
      coordinated with customers and alumina loaded onto panamax vessels.
      Major raw materials such as fuel oil and caustic are offloaded from vessels
      and transported to the alumina plants.
    • Supply Chain - Responsibility for sourcing of goods and services and
      management of contracts with annual spends of over $80M.
• Lands & Agriculture - Lands leased for mining are kept productive until mining is done; thereafter it is restored to required certification and returned to the Government.

04/04 – 05/05  Manager – Port and Railway Services – West Indies Alumina Co.

• Responsibility for operations and maintenance Port & Railway department.
• Operating budget of $4m.
• Efficient management of product and raw material inventories to support two operating alumina plants with total production of 1.25 million tones /year. This involves transportation using locomotives, hopper cars, and tank cars over a rail network covering 70 miles, all operated and maintained by the department.
• Coordination of shipping logistics.

05/90 – 04/04  Manager – Power, Instruments & Electrical Department – Alcan Jamaica Co / West Indies alumina Co.

• Operations & Maintenance of 25MW combined cycle power plant supplying steam & power to the Alumina Plant at Kirkvine.
• Maintenance of modern DCS (Honeywell & ABB) Instrumentation in facility.
• Maintenance of all electrical systems in facility.

06/82 – 05/90  Engineer – Power Operations & Maintenance - Alcan Jamaica Co.

• Technical responsibility for maintenance and operations of 25 MW Power Plant at Kirkvine Works.

08/80- 06/82  Plant Maintenance Engineer – Alcan Jamaica Co.

• Technical responsibility for pump development, mechanical maintenance of tanks, pipeline and other mechanical equipment in the Alumina Plant.

OTHER ACTIVITIES

• Recent appointment to P3 Desalination Technical Committee.
• Previous Board Chairman of Shims Success Co Ltd, a privately owned food production facility with annual sales of over US 2M / Year.
• Previous Chairman of the Manchester Pensions Funds. This organization manages the pension's funds for employees and ex employees of West Indies Alumina Co, Formerly Alcan Jamaica Co.
WORKSHOPS & CONFERENCES

- Labor Law
- Reliability Excellence (LCE)
- MSHA Law
- Behavioral Safety
- Management and Leadership Workshops including team building sessions, conflict management and working with Unions.
- Time management and management of multiple priorities.
- Negotiations Workshop.
- Project Management
- Cause Mapping.
- Microsoft Office and Microsoft Projects training.
- Process Information (PI), ABB and Honeywell DCS Systems
- Central Electricity Generating Board (UK – 83-84)
- International Power Gen Conferences (UK & USA)
- International Bulk Terminal Conference
- North American Energy Services Seminar
- EMS 14001 Training.
Rocky Freund

From: Russell, Thomas <tgrussell@SherwinAlumina.com>
Sent: Monday, March 02, 2015 12:01 PM
To: 'rfreund@nueces-ra.org'
Cc: 'Bob Barger'; Nickerson, Charles; 'Bob Paulison'
Subject: RE: Nomination For Coastal Bend Regional Water Planning Group

Rocky –

Thank you to the Region N Water Planning Group for consideration of Michael Douglas for the open industry seat vacated by the retirement of Tom Ballou. Sherwin Alumina is committed to supporting the Group with a broad perspective on the water issues and opportunities in our Region. Should you approve Michael for this position, he will be able to participate freely as is required by the RWPG. Sherwin Alumina has a long history of supporting regional interests and specifically the PICC. Thank you again and look forward to the Group decision.

Tom

Thomas G. Russell
President and CEO
Sherwin Alumina Company, LLC
Office: 361/777-2622
Mobile: 361/288-9042

CONFIDENTIALITY STATEMENT
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Barrett Fines
Lead Environmental Engineer - Water Programs
Flint Hills Resources Corpus Christi, LLC
P.O. Box 2608
Corpus Christi, TX 78403
361-242-5252

Barrett Fines graduated with a B.S. in Biology from Texas A&M Corpus Christi and with a M.S. in Marine Science from The University of Texas. He is currently the Water Programs Lead Environmental Engineer at Flint Hills Resources Corpus Christi. His duties include oversight of the stormwater, wastewater, and drinking water regulatory programs. This includes monitoring and reporting of facility water usage and technical support for Flint Hills Resources’ water conservation efforts. He is also an active member of the executive board of Corpus Christi Coastal Conservation Association. Prior to Flint Hills Resources, Barrett worked at the Harte Research Institute on the campus of Texas A&M Corpus Christi coordinating the Texas Coastal Management Plan Assessment and supporting efforts of the Nueces Bay/Basin Expert Science Team’s Environmental Flows Recommendation Report.
January 29, 2015

Coastal Bend Regional Water Planning Group
Nueces River Authority
400 Mann St. Suite 1002
Corpus Christi, TX 78401

RE: Nomination for Joe Almaraz
Director, Health Safety, Environmental Affairs at Valero Corpus Christi Refineries
PO BOX 9370, CC TX 78469
Phone: 361.289.3328
Joe.almaraz@valero.com

Dear Coastal Bend Regional Water Planning Group,

It is with great support that I nominate Joe Almaraz for consideration to serve on Coastal Bend Regional Water Planning Group. In Joe’s role as Valero Corpus Christi’s Director Health, Safety, and Environmental Affairs, he is responsible for all regulatory compliance issues related to environmental and safety issues. He also has extensive management experience since he oversees the environmental department responsible for all permits, including renewals and amendment discharge permits. He is also in charge of maintaining the refineries general storm water permits and oil spill response plans.

Over the last two years, Joe has been integral in the development, management, and implementation of a sustainable water plan for Valero Corpus Christi refineries. Under Joe’s leadership, Valero was successful in working with the City of Corpus Christi on the first-ever reservation agreement for industrial effluent reuse. This is certainly an opportunity to further develop with the industrial customers as effluent provides a new divers, reliable, near drought-proof supply.

As a major industrial customer for the City of Corpus Christi, Valero understands the importance of working hand-in-hand with Region N to ensure water resources for years to come. A long term, reliable water supply is critical to the continued viability of Valero and other existing and new industrial businesses. With $32 billion of industrial investment in our region, it is vital to have key industry input especially as Plan 2016 is being developed. I believe Joe’s role at the refinery coupled with his leadership on water supply issues makes him an ideal candidate to serve and represent the industries sector on the Coastal Bend Regional Water Planning Group.

I appreciate your consideration of his appointment.

Sincerely,

Dennis L. Payne
Vice President
Regional Refinery Operations
Joe Almaraz Bio

Joe Almaraz

Director, Health Safety, Environmental

Valero Corpus Christi Refineries

BIO

Joe Almaraz, a South Texas native, graduated from Texas A&I University in 1990, with a Bachelor of Science in Natural Gas Engineering. After graduation, Almaraz was immediately hired by Coastal Refining & Marketing as an Environmental Engineer. Joe’s first assignment at Coastal was as a unit operator at the Waste Water Treatment area. After one year managing the Waste Water area, Joe was transferred back to the engineering department to focus on air-permitting applications, preparing and submitting annual emissions inventories (EIQ) while continuing to provide technical support to the wastewater treatment unit. His early career experience provided Joe a solid foundation in the environmental arena.

In June 1993, Joe moved from Coastal and began working at the Valero- Corpus Christi refinery as a contract Environmental Engineer for Onyx Engineering. In January 1994, Joe was hired by Valero thus starting his 21-year career with the company.

At Valero, Joe has held various positions in Environmental Engineering Department focusing on air-permitting projects for new construction, permit renewal and permit-by-rules for existing facilities, wastewater permit renewals, groundwater recovery projects, and Leak Detection and Repair (LDAR) program oversight.

In April 2001, Joe was promoted to Environmental Manager for the Corpus Christi refineries overseeing compliance in all mediums including Air, Water, and Waste management. During his tenure as Manager, Joe provided oversight to the integration of the purchased El Paso Refinery (formerly Coastal Refining & Marketing) into the Valero system. In addition, Joe has been directly involved in the more than $100 million environmental control investments at both the Valero East Plant (Formerly El Paso Refinery) and West Plant.

In April 2007, Joe was promoted to Health, Safety, Environmental Director, which expanded his duties to include Refinery Safety and Process Safety Management departments. With Joe’s guidance, the Valero Corpus Christi refineries received and have maintained the prestigious OSHA Voluntary Protection Program (VPP), the highest distinction for health & safety programs in the workplace. He also oversaw the addition of Valero’s base-load contractors into the OSHA VPP program. In 2009, the Valero Corpus Christi refineries were awarded the Valero Chairman’s Award for Safety in recognition for one year without a single recordable safety incident. Under Joe’s leadership, Valero Corpus Christi refineries have been able to maintain safe working conditions for nearly 800 employees and 400 contractors, obtain permits to expand, as well as, install Best Available Control Technology (BACT) in a majority of the refinery units at the East Plant (Coastal) and West Plant, including flare gas recovery systems.

In Joe’s role as HSE director, he plays an integral part in the development, management, and implementation of a sustainable water plan for Valero Corpus Christi refineries. Joe was successful in working with the City of Corpus Christi on the first-ever reservation agreement for effluent from the Greenwood Wastewater treatment facility.
Joe Almaraz Bio

This agreement leads the way for Valero to be the first industrial customer to re-use effluent for industrial application. In Joe’s role as HSE Director, he understands the importance of working hand-in-hand with water customers, both industrial and residential, to ensure water resources for years to come.

Joe is married to Kathy and has a son and two daughters. His hobbies include archery, hunting and traveling.
ATTACHMENT C
Agenda Item V
Quorum Requirements for Approval of the 2016 Initially Prepared Plan (IPP)

The Region N Bylaws state:

**Article 10, Section 3. Final Adoption of Regional Water Plan; Amendments**
The voting members of the Coastal Bend RWPG shall finally adopt the regional water plan for the Coastal Bend RWPA, and any amendments thereto by consensus, but not less than agreement of two-thirds of the voting membership. Proposed amendments will be posted on the NRA website and the information emailed to all persons on the meeting notification lists no later than seven calendar days prior the Regular Meeting at which the amendments are to be adopted.

There is no mention of approval/adoptions with respect to the IPP. Therefore, the group needs to approve the process of approving/adopting the IPP, which will be considered at the April 9, 2015 meeting.
Ms. Kristi Shaw will review the following 2016 Water Management Strategies:
  - Reuse of Reclaimed Water
  - Seawater Desalination

This will complete the review of water management strategies considered for the draft 2016 Coastal Bend Regional Water Plan.
ATTACHMENT E
Agenda Item VII
Updated Needs Analysis to Include Mary Rhodes Phase II in Current Supplies

Background - The Mary Rhodes Phase II (MRP Phase II) project is under construction and will integrate up to 35,000 acft/yr of water supplies from the Colorado River into the Choke Canyon/Lake Corpus Christi/Lake Texana (CCR/LCC/Texana) regional water supply system by the end of the year. Accordingly, the existing water supply analysis for the 2016 Region N Plan was revised to include the MRP Phase II project as part of the regional system.

On November 14, 2013, Region N adopted a 1-year safe yield reserve (125,000 acft/yr) to remain in CCR/LCC storage during the historical drought of record. This reserve is a drought management measure to provide sufficient regional water supplies in the event that future drought conditions are more severe than past droughts or growth exceeds current projections. This safe yield reserve was maintained for the update.

Safe Yield Update - HDR ran the updated Colorado Water Availability Model (hydrologic period from 1940-2013)\(^1\) and determined the amount of water that can be diverted monthly by the MRP Phase II project based on available flow and priority date of the City of Corpus Christi’s Garwood water right. This new information was imported into the Corpus Christi Water Supply Model (1934-2003). The most recent drought simulated in the Colorado WAM (2011 to 2013) was placed to coincide with the drought of record simulated in the Corpus Christi Water Supply Model (1994 to 1996). This method was used to approximate the CCR/LCC/Texana/MRP2 system yield under current drought conditions for regional water planning purposes. The state-maintained Nueces River Basin Water Availability Model simulates a hydrologic period from 1934 to 1996 and does not appropriately simulate the CCR/LCC/Texana/MRP2 system with Agreed Order provisions.

A comparison of the previous safe yield of the CCR/LCC/Texana system without MRP Phase II and with MRP Phase II added is shown below. MRP Phase II adds 27,000 – 29,000 acft/yr to the safe yield during drought conditions.

<table>
<thead>
<tr>
<th></th>
<th>Safe Yield with 1-Year Reserve (acft/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>CCR/LCC/Texana/MRP2</td>
<td></td>
</tr>
<tr>
<td>(new)</td>
<td>219,000</td>
</tr>
<tr>
<td>CCR/LCC/Texana</td>
<td>192,000</td>
</tr>
<tr>
<td>(previous)</td>
<td></td>
</tr>
</tbody>
</table>

---

1 TCEQ, November 2014.
Needs Analysis-
The MRP Phase II supply update affected previous projections of water supply needs. A summary of the water needs for the draft 2016 Region N Plan follows:

<table>
<thead>
<tr>
<th>Water User Group</th>
<th>County</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
<th>2060</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Municipal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego</td>
<td>Jim Wells/Duval</td>
<td>4</td>
<td>(28)</td>
<td>(56)</td>
<td>(94)</td>
<td>(128)</td>
<td>(158)</td>
</tr>
<tr>
<td>Robstown</td>
<td>Nueces</td>
<td>(1,583)</td>
<td>(1,547)</td>
<td>(1,511)</td>
<td>(1,513)</td>
<td>(1,518)</td>
<td>(1,525)</td>
</tr>
<tr>
<td><strong>Irrigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McMullen</td>
<td>McMullen</td>
<td>(40)</td>
<td>(42)</td>
<td>(44)</td>
<td>(46)</td>
<td>(49)</td>
<td>(51)</td>
</tr>
<tr>
<td>San Patricio</td>
<td>San Patricio</td>
<td>3,356</td>
<td>2,197</td>
<td>916</td>
<td>(499)</td>
<td>(2,063)</td>
<td>(4,191)</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nueces</td>
<td>Nueces</td>
<td>29,229</td>
<td>17,696</td>
<td>7,643</td>
<td>(1,905)</td>
<td>(10,981)</td>
<td>(19,603)</td>
</tr>
<tr>
<td>San Patricio</td>
<td>San Patricio</td>
<td>1,009</td>
<td>(2,553)</td>
<td>(5,904)</td>
<td>(8,919)</td>
<td>(12,712)</td>
<td>(16,764)</td>
</tr>
<tr>
<td><strong>Steam-Electric</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nueces</td>
<td>Nueces</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(2,846)</td>
<td>(6,893)</td>
</tr>
<tr>
<td>McMullen</td>
<td>McMullen</td>
<td>(2,733)</td>
<td>(3,269)</td>
<td>(3,219)</td>
<td>(1,087)</td>
<td>(315)</td>
<td>230</td>
</tr>
<tr>
<td><strong>Surplus or (Shortage) acft/yr</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Assumes San Patricio and Nueces County - Manufacturing demand is 90,013 acft/yr, or 80 MGD (avg) in 2020 and increases to 124,760 acft/yr, or 111 MGD (avg) by 2070. Nueces Steam-Electric demand is 15,038 acft/yr, or 13 MGD (avg) in 2020 and increases to 34,541 acft/yr, or 31 MGD (avg) by 2070.

2 Raw water. Treated need for Nueces County of 2,386 acft/yr begins in 2050 and increases to 12,653 acft/yr by 2070. Treated need for San Patricio County of 6,451 acft/yr begins in 2020 and increases to 18,529 acft/yr by 2070.

The table above reports raw water shortages. The 2016 Plan will include raw and treated water shortages, with needs based on the greater constraint. The 2016 Plan includes water treatment plant improvements as recommended water management strategies to remove treated limitations up to contracted supplies or regional water system yield, where appropriate.
ATTACHMENT F
Agenda Item VIII

The following water management strategies were evaluated for the draft 2016 Region N Plan:

| 5D.1   | Municipal Water Conservation |
| 5D.2   | Irrigation Water Conservation |
| 5D.3   | Manufacturing Water Conservation and Nueces River Water Quality Issues |
| 5D.4   | Mining Water Conservation |
| 5D.5   | Reclaimed Wastewater Supplies and Reuse |
| 5D.6   | Modify Existing Reservoir Operating Policy and Safe Yield Analyses |
| 5D.7   | Gulf Coast Aquifer Supplies |
| 5D.8   | Brackish Groundwater Desalination |
| 5D.9   | Seawater Desalination and Variable Salinity Program |
| 5D.10  | Potential Water System Interconnections |
| 5D.11  | Local Balancing Storage Reservoir |
| 5D.12  | Lavaca Off-Channel Reservoir Project |
| 5D.13  | GBRA Lower Basin Storage Project |
| 5D.14  | SPMWD- Industrial Water Treatment Plant Improvements |
| 5D.15  | O.N. Stevens Water Treatment Plant Improvements |

*Inactive strategies from the previous 2011 Plan will be summarized in the 2016 Plan. 5D.7 Gulf Coast Aquifer Supplies includes the City of Beeville requested projects. 5D.8 Brackish Groundwater Desalination includes the City of Alice requested project. 5D.10 Potential Water System Interconnections includes the City of Alice requested STWA interconnection project.

A summary of project yield and unit costs ($/acft/yr) for water management strategies is shown in the attached figure. For water management strategies with a range of options (i.e. Potential Water System Interconnections) a range of yield and costs is shown. City of Beeville and City of Alice projects are not included in the figure, but will be in the plan as requested by Beeville and Alice.

At the March 12th Region N meeting, the planning group will consider assigning recommended strategies for water user groups in the Coastal Bend area. HDR will provide information gathered from water user groups/wholesale water providers and present recommendations.
Several entities have no water needs identified during the 2020-2070 projection period, but are anticipated to have water management strategies recommended in the plan:

- **Water Conservation**
  - Alice
  - Beeville
  - Benavides
  - Bishop
  - Corpus Christi
  - El Oso WSC
  - Falfurrias
  - Freer
  - Fulton
  - George West
  - Gregory
  - Kenedy County-Other
  - Kleberg County-Other
  - Orange Grove
  - Port Aransas
  - Portland
  - Premont
  - River Acres WSC
  - Robstown
  - Rockport
  - San Diego
  - Sinton
  - Three Rivers

- **City of Beeville**
  - Water Conservation
  - 1.3 mgd Chase field groundwater project
  - 0.3 mgd well conversion

- **City of Alice**
  - Water Conservation
  - 3 MGD brackish groundwater desalination project
  - 2.5 MGD STWA interconnection
ATTACHMENT G
Agenda Item IX
Process to Procure Technical Consultants for the 2021 Planning Cycle

The regional water planning process requires that technical consultants be procured prior to each planning cycle based on the procurement process of the political subdivision. NRA’s Professional Services Procurement policy is to comply with Subchapter B, Chapter 2254, Texas Government Code. Section 2254.003, Selection of Provider: Fees states:

(a) A governmental entity may not select a provider of professional services or a group or association of providers or award a contract for the services on the basis of competitive bids submitted for the contract or for the services, but shall make the selection and award:

   (1) on the basis of demonstrated competence and qualifications to perform the services; and

   (2) for a fair and reasonable price.

(b) The professional fees under the contract may not exceed any maximum provided by law.