



# Guardian

America's First Choice for Environmental Restoration

A Publication of the Environmental Restoration Program

Travis Air Force Base, California

April 2019

## INSIDE

### Viewpoint:

*What happens when the federal government shuts down? Keeping the base cleanup efforts in mind, the Travis AFB Restoration Program Manager discusses the impact of the partial government shutdown that started late last year and lasted for over a month.....*

**2**

### Next RAB Meeting:

*The next Restoration Advisory Board meeting will be held on April 18, 2019, at 7 p.m., at the Office of the Northern Solano County Assn. of Realtors.....*

**4**

### Editor's Corner

*It is rare to receive any feedback on the Guardian, which normally consists of requests for address changes. However, we recently received a phone call from a lady who asked for an address change for her father, who reads this newsletter to keep track of base activities. We appreciate her compliments on the newsletter, and to our readers who enjoy our articles and quirky attempts at humor, we say "Thank you!"*

*However, our cleanup efforts are slowly wrapping up, and there are fewer topics to discuss in print. So, we are considering a change in the publishing frequency from quarterly to semi-annually. Do you have any suggestions for future topics? If so, please sent them to [enviropa@travis.af.mil](mailto:enviropa@travis.af.mil).*



(Photograph by Glenn Anderson)

**Reflecting on Safety:** Three large solar panel arrays are positioned to provide enough electricity for three groundwater extraction pumps near the base gas station. Before the arrays could be installed, the Solar Glare Hazard Analysis Tool was used to verify the glare did not pose a problem to pilots.

## Avoiding Energy Blindness

Special Software Tool Verifies  
Solar Panels Are Pilot Friendly

**By Glenn Anderson**

Travis Environmental Project Manager

Imagine that you are a pilot of a multimillion dollar military cargo aircraft, and you are making your approach toward an assigned runway. It is a bright sunny day with light winds, and you could probably make this landing in your sleep. Then, just as your aircraft reaches the edge of the base property line on its descent, your cockpit is filled with a blinding light, so for a few seconds, you can't easily read the gauges on the instrument

panel. Yikes!

Obviously, the safety and security of people and equipment both in the air and on the ground are critical to the proper operation of an Air Force base, so this kind of scary scenario cannot be allowed to happen at any time. There is also a growing interest in installing solar energy systems on roofs, car ports, and other facilities that receive direct sunlight for most of the day; however, the potential glare from the reflection of sunlight from solar panels could create visual distractions for pilots.

See **Glare** page 3

Visit our Environmental Program web site at <http://www.travis.af.mil/About-Us/Environment>



Travis Air Force Base, California

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The *Guardian* is published by the Air Force Civil Engineer Center's Western Region Restoration Support Team, located at Travis Air Force Base. The newsletter is designed to inform and educate the public about the ongoing environmental cleanup program at Travis Air Force Base. Contents expressed herein are not necessarily the official views of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force. Additional information about the program can be obtained from the public web site at <http://www.travis.af.mil/enviro>. Questions and comments about the program may be sent to this address:

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# Fed Up With Shutdowns

While most people were celebrating the 2019 New Year with champagne toasts and party hats, a few federal civil service employees were counting the days of the most recent partial federal government shutdown. It lasted from 22 December 2018 to 25 January 2019 and was the longest federal government shutdown in U.S. history. It forced nine executive departments with their 800,000 federal employees to stop all work, either fully or partially.

It is not a surprise that this topic was a hot one around the water cooler (or in my caffeine-loving case, the office coffee maker), and we all breathed a sigh of relief after a second government shutdown was avoided a month later when the Congress and President enacted a fiscal year 2019 spending package that included a compromise to the Homeland Security Department appropriations as well as six previously unfinished appropriations bills. Uncle Sam was back in business!

There is no question that this last partial government shutdown showcased the deep political divisions within our country, and it is likely that people have a wide variety of opinions regarding the compromises within the spending package. Rather than getting into a political debate that is often the topic of daily television and radio programs, I will use this Viewpoint to answer a very important question:

Did the recent government shutdown have an adverse impact on the Travis AFB Environmental Restoration Program (ERP)?

On the bright side, the shutdown did not affect the Department of Defense, because Congress



## VIEWPOINT

Lonnie A. Duke  
 Travis AFB Restoration  
 Program Manager

had earlier passed the legislation necessary to fund the military for the foreseeable future. So, the first day of the shutdown was just another day to promote environmental cleanup. Our environmental contractor was busy with two soil cleanup actions, and we were working on the documentation to complete cleanup actions and close sites.

Also, the shutdown did not impact the California Department of Toxic Substances Control or San Francisco Bay Regional Water Quality Control Board regulatory staff assigned to our programs, since they work for state regulatory agencies and receive funding for environmental oversight from the Department of Defense.

However, the U.S. Environmental Protection Agency (EPA) had to stop work once the shutdown started, and this created document scheduling problems for us. All activities under the Travis AFB ERP are managed under the framework of a Federal Facility Agreement, a legal document that describes the foundation for the development of all cleanup decisions and the review process for all work plans and technical reports. Before any field work can take place, a work plan describing the field work has to be developed, reviewed and approved by EPA and the two state agencies. Before a cleanup action is considered complete, a technical report describing how the cleanup action was conducted has to be reviewed

See **Viewpoint** page 3



## Viewpoint

■ From page 2

and approved by all three regulatory agencies. Without an EPA representative at the table, it is not possible to proceed with most active cleanup projects, which creates a backlog of documents (and the decisions associated with them).

So, the answer to the question posed above is:

Yes, the recent government shutdown did impact the Travis AFB ERP, but the impact was somewhat minimal. We had to add a month or more to the schedules for most of our active documents, but the shutdown had no impact on two soil cleanup actions (at an electrical generator facility and at a railhead staging area) or on the operation of and maintenance on our four groundwater treatment plants and various monitoring well networks.

At the same time, I am always concerned with any technical or programmatic issues that could potentially result in delays to either field work or its documentation. Our current contract is performance-based, and schedule delays make it more difficult for the Travis team to complete cleanup tasks and close sites. Two of the most important aspects of our program that led to the successful execution of the last two performance-based contracts were proper fiscal stewardship and project execution. Anything that results in schedule delays makes it more difficult to continue this track record of success.

Looking forward, the only shutdowns that I look forward to seeing will be applied to our groundwater treatment plants when they have achieved the cleanup standards for multiple groundwater sites and are ready to be decommissioned. Uncle Sam can deal with the rest of them!



## Glare

■ From page 1

So, when energy managers began to look to the sun as a sustainable source of electricity for various uses, concerns about this potential scenario were voiced by managers at both military and civilian airfields. For this reason, the Federal Aviation Administration has updated its rules about siting solar projects at or near airport facilities. These new rules can be found in the Federal Register (78 FR 63276).

To make this issue more complicated, traditional glare analysis focuses on the geometry of the solar panel location compared to the locations where the glare could be seen. However, this analysis does not identify the intensity of the reflected light or the potential visual impairment at each location.

Fortunately, a special software tool was developed to evaluate this potential hazard and identify possible actions to mitigate the glare. The Solar Glare Hazard Analysis Tool (SGHAT) provides a quantitative assessment of when and where solar glare can occur from a solar panel array at a specific location as well as potential visual problems resulting from it. The SGHAT can also calculate the best tilt and orientation of solar panels to reduce the glare and improve the energy production throughout the year. The tool can evaluate fixed panels as well as those that track the path of the sun on a single or double axis.

“The last thing that we want to do is to create a problem while solving a problem,” said Mr. Lonnie Duke, Travis Air Force Base Environmental Restoration Program (ERP) Manager. “Our solar panels are great at providing electrical power for groundwater

extraction wells in remote locations, and the SGHAT provides the assurance that this ‘green’ technology is compatible with the base’s mission.”

Later versions of the tool have several built-in improvements that enhance its value. A flight path tool can evaluate the glare across a continuous flight path rather than at discrete points in the path. It can also evaluate glare from vertical surfaces, such as the sides of modern office buildings. The calculations are based on analyses, test data and a library database of various surfaces, including non-reflective surfaces.

Before the Travis AFB ERP field team can install a new solar panel array on base to power a groundwater cleanup system, this type of analysis has to take place to ensure that the new array does not interfere with flight activities. Thanks to this tool, the overall groundwater cleanup can take place in an environmentally friendly manner without adversely impacting base activities.

Currently, the Travis AFB ERP has 10 solar panel arrays in the field. Eight of them provide the electricity needed to run groundwater extraction wells, while two of them are assigned to two subsurface bioreactors that use naturally occurring bacteria to treat highly contaminated groundwater. The October 2010 edition of the Guardian provides a detailed description of a bioreactor.

It is important to make sure that new innovative technologies that offer benefits to our lives and the environment do not have unintended consequences. Thanks to tools like the SGHAT, we can improve our energy generation capabilities without creating unrelated problems to current operations.



## Meeting Agenda

### 6:30 - 7:00 p.m. Open Forum:

The open forum allows RAB and community members to discuss ongoing Travis AFB restoration program activities with the Travis AFB environmental staff on a one-to-one basis.

### 7:00 - 9:00 p.m. RAB General Meeting

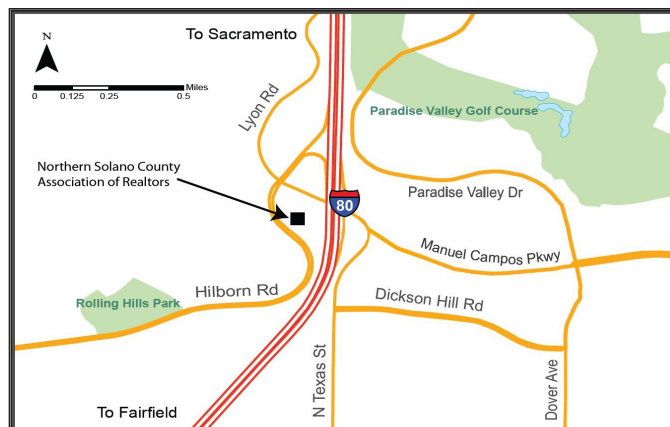
- I. Welcome and Introductions
- II. Approval of Minutes
- III. Additional Agenda Items and Questions
- IV. Discussion Topics
  - 2018/2019 Field Activities
  - Break
- V. Cleanup Program Status
  - Various Program Topics
- VI. Regulatory Agency Reports
- VII. Focus Group Reports
- VIII. RAB/Public Questions
- IX. Set Time and Place for Next RAB Meeting

Adjourn

## Travis AFB Restoration Advisory Board Meeting

April 18, 2019  
7 p.m.

Northern Solano County Association of Realtors  
3690 Hilborn Road  
Fairfield, CA



## LOCATION OF INFORMATION REPOSITORIES

### Vacaville Public Library

1020 Ulatis Drive  
Vacaville, CA 95688

(707) 449-6290

**Monday-Thursday:** 10 a.m. - 9 p.m.

**Friday-Saturday:** 10 a.m. - 5 p.m.

**Sunday:** 1 p.m. - 5 p.m.

### Fairfield-Suisun Com. Library

1150 Kentucky Street  
Fairfield, CA 94533

(707) 421-6500

**Monday-Thursday:** 10 a.m. - 9 p.m.

**Friday-Saturday:** 10 a.m. - 5 p.m.

**Sunday:** 1 p.m. - 5 p.m.

### Mitchell Memorial Library

510 Travis Boulevard  
Travis AFB, CA 94535

(707) 424-3279

**Monday-Thursday:** 10 a.m. - 9 p.m.

**Friday:** Closed

**Saturday:** 12 p.m. - 6 p.m.

**Sunday:** 12 p.m. - 6 p.m.

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*If you would like more information or need special accommodations for the RAB meeting, please contact Lonnie Duke, (707) 424-7520.*

**For more information about Travis AFB's restoration program, please contact:**

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