

THE
AIRCRAFTSMAN

JUNE 2012



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Corpus Christi Army Depot



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RETURNS
FIRST WRA
OH-58D
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**NEW METAL
SPRAY
TECHNOLOGY**

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**Commander,
Corpus Christi
Army Depot:
Col. Christopher
Carlile**

**Public Affairs
Chief: Shawn
Clark**

**Editor: Nicole
Plascencia**

**ON THE COVER>
Pilots with the 1-6
Air Cavalry
Squadron get ready
to take their aircraft
home. Photo by
Kiana Allen**



CCAD Machinist Frankie Thomas Jr. puts new liners on the pitch varying housing for a CH-47 Chinook. Photo by Kiana Allen



THE AIRCRAFTSMAN

Corpus Christi Army Depot

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http://ccadportal.ccad.army.mil/AMCC-HC/AMCC-HCP/Pages/Division_Home.aspx

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ARMY RETURNS THE FIRST WARTIME REPLACEMENT AIRCRAFT TO THE FIGHT

By CCAD Public Affairs

Corpus Christi, TX – The Army delivered the first OH-58D Kiowa Warrior upgraded under the Wartime Replacement Aircraft (WRA) Program to the Warfighter at a roll-out ceremony at Corpus Christi Army Depot on June 7, 2012.

CCAD Commander, Col. Christopher B. Carlile handed over the aircraft's log books to Lt. Col Paul A. Cravey, Squadron Commander for the

Air Cavalry Squadron from Fort Riley, Kansas during the ceremony in Hangar 44.

The Wartime Replacement Aircraft Program is the Army's initiative to replace OH-58D Kiowa Warriors, the primary air cavalry helicopter. The Army is aggressively pursuing ways to sustain the fleet and is looking to its industrial base and the entire Aviation Enterprise to support ongoing fleet upgrades that address obsolescence,

improve reliability, increase capability and put OH-58Ds back in the fight.

The Army is approved for a complete fleet of 368 of OH-58D Kiowa Warriors. Since production of the KW ended in 1999, increasing the number of 58Ds to the soldier is crucial at a time when cost-effective measures are critical. The Army recognizes the cost-saving opportunities from

WRA, see pg. 5



(l to r) James Shultz, Director of Army Programs and Field Systems for Bell Helicopter, Textron, Inc; Lieutenant Colonel Paul Cravey, Squadron Commander, 1-6 Air Cavalry Squadron in Fort Riley, Kansas; Col. Christopher Carlile, CCAD Commander and Lt. Col. Matthew Hannah, Kiowa Warrior Product Manager commemorate the completion of the first Wartime Replacement Aircraft OH-58D Kiowa Warrior. Photo by Kiana Allen



MG Frank Turner III, Commanding General of the U.S. Army Security Assistance Command, is briefed by Ralph Molina, Special Process Division Chief, while getting to see the robotic metal spray unit close up. Photo by Kiana Allen

Robots Revolutionize Army Aviation Maintenance at Depot

By Jaelyn Nix, Public Affairs

Corpus Christi Army Depot introduced its sixth robotic metal spray unit to coat helicopter components better, faster and cost efficiently.

The robotic metal spray booth mechanically bonds plasma spray to coat aircraft components. Instead of CCAD artisans machining metal onto a part, existing components can be restored and put back into service.

The plasma consists of a high heat source, gas and a metallic powder, which can be anything from aluminum to tungsten. The powder adheres and coats the

component without harming the bare metal.

“Instead of throwing away the part, we prep it and do the thermal spray so you won’t lose the bare metal which costs the most,” said Juan Medrano, Senior Project Manager from Solzer Metco, a coating solutions center.

“This is actually going to have return on investment of \$2.6 million from an initial investment of \$1.1 million over a life span of 20 years,” said Lupe Lara, Mechanical Engineer.

Robotics have become a beneficial part of CCAD life since it

reduces gun set-up time and rework while increasing employee safety.

Metal Operator, Darrell McIntyre says that the switch to robots has made the job go by faster and with more consistency.

About ten years ago, metal operators sprayed components by hand. They exposed themselves to hazardous conditions such as UV lighting and fumes from the plasma that required safety equipment from gloves to a full jacket, mask, safety glasses and ear plugs.

The operator would spray the components with multiple coats throughout the day, increasing the likelihood of human error with every coat.

“In the past we had to go in there manually to adjust all the positions every time we set up for a new part,” said McIntyre. “Now we just punch a button, tell the system what part we got and the robot does the rest.”

The robotic metal spray unit can spray up to two and a half feet per second, making the job more accurate and faster than ever before.

“It’s speeding up the process because guys were having to work late but now that we have five booths we will be able to push through equipment and make deadlines,” said Lara.

A better product that uses fewer resources and still comes out faster is business as usual for CCAD as they continually look for ways to improve the world of helicopter support.

Robots, see pg. 5

WRA, cont.'d

investing in its depots and their partnerships.

The WRA Program is a joint effort with CCAD, the Armed Scout Helicopter (ASH) Project Office, the Aviation Field Maintenance Directorate (AFMD), and Bell Helicopter providing the Army a cost-effective and efficient way to replenish lost aircraft. This aircraft, completed 7 weeks ahead of schedule, represents the first KW to be produced as part of that joint venture and is the first one to increase Army fleet density in over a decade.

"This is a significant milestone for our Army as we deliver the first Kiowa Warrior that replenishes the fleet under the Wartime Replacement Program," said Lt. Col. Matt Hannah, Product Manager for

Kiowa Warrior helicopters. "This is the beginning of a bright future for our scout pilots and Army aviation. I am extremely proud of this team."

While fleet attrition continues to be a serious problem with an average of six lost per year, the Kiowa Warrior has logged more than 800,000 combat hours between Iraq and Afghanistan where it battles sand, snow and high altitudes. These war birds are life-saving assets for troops on the ground. The Army will rely on the OH-58D Kiowa Warrior as the primary air cavalry helicopter at least until 2025.

The Army is replacing wartime losses suffered by the OH-58D fleet by taking "A" model cabins and upgrading them to "D" model cabins and capabilities. This is done through

an element of the WRA program called the "A2D" conversion program.

This A2D wartime replacement cabin was inducted at Bell Helicopter, Amarillo, TX facility for conversion in December 2010 and completed a year later. The cabin was then delivered to CCAD in January 2012 where CCAD completed final assembly operations and flight test.

The success of the WRA program process was proven with the completion of an earlier KW aircraft in December 2011. Because it did not increase the Kiowa Warrior fleet density, that aircraft was not classified as a WRA, but it was restored and served as the pilot for all future WRA production aircraft.

Robots, cont.'d



A CCAD robotic metal spray operator shows the robot in action to MG Frank Turner III, Commanding General of the U.S. Army Security Assistance Command. Photo by Kiana Allen

Profiles in Professionalism



**Ricardo Rincon,
Accessories Division Chief**

What has been your greatest CCAD achievement?

Achievements can be defined as something accomplished, especially by superior ability, special effort, great courage, etc. For me I find that achievement is much more than self accomplishments. Instead, I believe my greatest achievements have been to witness the success of those that I have had the opportunity to lead and their acknowledgement of my impact upon their career and growth.

A brief description of your job

I am currently the Accessories Division Chief, which consists of four Hydraulic Branches, two Mechanical Branches, and currently piloting a Production Control Branch. The division is staffed with approximately 200 employees and will be growing to about 240 by mid FY13. My team and I are responsible for managing nearly 417 prime programs, numerous line support programs, and average about 900 assets sold monthly. It is my responsibility to ensure that the Accessories Division stays committed to returning components back to the field with uncompromising quality, the lowest possible price, and the shortest possible turn around.

What is your personal professional motto?

I try and remind myself each day that yesterday's successes are a thing of the past and tomorrow's future begins today. Often times people find themselves living in the past, reminiscing old successes, and ultimately get entrapped with the status quo. In today's ever changing market and competitors lurking in every corner we need to ensure we are continually striving for perfection. Many will argue and will be quick to tell you that perfection is unattainable, however; it was Vince Lombardi who said it best, "Perfection is not attainable, but if we chase perfection we can catch excellence." As long as we as a workforce reject the status quo and continue to strive for perfection we will catch excellence along the way!

Who has been your biggest influence at CCAD?

I have been very fortunate that I have had the opportunity to work with several individuals who have touched my life and personally added to my overall success. A FEW of the major contributors include my Father (Ricardo Rincon Sr), Gilbert Rodriguez Jr, Raul Morales, Lori Jones, Abe Benavides, Chenel Rouse, and recently Mr. Joseph Mitchell. While I could write a novel on each of them I would like to personally address the one who served as my coach for 7 years and has become a lifelong friend. For those who are unaware it was Lori Jones who took a vested interest early in my career and provided the tools I would need to improve upon existing techniques and procedures with the objective of maximizing overall depot efficiencies. She taught me the importance of approaching issues logically and analytically while maintaining focus on the tasks at hand rather than my own personal agendas. For a lack of better words, I learned to pick my battles carefully, never making mountains out of molehills.



Mike Barreto
Facilities Plumbing Specialist

Hometown:

I am from Ingleside currently living in Beeville, Texas.

Brief Job Description:

I work as the Facilities Plumbing Specialist at CCAD. I am a Texas State Licensed Master Plumber and certified Backflow Prevention Assembly Tester. My duties are trouble shooting plumbing service request, planning / estimating work orders, expediting materials, quality assurance, and Contracting Officer Representative duties.

What has been your greatest CCAD achievement?

My greatest achievement at CCAD would be to continue providing code approved safe plumbing systems to the CCAD community by coordinating with CCAD Personnel, Licensed Plumbers, Contractors, and Vendors.

Who has been your biggest influence at CCAD?

While working at CCAD Colonel Carlile has been my greatest influence due to his strong leadership and commitment to the Army's mission.

What do you enjoy most about working at CCAD?

I enjoy working with a variety of personnel to provide a quality work environment at CCAD to support the Army's mission to protect the Warfighter.

What is your personal professional motto?

A good name is to be chosen rather than great riches, and favor is better than silver or gold. Proverbs 22:1



Hometown:

I'm from Columbus, Mississippi located in northeast Mississippi. I graduated from Mississippi State University a few years ago with a Bachelor of Science degree in Microbiology.

A brief description of your job:

My current job is conducting environmental compliance audits in the work centers for CCAD to maintain readiness in annual inspections. I mentor work centers into complying with both Federal and State of Texas Environmental Regulations as well as any Navy requirements. I also prepare equipment for removal, relocation, arrival, etc. at CCAD.

What has been your greatest CCAD achievement?

I'm the Environmental Compliance Audit Lead which has given me an opportunity to teach coworkers and employees in the work centers information I have learned. It's a good feeling to share knowledge with others to hopefully enrich their environmental experience.

Who has been your biggest influence at CCAD?

This is a tough one because there are so many intelligent and hard-working individuals here at CCAD. I can't say it's only one person as I've learned from Directors, Division and Branch Chiefs, members of the TEAMS, contractors, artisans from the work centers, and my coworkers.

What do you enjoy most about working at CCAD?

I enjoy the challenges which always makes the day interesting along with the helpful attitudes should I need to request a work center to correct an issue involving an environmental matter.

What is your personal professional motto?

I believe that you should try your hardest to treat others as you would want others to treat you.



Debbie Smith
Environmental Protection Specialist

AWARDS AROUND YOUR DEPOT



Gunnery Sgt. Richard Maus presents Col. Carlile with a Toys for Tots Plaque.



Carzell Campbell Sr. receives Memorandum of Appreciation.



Antonio Trejo receives Certificate of Appreciation.



Lt. Cmdr. Craig Clutts receives Certificate of Appreciation.



Benny Messer receives Certificate of Appreciation.



Albert Sanchez receives Certificate of Appreciation.



Mike Abrego receives Certificate of Appreciation.



Andrew Gonzalez receives Certificate of Appreciation.



Enrique Rodriguez receives Certificate of Appreciation.



Shauna Cavazos receives Certificate of Appreciation.



Larry Ochoa receives Certificate of Appreciation.



James McNeil receives Certificate of Appreciation.



Lawrence Rush receives Certificate of Appreciation.



James Ortega receives Certificate of Appreciation.



CCADers show their pride, representing the depot at this years 4th of July Parade downtown!

AH-64 APACHE FLEET RECOGNITION



Working together as a team, these employees provided leadership, technical engineering expertise, logistical and shop support to accomplish the development, coordination and production of a critical repair in a timely fashion. Their efforts have resulted in the rapid return of U. S. Army aircraft assets to operational status in order to meet command readiness requirements. Kudos!

Machine Shop

Thomas Castellanos
Juan Flores
Eddie Lopez

NDT

John Quesada

Jig/Fixtures

Narciso Martinez

Composite Bond

Martin Perez

Ruben

Delgadillo

Nestor Barrera

AMRDEC

Noel Castillo

Tony Cereceres

Mark Velazquez

Ron Walterick

Gregory Eisenhower (SAFR contractor)

Ernie Powell (AMRDEC Contractor)

AROUND THE DEPOT!



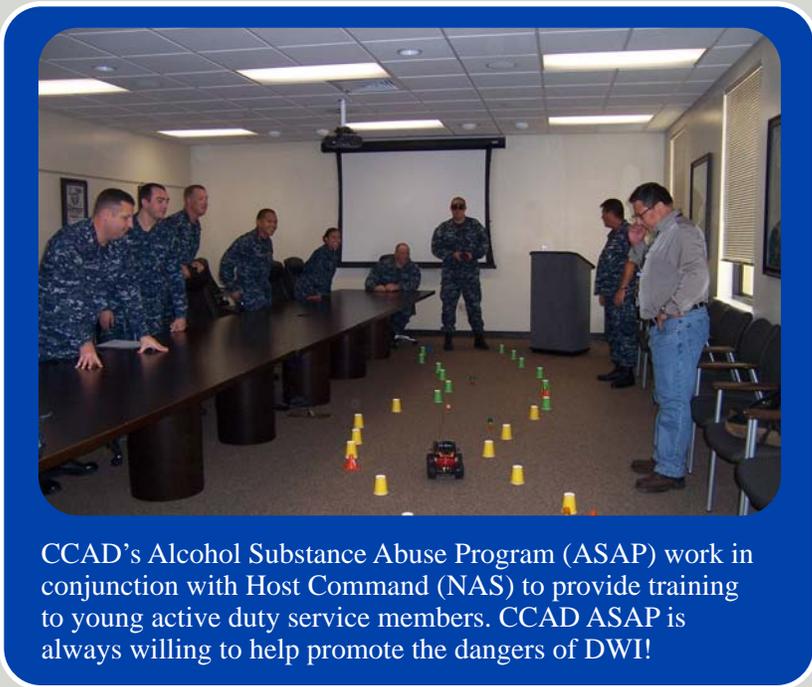
Department of Defense Value Engineering Achievement Award

U.S. Army Material Command (AMC), Major Subordinate Commands (MSCs) and supported Program Executive Offices (PEOs) successfully executed numerous Value Engineering studies, implemented one hundred and sixty Value Engineering Proposals (VEPs), and exceeded the annual savings objective of \$15.6M by \$14.6M, or 193 percent.

Pictured (l to r): Danielle Finley, CCAD; Jennifer Bennett, AED; Kevin Rees, AED; BG John Wharton, AMC; Patrice Puckett, CCAD; Mark Velazquez, AED; Pat Kelley, ED



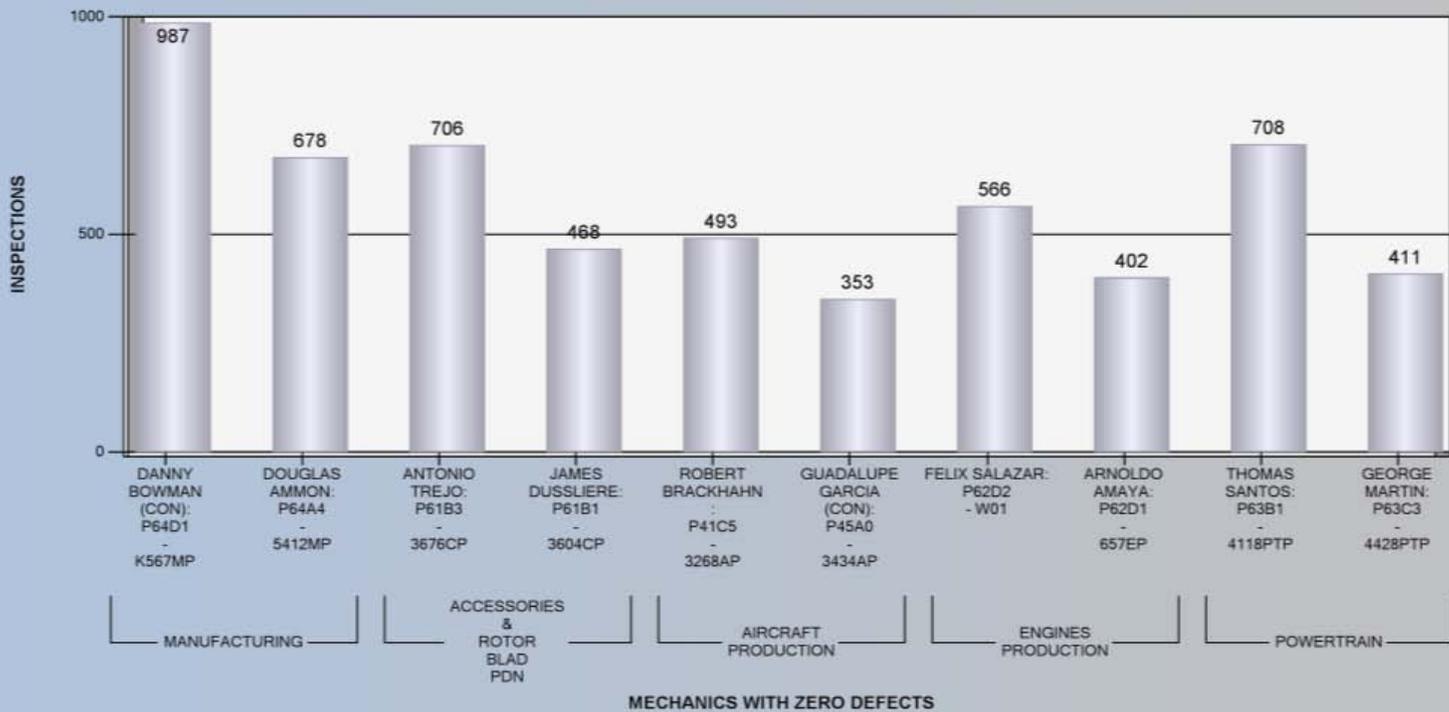
ASAP Office does a DWI demo for employees in Bldg. 8.



CCAD's Alcohol Substance Abuse Program (ASAP) work in conjunction with Host Command (NAS) to provide training to young active duty service members. CCAD ASAP is always willing to help promote the dangers of DWI!

Zero Defects: CCAD's Top 10 Performers

TOP 10 PERFORMERS BY STAMP



(1 to r) Thomas Santos, Danny Bowman, George Martin, Felix Salazar and Guadalupe Garcia are among the top 10 performers at CCAD! Not pictured are: Douglas Ammon, Antonio Trejo, James Dussliere, Robert Brackhahn and Arnold Amaya. Photos by Nicole Plascencia

PREVENTION IN THE NEWS... 101 Days of Summer

Do not drink alcohol and swim, surf, fish from rocks, operate a boat or personal water craft....WATER AND ALCOHOL SIMPLY DO NOT MIX!****

There is a range of physical changes which occur when an individual consumes alcohol and then engages in aquatic activity. These include but are not limited to:

SPASM OF THE VOCAL CHORDS

Water in the windpipe triggers a reflex closure of the windpipe. Alcohol increases the chance that a spasm of the vocal chords will occur, snapping the airway closed. The combination of water and alcohol can lock the airway closed, making breathing difficult.

LACK OF COORDINATION

Alcohol numbs the senses particularly sight, sound and touch. When these senses fail, the stumbles and stutters kick in and swimming abilities may be altered.

DISTURBANCE OF THE INNER EAR

Fluid in the ear is responsible for balance. Alcohol and a sudden change in temperature can lead to disorientation. Diving into the water is a perfect

HYPOTHERMIA

Alcohol increases blood flow to the arms and legs, even when the body would normally try to stop this action to save from heat loss. If you fall into cold water under the influence of alcohol, hypothermia could potentially occur.

IMPAIRED REACTION TIME

As a depressant, alcohol reduces the rate the brain processes information. Ordinary reactions simply take longer. On the water, a quick response is vital.

IMPAIRED JUDGEMENT

Alcohol distorts your perception of risk, and your own abilities. With less accurate information pouring into the brain, you're not as well equipped to make the right decisions.



Prescription Painkiller Abuse Surged in U.S., Study Finds

By Nicole Ostrow, Bloomberg News

A new study finds prescription painkiller abuse jumped 75 percent between 2002 and 2010. Men and adults ages 26 to 49 were most likely to abuse prescription painkillers.

Bloomberg News reports the study is the first to examine who is likely to abuse prescription painkillers, and how often it occurs. The study found more than 15,000 people overdosed on painkillers and died in 2009—more than double the number in 2002.

“Chronic nonmedical use is increasing and these drugs have very dangerous risks,” study author Christopher Jones of the Centers for Disease Control and Prevention’s Injury Center told Bloomberg News. “As sales of these drugs have gone up so has the unintended adverse events.” These events include overdoses, deaths, emergency room visits and addiction, he said.



The study, published in the Archives of Internal Medicine is based on data from the National Survey on Drug Use and Health, which provides national estimates on substance abuse. The researchers found 3.8 per 1,000 people said they used prescription painkillers for nonmedical purposes for 200 days or more in 2009-2010, compared with 2.2 per 1,000 in 2002-2003. That represents a 75 percent increase. The study took population growth into account, the authors noted.

Men who used prescription painkillers for non-medical purposes for 200 or more days annually rose 105 percent from 2002 to 2010. Among adults ages 26 to 34, the rate jumped 81 percent, the article notes. Among teens 12 to 17, non-medical use of painkillers dropped 26 percent during those years. Overall, almost one million people reported using pain relievers non-medically for 200 days or more in 2009-2010, while 4.6 million people used them for 30 days or more. The researchers conclude that “these findings underscore the need for concerted public health and public safety action to prevent non-medical use of these drugs.



2011 ANNUAL DRINKING WATER QUALITY REPORT



**Naval Air Station Corpus Christi
11001 D Street
Corpus Christi, TX 78419**



This report is a summary of the quality of water we provided to our customers during 2011. We hope the information helps you become more knowledgeable about what is in your drinking water.

2011 Annual Drinking Water Quality Report

(Consumer Confidence Report)
Naval Air Station Corpus Christi
Environmental Office: 361-961-3776



SPECIAL NOTICE

Required language for ALL community public water supplies:

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants, those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (1-800-426-4791).

Public Participation Opportunities

NASCC:

Date: None Scheduled

Phone: (361) 961-3776 (For comments/questions)

City of Corpus Christi (Annual Public Meeting):

Date: June 21, 2011 6 p.m.

Location: Water Utilities Conference Room
2726 Holly Road, Corpus Christi, TX

Phone: (361) 880-3105

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. (361) 961-5363 para hablar con una personal bilingüe en español.

OUR DRINKING WATER IS REGULATED

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Source of Drinking Water:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

-Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

-Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

-Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

-Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.



Where do we get our drinking water?

Naval Air Station Corpus Christi (NASCC) purchases water from the City of Corpus Christi. NASCC disinfects the purchased water on an as needed basis. Corpus Christi's primary supply of water comes from surface water sources; primarily Nueces River. A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

ALL drinking water may contain contaminants.

When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline (1-800-426-4791).

Secondary Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents

and are regulated by the State of Texas, not the EPA.



These constituents are not causes for health concern. Therefore, secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

About the Following Pages

The pages that follow list all of the federally regulated or monitored contaminants, which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

Definitions:

(MCL) Maximum Contaminant Level → The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(MCLG) Maximum Contaminant Level Goal → The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

(MRDL) Maximum Residual Disinfectant Level → The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(MRDLG) Maximum Residual Disinfectant Level Goal → The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

(TT) Treatment Technique → A required process intended to reduce the level of a contaminant in drinking water.

(AL) Action Level → The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Abbreviations:

(NTU) → Nephelometric turbidity units (a measure of turbidity)

(MFL) → Million fibers per liter (a measure of asbestos)

(MPN) → Most probable number

(pCi/L) → Pico-curies per liter (a measure of radioactivity)

(ppm) → Parts per million or milligrams per liter (mg/L)

(ppb) → Parts per billion or micrograms per liter (µg/L)

(ppt) → Parts per trillion, or nanograms per liter

(ppq) → Parts per quadrillion, or picograms per liter

Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2011	Fluoride	0.32	0.32	0.32	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories.
2011	Nitrate	0.18	0.18	0.18	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2005	Gross beta emitters	4.1	4.1	4.1	50 *	0	pCi/L	Decay of natural & man-made deposits.

* EPA considers 50 pCi/L to be a level of concern for beta particles.

Organic Contaminants

TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant
2011	Chloramine Residual	2.34	0.7	4.0	4	4	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2011	Total Haloacetic Acids	19.3	7	34.5	60	ppb	Byproduct of drinking water disinfection.
2011	Total Trihalomethanes	56.3	47.9	62.9	80	ppb	Byproduct of drinking water disinfection.

Unregulated Initial Distribution System Evaluation for Disinfection Byproduct

This evaluation is sampling required by the EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2007	Total Haloacetic Acids	42.0	0	178	NA	ppb	Byproduct of drinking water disinfection.
2007	Total Trihalomethanes	85.8	16.8	508.5	NA	ppb	Byproduct of drinking water disinfection.

Unregulated Contaminants

Bromoform, chloroform, bromodichloromethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2011	Chloroform	4.52	2.8	5.5	ppb	Byproduct of drinking water disinfection.
2011	Bromoform	19.92	13.8	28.5	ppb	Byproduct of drinking water disinfection.
2011	Bromodichloromethane	12.55	10.4	13.6	ppb	Byproduct of drinking water disinfection.
2011	Dibromochloromethane	19.25	15.9	21.2	ppb	Byproduct of drinking water disinfection.

Lead and Copper

Year	Contaminant	The 90 th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2011	Lead	3.4	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2011	Copper	0.17	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

Required Additional Health Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2011	Turbidity	0.23	100.0	<0.3	NTU	Soil runoff.

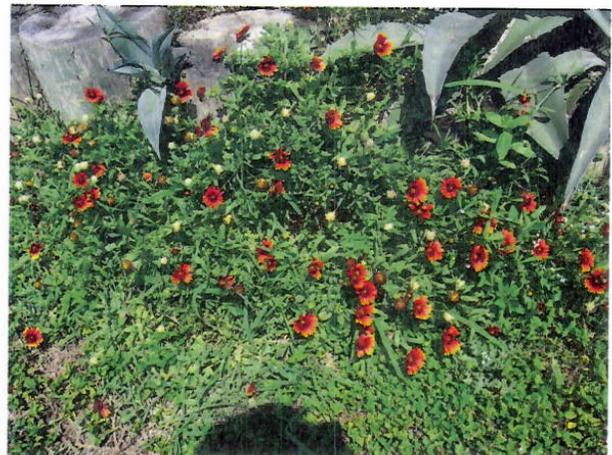
Total Coliform

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Year	Contaminant	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2011	Total Coliform Bacteria	0.008	*	Presence	Naturally present in the environment.

* Presence of coliform bacteria in 5% or more of the monthly samples.

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA



Secondary and Other Constituents Not Regulated

(No associated adverse health effects)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2011	Bicarbonate	122	122	122	NA	ppm	Corrosion of carbonate rocks such as limestone.
2011	Chloride	119	119	119	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2011	Hardness as Ca/Mg	231	231	231	NA	ppm	Naturally occurring calcium and magnesium.
2011	pH	7.9	7.9	7.9	>7.0	units	Measure of corrosivity in water.
2011	Sodium	118	118	118	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2011	Sulfate	77.6	76.6	76.6	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2011	Total Alkalinity as CaCO ₃	122	122	122	NA	ppm	Naturally occurring soluble mineral salts.
2011	Total Dissolved Solids	587	587	587	1000	ppm	Total dissolved mineral constituents in water.

