



AGENDA REPORT  
May 7, 2019

**Board Report of Costs and Liabilities for a request by Sandra Sullivan**

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**SUBJECT:**

Board Report of Costs and Liabilities regarding a request by Sandra Sullivan

**DEPT/OFFICE:**

ACM Development

**REQUESTED ACTION:**

It is requested that the Board discuss and review the attached staff report as desired, and provide Board direction to staff, if any.

**SUMMARY EXPLANATION and BACKGROUND:**

During the Board of County Commissioners meeting on April 23, 2019, Sandra Sullivan presented public comment requesting the County to provide mapping and other related services related to surveying. The Board authorized staff to come back to the Board with a report at the May 7th regular meeting, outlining the costs and the potential liabilities of performing the mapping services requested by Sandra Sullivan.

The staff report is attached for Board review and discussion.

**CLERK TO THE BOARD INSTRUCTIONS:**

Forward Board action to the County Manager's Office, Public Works Department and the Natural Resources Management Department.

**ATTACHMENTS:**

**Description**

- ▢ **Staff Report**



Tammy Rowe, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

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Tammy.Rowe@brevardclerk.us

May 8, 2019

**M E M O R A N D U M**

**TO:** Frank Abbate, County Manager

**RE:** Item I.2., Board Report of Costs and Liabilities for a Request by Sandra Sullivan

The Board of County Commissioners, in regular session on May 7, 2019, discussed the Board Report of Costs and Liabilities for a request by Sandra Sullivan, but took no formal action.

Your continued cooperation is greatly appreciated.

Sincerely yours,

BOARD OF COUNTY COMMISSIONERS  
SCOTT ELLIS, CLERK

*Tammy Rowe*

Tammy Rowe, Deputy Clerk

/cmw

cc: Public Works Interim Director  
Natural Resources Management Director

# Staff Report

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**Date:** May 2, 2019

**Subject:** Mapping Services requested by Ms. Sandra Sullivan in her pursuit of Formerly Used Defense Sites (FUDS) Program eligibility from the U.S. Army Corps of Engineers (USACE)

## **Summary Statement:**

The Brevard County Board of County Commissioners, in their April 23, 2019 meeting, directed staff to investigate the cost and potential liability associated with county staff providing surveying and mapping services to Ms. Sullivan for her use in pursuing FUDS eligibility by demonstrating military responsibility. The U.S. Army Corps of Engineers is currently assessing the South Patrick Shores area for eligibility for the FUDS program. The criteria for eligibility are whether the military owned, leased or otherwise possessed the land at issue when contamination occurred. Real estate documents, aerial photographs and maps, as well as anecdotal evidence is considered in the FUDS assessment.

In order to develop an idea as to the estimated staff time required for this mapping effort and the potential liability associated with the resulting document, qualified staff must develop an understanding of the documents that Ms. Sullivan has acquired, to the best of our ability, while being aware that there is land documentation that is apparently missing and/or may not be obtainable. It is also necessary to recognize the recent and ongoing investigations related to the potential contamination in South Patrick Shores.

The Brevard County Surveying & Mapping Program has conducted research and professional interpretation of the legal descriptions in support of Ms. Sullivan's efforts. We have previously provided documented historical aerial images. As a result of this effort, we have determined that none of the locations described in legal descriptions are in the area of concern.

The result of this exploratory effort has provided us a better understanding of what is needed in order to provide the complete and accurate map that has been requested of staff. Without having all of the required documentation, the amount of effort (cost) associated with mapping is unknown. There is not enough information available at this time to develop a meaningful map, since the legal descriptions we have obtained so far do not describe lands that are suspected to be previous military waste sites. As such, the potential of liability is high if staff were to attempt to prepare a map that may or may not factually and completely represent the land ownership.

## Background & Current Status:

On Friday, April 19, 2019, Ms. Sullivan inquired via email if our Surveying & Mapping Program could assist her by identifying the lands that the United States Government owned and professionally mapping the areas on a 1991 map. In her email, she acknowledged that reading and interpreting the taking of lands documents that she had acquired was beyond her expertise. Ms. Sullivan suggests that acquiring FUDS eligibility would be in the mutual interest of the residents of the county, as the cleanup would result in greater property values and hence revenue for the county.

Ms. Sullivan, an activist and resident of South Patrick Shores, has acquired information regarding the historical use of this area of unincorporated Brevard County, south of the Patrick Air Force Base and Pineda Causeway (SR 404), and north of Satellite Beach. This is in response to environmental and health concerns regarding military waste that was buried in the area and whether this poses health risks. Ms. Sullivan has unearthed debris that was buried in her yard and has actively pursued reassessment of the South Patrick Shores area and re-examination of alleged groundwater contamination from Federal and State agencies, including the U.S. Environmental Protection Agency (EPA). Previous assessments of groundwater and soil samples were completed in 1991 by the EPA and also the Florida Department of Health and Rehabilitative Services (HRS).

It is apparent that the United States did own some of the land in South Patrick Shores. There are also possible lease agreements that may apply to lands that the United States did not own. Some of these areas, owned or leased, may have been used as military dump sites. The details of these records must be proven as one of the criteria to get FUDS eligibility.

Ms. Sullivan has shared the following statement from the Department of the Army, U.S. Army Corps of Engineers, Formerly Used Defense Sites (FUDS) Program Policy, detailing what is needed for FUDS eligibility:

*"FUDS property eligibility requires a showing of both control over the property by the Secretary and the presence of an interest in the property by the United States. The United States' interest in the property must be supported by specific historic documentation. Examples of documentation might range from full title to the property evidenced by a deed; a right to use and occupy the property for a specific period documented in a lease; or, a bare right of forbearance to allow use of the land, as may be memorialized in an easement, permit, license, tenancy at will, or other such document indicating the transfer of something less than full fee title. Project eligibility*

*at an eligible property is then determined by evaluating whether contamination of the property occurred during that period when the Secretary exercised jurisdiction over the property. The term "Secretary" means the Secretary of Defense and the Secretaries of each of the Military Departments, as well as the Secretaries of any predecessor departments or agencies of DoD. "*

As indicated in the FUDS Program Policy, there must be specific historic documentation of the United States interest in the property, such as a deed or a lease. An attorney for USACE has further stated that they consider possession, meaning actual physical control without legal possession, to be a third category of FUDS eligibility. Real estate documents, aerials and anecdotal evidence may be considered in order to determine possession. It is not known if a mapping effort of an interpretation of such documents would fulfill this eligibility requirement. Further, it is then determined whether contamination of the property occurred. Historically, buried debris that does not pose a human health threat is not typically removed.

In a 1992 health assessment conducted by the Agency for Toxic Substances and Disease Registry (ATSDR), a federal public health agency of the U.S. Department of Health, it was determined that the soil sampling conducted by the EPA in the South Patrick Shores area did not indicate significant contamination in the area. The limited groundwater sampling identified detectable levels of certain chemicals, most of which were below the standards for drinking water. In one well, the sample detected a higher level of atrazine; however, it was noted that the levels were acceptable for irrigation and swimming pool use. This same well sample also indicated elevated levels of aluminum and lead, but it was noted that the well is not a potable water source.

In a Memorandum dated March 19, 2019, the EPA Scientific Support Section provides a data evaluation of soil samples collected in Ms. Sullivan's yard, at her request. The evaluation revealed that arsenic and chromium were the only two analytes that exceeded the screening level values developed by the EPA. Neither arsenic nor chromium was present in concentrations that warrant a removal action. The evaluation then explains that both arsenic and chromium are naturally occurring metals that are present in soil due to natural geologic processes and the levels detected in their samples were at concentrations that are consistent with Florida background concentrations. In addition to metals, the analysis also included pesticides PCBs, volatile organic compounds, and semi volatile organic compounds. These were not detected at concentrations that exceeded any screening or removal management levels.

The EPA is currently following up on the County's investigating with more extensive testing in the South Patrick Shores area. This testing may or may not come to the conclusion that contamination of the property has occurred.

## **Summary of Deed Document discovery related to Patrick Air Force Base (PAFB):**

For this discussion, we will use the Pineda Causeway as a local landmark that approximately represents the existing southerly boundary of Patrick Air Force Base (PAFB).

On April 24 and April 25, 2019, Ms. Sullivan provided us the following documents and requested a determination of the location of lands described within those documents:

- Judgement / Lien Book 1, Page 93, Orlando No. 80 Civil, Filed in Jacksonville, FLA on 10/7/1940.
  - The legal description within that document describes 996 Acres of land whose southerly boundary is the Pineda Causeway and extends northerly for 1.5 miles, bounded on the east by the Atlantic Ocean and bounded on the west by the Banana River.
- Official Record Book 96, Page 203, Declaration of Taking Case No. 890 ORL, filed 3/12/1958.
  - This document describes five (5) parcels of land. All of the parcels are located within the Cocoa Ocean Beach subdivision and are approximately 9 miles north of the Pineda Causeway.
- Deed Book 256, Page 163, Quitclaim Deed from the United States to the State of Florida, 5/14/1941;
  - The legal description within this document is a description of State Road A-1-A within PAFB, a 100 foot wide right of way, from the Pineda Causeway northward for approximately 4 miles toward Cocoa Beach.

The review of these legal documents provided by Ms. Sullivan revealed that none of the locations described are for lands located within the South Patrick Shores area.

Staff has discovered real estate documents involving the United States while researching the right of way status of South Patrick Drive south of the Pineda Causeway, and they include the following:

- Official Records Book 68, Page 190, Case No. 854 civil, filed 6/25/1957;
  - The document describes the Family Housing Annex located approximately a mile south of the Pineda Causeway approximately lying between East and West Exeter Street and Nautilus Drive. This document also describes the 200' wide Right of Way for South Patrick Drive from the Pineda Causeway southerly for approximately 1 mile to the northerly limits of the Family Housing Annex.

- Official Records Book 74, Page 463, Easement for Road or Street, dated 1/15/1958
  - This document describes a 50' wide right of way easement for South Patrick Drive from Nautilus Drive northerly to East and West Exeter Street and also describes a 66' wide right of way easement for the Pineda Causeway from South Patrick Drive easterly to State Road A-1-A.
- Official Records Book 3112, page 2494, Easement for Right of Way, dated 1/14/1986
  - This document describes an 8 foot wide easement within the 200' wide right of way of South Patrick Drive from Sea Park Boulevard southerly for approximately 3/4 of a mile.

While our review of these legal documents found that all three of these locations are within or on the boundary of the South Patrick Shores area, they do not include home sites and it is questionable whether any of the locations describe lands that are suspected to be previous military waste sites.

The above research is based on a very limited amount of documents. To produce a complete discussion of the past and present holdings of the United States government with respect to Banana River Naval Air Station and Patrick Air Force Base lying south of the Pineda Causeway would require an abstract of title that would need to include leases. Some of the documents may have been filed with the Brevard County Clerk of Courts but it is not unreasonable to say that the Real Estate office of the Army or other government agency may have additional documents that are not readily available to the public.

### **Investigation of Potential Pollution in South Patrick Shores:**

In response to community concerns during 2018 regarding Per- and Polyfluoroalkyl Substances (PFAS) near Patrick Air Force Base and throughout the County, Brevard contracted with Applied Ecology, Inc. to sample and analyze fifty samples (including one blank) for a full suite of PFAS compounds. This investigation included thirteen groundwater monitoring wells, thirteen surface water grabs, eight sediment/muck samples, eleven irrigation wells, four push points (equivalent to shallow groundwater well sampling), and one trip/equipment blank. At the same time that community concerns surfaced regarding PFAS, concerns resurfaced regarding historical use of land in the South Patrick Shores area for disposal and potential correlation with local cancer rates. Therefore, in addition to the PFAS sampling, Applied Ecology was also contracted to sample three shallow irrigation wells in South Patrick Shores for the full suite of federally listed priority pollutants, carcinogens, volatile and semi-volatile organics, pesticides, heavy metals and radionuclides.

Results for the expanded sampling for the three shallow irrigation wells in South Patrick Shores were compared to all available standards, including Florida's Groundwater Cleanup Targets (GCTLs) and Irrigation Water Screening Levels (IWSLs). This data was immediately shared with state and federal agencies responsible for public health and contamination screening and remediation, neighboring municipalities, the School Board, Patrick Air Force Base, Commissioners and the press. The majority of pollutants, including volatile and semi-volatile organics, pesticides, herbicides, heavy metals, dioxins and radionuclides were non-detectable or well below the appropriate screening values.

The following items were detected above the GCTLs which are based upon groundwater consumption, but below the IWSLs for residential use: the metal manganese and the pesticide dieldrin. Manganese is naturally ubiquitous in the environment, trace amounts are essential to animal health, and the concentrations measured were representative of typical background levels for the surficial aquifer. Dieldrin (detected at one well) is a broad-spectrum insecticide that was historically used to control termites and can have potential health impacts at certain concentrations in groundwater used for consumption.

Another metal, Strontium, was found above the Florida GCTL with no available IWSL for comparison. Strontium is a naturally occurring metal in groundwater, contained in certain foods, and typically seen in Florida's groundwater in the measured concentrations.

EPA is currently following up on the County's investigating with more extensive testing in the South Patrick Shores area. This includes:

1. Seven (7) soil samples were collected from Ms. Sullivan's yard at her request and tested for metals, pesticides, PCBs, volatile organic compounds and semi-volatile organic compounds. None of the detected chemical concentrations exceeded EPA's residential soil Removal Management Level. Although not at a level to warrant removal action, two analytes, arsenic and chromium, exceeded EPA's residential soil Regional Screening Levels. Arsenic is naturally occurring in Florida and the concentrations detected were consistent with those typically observed in urban Florida settings. Chromium is also naturally occurring and the concentrations detected were consistent with those typically observed in urban Florida settings. The EPA memorandum report dated March 19, 2019, on this testing is attached (see Exhibit "A").
2. EPA is planning to collect soil gas samples at Ms. Sullivan's property to determine the possibility of any vapor intrusion taking place. This has been coordinated with Ms. Sullivan's schedule and is expected to occur the week of June 24th.
3. EPA is planning a limited sampling investigation of a portion of the South Patrick Shores subdivision in response to community concerns about debris burial in the area. A map of the



investigation area is attached (see Exhibit "B"). EPA will assess the presence or absence of environmental impacts in the mapped area. EPA has requested reports from the Air Force regarding ordnance discovered in South Patrick Shores.

4. The federal Agency for Toxic Substances and Disease Registry (ATSDR), a program of the U.S. Department of Health, is reviewing a petition to consider cancer data, especially in young people, for South Patrick Shores, Satellite Beach and the surrounding area and provide a Health Consult to minimize the potential for human health risks associated with exposure to hazardous substances.

The Army Corps of Engineers is currently preparing a draft Findings document to determine if the disposal site in South Patrick Shores would be eligible for cleanup funding through the Formerly Used Defense Site (FUDS) program, if any contamination is found that needs to be remediated. A previous evaluation in 1989-1991 did not determine the South Patrick Shores area to be a FUDS. The Army Corps is considering information that was not available or considered during their previous analysis. Their evaluation process started in October 2018 and typically takes a year. Jacksonville staff anticipate completing their assessment in June and submitting a report to the South Atlantic Division office in Atlanta. From there it goes to Washington DC for a final decision.

If the site is not eligible for FUDS funding but is found to contain hazardous contaminants, then EPA will determine if the site should be added to the Superfund National Priorities List (NPL). This is a ranking system based on the hazardous substances released and the risk associated with that release. The NPL assesses the volume released, the toxicity, the degree to which it was contained, and any human exposure pathways. This is used to prioritize Superfund cleanups nation-wide.

Regarding the County-wide PFAS sampling results, the U.S. Environmental Protection Agency (USEPA) established a lifetime drinking water health-advisory (LHA) of 0.07 µg/L for PFOS and/or PFOA. This non-regulatory LHA is based on daily ingestion of PFOA and PFOS over a lifetime and does not apply to less direct or frequent exposure such as swimming, bathing, or similar contact. None of the 50 samples had PFOA concentrations exceeding the LHA of 0.07 µg/L. Eight percent (8%) of the groundwater samples exceeded the drinking water LHA for PFOS. Combining measured concentrations of PFOA and PFOS, only 12% of the samples were at or above the LHA of 0.07 µg/L. However, none of the 50 samples exceeded the newly proposed IWSLs for either PFOA or PFOS and most of the other PFAS compounds sampled were below laboratory detection limits.

**Conclusion:**

In order to develop the cost and potential liability associated with county staff providing surveying and mapping services to Ms. Sullivan, staff evaluated the limited amount of documents that Ms. Sullivan has acquired, and also obtained additional documents. It is unknown if there are other legal documents, such as lease agreements that would not have been recorded, and whether we would have access to them in order to produce a complete investigation of the United States government lands with respect to Banana River Naval Air Station and Patrick Air Force Base. It is very possible that there are additional documents that are not readily available to the public since lease documents are not typically recorded.

It is staff's opinion that none of the legal descriptions obtained so far describe lands that are suspected to be previous military waste sites. Without having all of the information, the amount of effort associated with mapping is unknown. There is not enough information available at this time to develop a meaningful map. As such, the potential of liability is high if staff were to attempt to prepare a map that may or may not factually and completely represent the land ownership.

We could prepare a map of the lands described in the documentation that we currently have, overlaid on the aerial from the 1991 report, but this will not demonstrate the historic documentation of the United States interest in the property as needed by Ms. Sullivan to meet eligibility requirements for the area in question. It would be of questionable value as it is not in the area of concern.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

March 19, 2019

4SD-SSB

MEMORANDUM

**SUBJECT:** Data Evaluation  
Residential Yard  
South Patrick Shores, Brevard County, Florida

**FROM:** Tim Frederick, Life Scientist  
Scientific Support Section  
Superfund Division TAF

**TO:** Frank C. Russell, On-Scene Coordinator  
Emergency Response & Removal Branch  
Superfund Division

**THRU:** Glenn Adams, Chief  
Scientific Support Section HGA  
Superfund Division

Per your request, SSS has reviewed data relating to environmental conditions at a residential yard on Dorset Lane in South Patrick Shores, Brevard County, Florida. In response to resident concerns, seven samples were collected from three depth intervals at each location (0-6", 6-12", and 12-24" below land surface). An exception is soil sample SP-08, which was collected at a depth of 30-36" below land surface at the request of the property owner. The owner identified the potential for contaminants to be present at depth at this location. Analyses of all samples included: metals, pesticides, PCBs, volatile organic compounds, and semivolatile organic compounds. The resident reported gardening in her soil.

**Data Evaluation**

To evaluate the data, the concentrations of detected chemicals were first screened against EPA's residential soil Regional Screening Levels (RSLs). RSLs are conservative risk-based screening

values developed by EPA to help identify contaminants of potential concern. Only two analytes, arsenic and chromium, exceeded their respective RSLs. Arsenic and chromium exceeded their RSLs in every sample in which the metals were detected.

Arsenic is naturally occurring in soil due to normal geologic processes. Although above its RSL, arsenic concentrations in the samples from this site are consistent with arsenic concentrations typically observed in Florida urban settings. For example, a study of Miami-Dade County soil found that the mean background concentration in surface soils (0-6") was 3.9 mg/kg (2014). Statewide background surface soil arsenic concentrations measured by the United States Geological Survey (USGS) in non-urban areas ranged from 0.6-6.3 mg/kg (2013). The highest concentration in this sampling event was 3.0 mg/kg.

Chromium is also naturally occurring in soil due to normal geologic processes. EPA does not have a screening level for chromium because its toxicity can vary depending on its form. Chromium was not speciated in the lab, so the distribution of chromium by form is not known for these samples. For this evaluation, it was conservatively assumed that all of the chromium present was in its most toxic form, hexavalent chromium. This is a conservative assumption, because chromium is typically found in its trivalent form in natural settings. There are no indications that hexavalent chromium would be present in soil at this residence due to industrial processes. Although above the hexavalent chromium soil RSL, chromium concentrations in the samples from this site are consistent with chromium concentrations typically observed in Florida urban settings. For example, the Miami-Dade County study found that the mean background concentration of chromium in surface soils was 12.0 mg/kg and ranged from 1-38 mg/kg. The USGS background chromium concentrations in non-urban areas ranged from 1-51 mg/kg. The highest concentration of chromium observed in this sampling event was 20 mg/kg.

Analyte concentrations that exceeded an RSL in any sample were then compared to EPA's Removal Management Levels (RMLs). RMLs are risk-based screening values developed by EPA to determine whether sample concentrations are sufficiently elevated that they may warrant a removal action. Exceedance of an RML by itself does not imply that adverse health effects will occur or that a removal action is necessary. None of the detected chemical concentrations exceeded a residential soil RML in any of the samples collected.

## **Conclusions**

Only two analytes, arsenic and chromium, exceeded their respective RSLs. Arsenic and chromium exceeded their RSLs in every sample in which the metals were detected. Arsenic and chromium are naturally occurring metals that are present in soil due to natural geologic processes. Arsenic and chromium were detected in these samples at concentrations that are consistent with Florida background concentrations. Neither arsenic nor chromium were present at concentrations that exceeded their Removal Management Levels. Therefore, a removal action does not appear to be warranted at this time. The data also do not indicate a need for the resident to stop gardening in the areas represented by these samples.

PCBs, pesticides, volatile organic compounds, and semivolatile organic compounds were not detected at concentrations that exceeded any RSLs or RMLs in any of the samples collected.

The concentrations found at sample SP-08 were consistent with the concentrations identified in the other samples for this investigation.

Additional investigation is being conducted in this area by the Region 4 Superfund Site Assessment group. Additional sampling can be performed at this location if environmental conditions change or if identified as a data need for that additional investigation.

Please contact me at 404-562-8598 or [frederick.tim@epa.gov](mailto:frederick.tim@epa.gov) if you have any comments or questions regarding this evaluation.

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## Exhibit "B"

Map of area that EPA plans to investigate for potential contamination:



LIMITED DEED RESEARCH OF GOVERNMENT PROPERTIES WITHIN PATRICK AIR FORCE BASE AND SOUTH PATRICK SHORES		DATE: 8/2/2018 SCALE: 1" = 1000' CHECK BY: M. J. SWEENEY
REVISION	DATE	
PROJECT NUMBER	DRAWING NUMBER	SHEET 1 OF 1
BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS SECTIONS 10, 11, 14, 15, 22, 23, 26, 27, 33, 34, 126S, R37E		



BC May 7, 2019