

# Navy Goes

# Digital

## Use of Alternative Technology Is Environmentally Sound

**T**he Navy's photographers have gone digital avoiding the hazardous waste generated by conventional photographic processes.

Ever since photography has been used aboard Navy ships, the Navy's photographers have been working to find environmentally sound alternatives to conventional, wet film-based photographic processes.

Perhaps one of the greatest measures to reduce photographic waste has been the use of storage containers or silver recovery units (SRU) for the wastewater generated when producing a photographic image using conventional methods. According to Wikie Din, Regional Water Program Manager, Commander, Navy Region Mid-Atlantic, the Navy installed these pretreatment devices (silver recovery units) to reduce photographic waste.

SRUs treat wastewater from the printing process to ensure that it meets area standards (which follow U.S. Environmental Protection Agency guidelines) before being released into the local discharge system.



Regardless, the continued use of wet film still produces some waste. Often, the water used to process the film must be stored until it can be properly treated. This wastewater contains silver and other hard metals that cannot be released untreated into the environment. This waste is typically held onboard ships throughout a transoceanic deployment and is only disposed of after returning to a homeport.

Before SRUs became commonplace, Sailors and soldiers would use "hobby kits" to process E6 (print) and color negative (slide) film. These kits were often used in remote locations to process and print imagery.

Photographer's Mate 1st Class (AW) Kathryn L. Hoshii, assigned to Fleet Combat Camera, Atlantic, documents USNS LEROY GRUMMAN (T-AO 195) as fuel and supplies are transferred to USS HARRY S. TRUMAN (CVN-75) by means of connected replenishment.

U.S. Navy photo by Photographer's Mate 1st Class (AW) Michael W. Pendergrass





SEAL Team Eight pointman takes cover during a simulated firefight during this year's "show of force" beach presentation. The annual event is part of the Special Warfare Operations Teams Reunion to display their land, air and water capabilities and speed.

U.S. Navy photo by Journalist First Class Jeremy L. Wood, Fleet Combat Camera-Atlantic

While the kits contained all the necessary elements to produce an image, there was no consideration made for the byproducts (wastes) from the production of the print media. "Improper disposal of the wastewater could result in heavy metals being introduced into the water supply," said Fleet Combat Camera, Atlantic, Underwater Photography Leading Chief Petty Officer PHC(DV/AW) Andy McKaskle. "Heavy metals in the water can easily contaminate fish and shellfish."

Another segment of the Navy's photographic core also travels across the globe, but not always onboard ships. And these photographers do not produce any chemical waste.

Air Department personnel participate in the loading of stores on board USS ANZIO (CG 68).

U.S. Navy photo by JOC(SW) Alan J. Baribeau





Rechargeable batteries and electronic storage media has taken the place of alkali batteries and film in the Navy photo community reducing the negative impact of the conventional photographic process on the environment.

U.S. Navy photos by PH1 Christopher Mobley



The naval photographers of Fleet Combat Camera, Atlantic (FCCA), use digital technology exclusively to document Naval operations worldwide and produce timely imagery to decision makers (and *Currents* magazine).

Images taken by FCCA photographers are digital representations of the image—combinations of ones and zeros. As a result, chemical waste products are not manufactured.

Whether it is along the Eastern Seaboard or in the deserts of Kuwait, the Sailors of FCCA use digital technology exclusively. Their efforts provide timely imagery to the on-scene commander while minimizing the Navy's footprint on the environment.

During Operation Iraqi Freedom, "FCCA Sailors used digital technology, avoiding the use of film and the associated environmental hazards," said Bahrain Detachment Crew Chief PHC(AW/SW) Thomas Coffelt. "Most people associate the environmental costs of processing film with the disposal of silver haliades (heavy metals). While the disposal of heavy

metals is a substantial waste stream, additional waste is generated from the plastic film canisters. These canisters are used in the field and often stay in the field. During the first 11 months of Operation Iraqi Freedom, more than 30,000 images were transmitted to the Joint Combat Camera Center in Washington D.C. That equates to over 833 rolls of 36-exposure film (and 833 plastic film canisters)."

FCCA Sailors are also employing environmentally friendly practices while serving at Naval Station Guantanamo Bay, Cuba, documenting detainee operations. "We are not

Photographer's Mate 3rd Class Chuck Ledbetter assigned to visual information support center Oceana detachment prepares to reclaim silver from a batch of color chemistry using a machine called Calfran designed by Boush Industries, in accordance with the U.S. Navy precious metals program.

U.S. Navy photos by Photographer's Mate 2nd Class Samuel Shavers



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producing hazardous waste," said Cuba Detachment Crew Chief PH1(AW) Shawn P. Eklund. "It is especially important here since there are limited resources available to dispose of hazardous waste. Heavy metals (silver halides) are one of the worst kinds of hazardous waste. Alkaline batteries also represent a disposal challenge. With digital cameras, we don't have to worry about those issues."

"If you go digital, there's no water discharge—no need for SRUs," said Din. "It is pollution prevention in its simplest form. If you don't have the chemicals associated with the conventional photographic processes

(and stored in the SRUs), you eliminate the waste generated by that process altogether. Additionally, you eliminate the maintenance associated with operating a SRU. Something could always go wrong with the equipment if it is not operated or maintained properly."

"Digital photography also allows us to take advantage of recyclable batteries. This precludes us from having to worry about the disposal of batteries (that contain cadmium and nickel) into the environment," added McKaskle.

According to Din, "We exercise more engineering control by using other methods to produce a product (using a digital photograph instead of wet

(film) processing). Increased engineering control equates to using environmentally safe methods."

The Navy's photographic core has gone digital and the environment has benefited. ⚓

## CONTACT

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