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NAS KEY WEST
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MEETING SUMMARY FOR RESTORATION ADVISORY BOARD DATED 22 JULY 2015 NAS
KEY WEST FL
7/22/2015
TETRA TECH

NAS KEY WEST RESTORATION ADVISORY BOARD

22 JULY 2015 MEETING SUMMARY

LOCATION: Florida Keys Eco-Discovery Center, Key West, FL

RESTORATION ADVISORY BOARD MEMBERS

Ron Demes	NAS Key West	305-293-2886 Ron.Demes@navy.mil
Tracie Vaught	FDEP	850-245-8998 tracie.vaught@dep.state.fl.us
Ed Barham	NAS Key West PWD Environmental	305-293-2911 Edward.Barham@navy.mil
Dave Barney	BRAC	617-753-4656 david.a.barney@navy.mil
Mimi Stafford	RAB Community Member	305-296-5947
Mark Songer	RAB Community Member	305-394-3807
Mike Petro	RAB Community Member	305-896-7300 mpetro@remax.net
Bob Eadie	RAB Community Member	305-809-5610
Margaret Romaro	RAB Community Member	

OTHER PARTICIPANTS/COMMUNITY ATTENDEES

Dan Owens	NAVFAC SE	904 542-6367 Daniel.Owens@navy.mil
Ken Bowers	NAVFAC LANT	757-322-8341 kenneth.a.bowers@navy.mil
Edward Russell	FDEP	305-289-7072 Edward.Russell@dep.state.fl.us
Amy Twitty	CH2M	850-232-0320 atwitty@ch2m.com
Shauna Stotler-Hardy	Tetra Tech, Inc.	803-641-4944 Shauna.Stotler-Hardy@tetrattech.com
Damon DeYoung	Battelle	619-574-4825 deyoungd@battelle.org
Steve Rosansky	Battelle	813-474-2943 rosansky@battelle.org
Todd Haverkost	Resolution Consultants	901-372-7962 thaverkost@ensafe.com
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Ashley Monnier	NAS Key West Community Plans and Liaison Officer	
Jim Scholl	Key West City Manager	jscholl@cityofkeywest-FL.gov
Robert Haverty	Key West Resident	305-307-4001
Page Haverty	Key West Resident	captpage@msn.com
Lucy Page	Key West Resident	lucypage@att.net
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Jim Bouquet	Key West City Engineer	305-809-3962 jbouquet@cityofkeywest-fl.gov

These minutes are a summary based on informal notes taken at the meeting. They are not intended as a verbatim transcript and may not have captured everything that was discussed.

NAS KEY WEST RESTORATION ADVISORY BOARD

22 JULY 2015 MEETING SUMMARY

LOCATION: Florida Keys Eco-Discovery Center, Key West, FL

Doug Bradshaw	City of Key West	305-089-3792 dbradshaw@cityofkeywest-fl.com
Ray Blazevic	Key West Resident	305-296-6649
Capt. Steve McAlearney	CO NAS Key West	305-293-2866
Trice Denny	NAS Key West PAO	305-293-2027 Andrea.Denny@navy.mil
Oliver Kofoid	Key West Resident	305-797-1087 okofoid@hotmail.com
Adam Linhardt	Key West Citizen Reporter	305-292-7777
John McMahon	Key West Resident	
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Kevin Wilson	Monroe County	Wilson-kevin@monroecounty-FL.gov
Rory & Carolina DuPont	Key West Residents	Theduponts5@gmail.com
Margaret Romero	Key West Resident	
Ray Pratt	Big Pine Key Resident	fwpratt@msn.com
Joe Wooten	Key West Resident	josephewooten@gmail.com
Sara Wooten	Key West Resident	Sara.Wooten@navy.mil
Luke Barradell	Key West Resident	Luke.Barradel@navy.mil

WELCOME AND INTRODUCTIONS

Ron Demes brought the meeting to order at 6:00 PM. It was requested that everyone please sign in since the Navy uses the information to send announcements to keep the public informed. Ron asked that the presenters be allowed to give their presentation without interruption. The Restoration Advisory Board (RAB) members will be invited to ask their questions followed by questions from the general audience. Ron asked the attendees to state their name and association before asking each question for the minutes. Ron informed the audience that the meeting and questions will be noted in the RAB meeting summary. If it is not possible to answer a question during the meeting, answers will be researched and provided at a later date.

The RAB members were introduced.

REVIEW OF LAST MEETING

Ron asked if there were any corrections to the minutes. Several corrections were submitted to Ron, and Ron had a few of his own. The minutes from the July 2014 RAB meeting will be corrected as soon as possible and resubmitted for approval.

MUNITIONS RESPONSE PROGRAM (MRP), MIKE ERVINE, RESOLUTION CONSULTANTS

Mike Ervine provided a presentation. MRP activities to date include the following:

- MRP Activities began in 2009 at NAS Key West
- Currently 17 MRP sites identified
- Preliminary Assessment of 14 sites completed in 2010
- Site inspection initiated in 2010, and the report finalized in March 2015
- Additional Expanded Site Inspection and Removal Activities currently underway (2 sites)
 - Fleming Key Dredge Spoils Area
 - A22 Ditch and A950 Spoils Pile (Boca Chica Field)

These minutes are a summary based on informal notes taken at the meeting. They are not intended as a verbatim transcript and may not have captured everything that was discussed.

NAS KEY WEST RESTORATION ADVISORY BOARD

22 JULY 2015 MEETING SUMMARY

LOCATION: Florida Keys Eco-Discovery Center, Key West, FL

The background of the Fleming Key Dredge Spoils Area includes the following:

- 27-acre area on Fleming Key
- Dredge spoils placed from the Federal Channel and Truman Harbor dredging in 2003/2004
- The following munitions items were discovered in spoils area:
 - 7.2-inch Hedgehog (WWII era anti-submarine munition)
 - 76 mm artillery shell

The Expanded Site Inspection was initiated in 2013 and included the following:

- Non-intrusive geophysical survey of fourteen 100-foot by 100-foot grids
- More than 1,900 metallic subsurface anomalies were identified
- Using advanced geophysical techniques, most anomalies were identified as metallic debris/clutter
- Some anomalies were identified as potential munitions

The next steps at Fleming Key include confirmatory sampling (to begin in late 2015). Other activities include an intrusive investigation, proposed excavation of approximately 400 anomalies to confirm geophysics results, and soil sampling for munitions constituents chemical contamination (metals, explosives).

The background of the Boca Chica Field MRP sites include the following:

- Munitions Discovery – October 2012
- Contractor was excavating ditches to improve airfield drainage, small arms ammunition encountered
- NAS Key West Explosive Safety Officer identified larger munitions in one of the ditches and on the associated spoils pile
- As a result of the finds, the following two new MRP sites identified:
 - A22 Drainage Ditch
 - A950 Spoils Pile

Current removal actions underway include the following:

- Work began in June 2015
- Removal action activities
- Vegetation removal, ditch dewatering, metal detector search, mechanical excavation, and soil screening
- Munitions constituent sampling of screened materials
- Anticipated completion – September 2015

The presentation also included photos of the activities occurring at the MRP sites.

Handouts that included more information of the MRP sites were made available to participants.

Questions, Answers, and Comments:

Q: Mark Songer, RAB Community Member. What munitions are being found?

A: Mike Ervine, Resolution Consultants. They have been finding discarded small arms.

Q: Adam Linhardt, Key West Citizen Reporter. What does discarded small arms mean?

A: Mike Ervine, Resolution Consultants. The bullet is still in the cartridge.

NAS KEY WEST RESTORATION ADVISORY BOARD

22 JULY 2015 MEETING SUMMARY

LOCATION: Florida Keys Eco-Discovery Center, Key West, FL

DEFENSE REUTILIZATION MARKING OFFICE (DRMO) SLIVERS, AMY TWITTY, CH2M

Amy Twitty provided a presentation. The project consists of two former DRMO land slivers adjacent to the City-owned portion of the former DRMO on Truman Annex. The land slivers were retained by the Navy during the Base Realignment and Closure (BRAC) process in 2002. The DRMO was formerly used as a storage facility for new and used military equipment. The south DRMO sliver is approximately 600 feet long by 25 feet wide, and the north DRMO sliver is approximately 200 feet long by 30 feet wide.

According to the Base Master Plan, the north DRMO sliver is zoned for commercial/industrial use, and the south DRMO sliver is zoned for residential land use (military housing nearby). Soil samples were collected at both slivers in November 2010 and June 2011 and analyzed for arsenic, lead, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). Samples from the north DRMO sliver exceeded the Residential standards, but were less than Industrial standards, and samples at south DRMO sliver exceeded both residential and industrial standards in some locations.

Soil removal action was conducted from September to October 2012. The soil was removed to meet Residential standards at both slivers. Confirmation samples collected at the walls of the excavations in 2012 indicate some residual soil contamination exists. Further soil sampling was conducted in an effort to delineate residual contamination (August 2013, March 2014, and December 2014). Background samples were also collected to assess the background concentration for PAHs.

A risk evaluation was conducted for soil at both slivers. Soil results were combined from the various sampling events from November 2010 through December 2014 as follows:

- November 2010 – pre-excavation sampling
- June 2011 – pre-excavation sampling
- October 2012 – confirmation sampling during excavation
- August 2013 – post-excavation sampling
- March 2014 – post-excavation sampling
- December 2014 – post-excavation sampling

All of the “excavated” samples were removed from the data set, and a risk-based screening evaluation was conducted for the residual soil. Using the soil samples representative of residual concentrations in both slivers, risks were calculated for PAHs, PCBs, arsenic, and lead. Based on the results of the risk evaluation, additional soil removal actions are recommended at the south DRMO sliver. No removal actions are recommended for the north DRMO sliver.

The total estimated volume recommended for removal at the south DRMO sliver is 45.5 cubic yards. The estimated volume recommended for removal in the 0- to 0.5-foot depth interval is 39.4 cubic yards. The estimated volume recommended for removal in the 0.5- to 2-foot depth interval is 6.2 cubic yards. A technical memorandum summarizing the results of the risk evaluation has been submitted to the Navy and the Florida Department of Environmental Protection (FDEP) for review. The additional soil removal action is anticipated to take place late fall.

Questions, Answers, and Comments:

Q: Mike Petro, RAB Community Member. Were there any samples taken from underneath the pavement?

A: Amy Twitty, CH2M. Yes, there were. Samples were taken to about 2 feet into the roadway. The samples in the road did not show any PCB contamination. PAHs were not sampled for in the road since asphalt contains PAHs.

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Q: Joe Mokay, City of Key West. Is the North Sliver cleaned to residential standards?

A: Amy Twitty, CH2M. Yes, it is.

BASE REALIGNMENT AND CLOSURE (BRAC) UPDATES, AMY TWITTY, CH2M

Amy provided a presentation. Portions of Truman Annex were transferred from the Navy to the City of Key West in 2002 as part of the BRAC process. Some areas were environmentally impacted sites including the following:

- Parcel C – Former Defense Reutilization and Marketing
- Office (DRMO)
- A portion of Parcel K
- Parcel E

The City of Key West has been working on a plan to develop a 23-acre park referred to as Truman Waterfront Park.

DRMO

Subsequent to the 2002 transfer, the Navy discovered additional soil contamination. The Navy conducted a number of soil removals from 1999 to 2009. The DRMO soil was cleaned up to allow unrestricted use (meets FDEP Residential use criteria). A follow-up groundwater investigation was conducted in 2014. The groundwater meets unrestricted use although it is not considered potable due to saline conditions.

A report summarizing history of the DRMO cleanup and demonstrating remediation completion was submitted to the FDEP in April 2015. The report requests No Further Action for soil and groundwater at the site (unrestricted use). The FDEP has concurred and will issue a Letter Concurrence for the City-owned Portion of the DRMO. The full Site Rehabilitation Completion Report will be revised once cleanup is completed at the Navy-owned DRMO Slivers. The Navy will modify deed to reflect unrestricted use for soil and groundwater.

Parcel K

In April 2009, the City collected soil samples and found lead, PCBs, and petroleum constituents exceedances. The Navy delineated the soil contamination and worked with the FDEP to develop recreational soil cleanup levels. The Navy conducted soil removal in January and February 2012. The FDEP asked for groundwater sampling in the highest lead area and along the site perimeter. Lead concentrations were within acceptable levels for unrestricted use.

The Navy submitted Site Rehabilitation Completion Report to the FDEP in April 2014 and recommend No Further Action with Land Use Controls (LUCs). This means that residential use would be prohibited, and the site would be acceptable for recreational use (the proposed park). The FDEP has concurred and will issue a Site Rehabilitation Completion Order. The Navy will modify the deed to allow recreational use, but prohibiting residential use. The Navy is developing a LUC Implementation Plan (currently under review). The City will be required to implement the LUCs to ensure a school or day care is not built on the property.

NAS KEY WEST RESTORATION ADVISORY BOARD

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LOCATION: Florida Keys Eco-Discovery Center, Key West, FL

Parcel E

Parcel E consists of several sites including the following:

- Building 102 – Former Torpedo Overhaul and Storehouse
- Building 103 – Former Central Power Plant
- Building 104 – Former Battery Overhaul and Storage
- Building 136 – Former Shipfitters/Plate and Mold Shop
- Building 189 – Former Liquor Store (No Further Action; 2001)

For Building 103, soil was cleaned to depths of 2 to 6 feet removing PCBs. Former Buildings 102 and 104 had the soil cleaned to depth of 2 feet removing PAHs. Former Building 136 had the soil cleaned to depth of 2 feet for arsenic, iron, and PAHs; contaminants under the road required special handling. The last contaminant (arsenic) was removed in a 2007 excavation. Building 189 was adjacent to an area affected by a petroleum leak from an underground pipeline. The site received a Site Rehabilitation Completion Order from the FDEP in 2001. The Navy is developing a LUC Implementation Plan.

The City of Key West submitted a Soil and Groundwater Management Plan for the LUC areas at Truman Annex to the Navy and the FDEP. The plan was developed to provide procedures and precautions to be implemented for the management of impacted soil and groundwater during construction activities associated with the development of Truman Waterfront Park. The plan has been approved by the Navy and the FDEP.

The Soil and Groundwater Management Plan is available for public viewing on the City's website.

Truman Annex Summary

The Navy will provide modifications to the 2002 Truman Annex deed for DRMO, Parcel K, and Parcel E once the following items are complete:

- The City and the Navy complete the legal descriptions for the DRMO and Parcel E and submit them to the FDEP.
- The FDEP incorporates the legal descriptions into the Letter of Concurrence for the City-owned Portion of the DRMO and the Site Rehabilitation Completion Order for Parcel K.

The City of Key West is proceeding with site development for the Truman Waterfront Park.

- 100% Construction Document Submitted – 7/15
- Commence Phase IA Construction to include the amphitheater – 11/15

Questions, Answers, and Comments:

Q: Mimi Stafford, RAB Community Member. At Parcel E, is there still PAH, arsenic, and iron contamination?

A: Amy Twitty, CH2M. Not below 2 feet.

Q: Mimi Stafford, RAB Community Member. Will any activities occur deeper than 2 feet?

A: Amy Twitty, CH2M. Subsurface utilities will need to be installed deeper than 2 feet.

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Q: Mark Songer, RAB Community Member. Are LUCs general in nature or tied to the master plan?

A: Amy Twitty, CH2M. That is why the surveys are so important. The LUCs will have a legal description included in the deed.

Q: Mike Petro, RAB Community Member. Will the City need to know the boundaries if the LUC requirements change?

A: Amy Twitty, CH2M. Yes.

Q: Robert Haverty, Key West Resident. Was 2015 deed done?

A: Ron Demes, NAS Key West and Dave Barney, BRAC. This will be happening in different phases. The goal is to get it done this year, but the final documentation has not been completed. Because descriptions are different on each parcel, it has taken more time than expected.

Q: Robert Haverty, Key West Resident. So, nothing official has been done?

A: Ron Demes, NAS Key West. The City has to record the deed.

A: Jim Bouquet, Key West City Engineer. The deeds will be finalized and recorded by the City before the end of 2015.

Q: Lucy Page, Key West Resident. Is there any way to liquid glass the area and put cement on top of it?

A: Ron Demes, NAS Key West. The area could be capped in that fashion, but it will not achieve the use wanted for the park.

A: Jim Bouquet, Key West City Engineer. The cap will be soil or a geomembrane.

Q: Ray Blazevic, Key West Resident. Boca Chica's main entrance used to be on the Atlantic side. Where the main intersection is on Boca Chica was a railroad work camp, and there were complex industrial equipment and chemicals. There are also many other areas had chemicals. Have these areas been checked?

A: Tracie Vaught, FDEP. The areas on Boca Chica have been checked. A study was conducted about 3 years ago to investigate the sediments, and nothing was found.

Ron reminded the attendees that contact information is included in the minutes, and the community can contact RAB members if they have questions that do not pertain to the topics in this meeting.

POTENTIAL TOPICS FOR NEXT MEETING (JULY 2016), RON DEMES

The potential topics requested by the public and RAB members for the next meeting included the following:

- BRAC update
- Information the parking structure
- Easement modification
- DRMO sliver work (how far along)
- Park update
- MRP update
- Storm water update

Ron said there is currently a contract in place to review the storm water management plan.

Someone asked about landscaping changes and Mangrove removal. Ron said this was part of the airfield restoration project.

NAS KEY WEST RESTORATION ADVISORY BOARD

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Ron restated that if the community members have concerns, please do not wait and please call a RAB Member if there are any issues or questions that need clarifications.

Bob Eadie added that the marsh grasses and Mangroves is worth seeing to see what the Navy has done. It is now back to a more natural state.

Robert Haverty stated that Navy has done an excellent job at Boca Chica, and this has helped the marina and water flow greatly.

If anyone would like a tour of the base, they can contact Trice Denny, NAS Key West Public Affairs Officer, at Andrea.Denny@navy.mil.

So far, the Navy has spent \$44.48 million in studies and cleanup, and this does not include the BRAC property.

Information about the cleanup and other activities can be found at the following website: http://cnic.navy.mil/regions/cnrse/installations/nas_key_west.html.

A community member asked about the iguanas making holes in the caps that are currently in place. Ron stated that any holes that are created by the iguanas are being filled. The iguanas are still trying to be controlled, and the Navy is staying on top of the holes so that contamination is not spread.

MEETING ADJOURNMENT

Ron Demes thanked everyone for coming to the meeting. The meeting was adjourned at 7:15 PM.

An informal question and answer period was conducted after the meeting concluded.



NAS Key West Munitions Response Program (MRP) Update

**July 2015 RAB Meeting
Key West, Florida**

**Mike Ervine, PE
Resolution Consultants**





MRP Activities to Date

- MRP Activities began in 2009 at NAS Key West
- Currently 17 MRP sites identified
- Preliminary Assessment of 14 sites completed in 2010
- Site Inspection initiated in 2010 and the report finalized in March 2015
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 - Fleming Key Dredge Spoils Area
 - A22 Ditch and A950 Spoils Pile (Boca Chica Field)



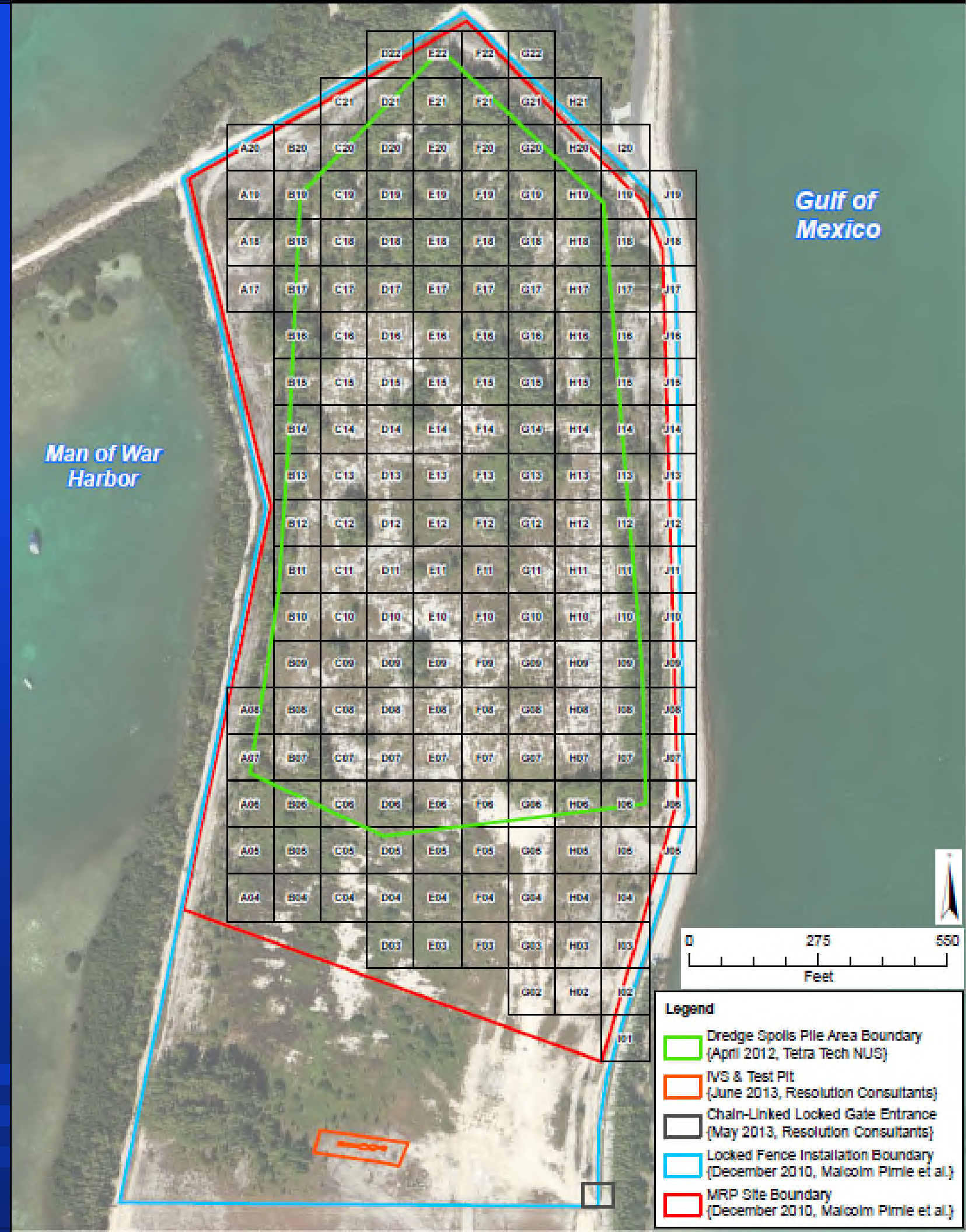
Naval Air Station Key West Munitions Response Sites



- Land-based Munitions Response Program Sites
- Near Shore Underwater Site Boundary



Fleming Key Dredge Spoils Area





Fleming Key Dredge Spoils Area

Background/History

- 27 acre area on Fleming Key
- Dredge spoils placed from the Federal Channel and Truman Harbor dredging in 2003/2004
- Two munitions items were discovered in spoils area:
 - 7.2 inch Hedgehog (WWII era anti-submarine munition)
 - 76 mm artillery shell





Expanded Site Inspection

Expanded Site Inspection initiated in 2013

- Non-intrusive geophysical survey of fourteen 100x100 foot grids
- More than 1,900 metallic subsurface anomalies were identified
- Using advanced geophysical techniques, most anomalies were identified as metallic debris/clutter
- Some anomalies were identified as potential munitions





Next Step at Fleming Key

Confirmatory Sampling (late 2015)

- Intrusive investigation
- Proposed excavation of approximately 400 anomalies to confirm geophysics results
- Soil sampling for munitions constituents chemical contamination (metals, explosives)





Boca Chica Field MRP Sites





Boca Chica Field MRP Sites

Background

- Munitions Discovery – October 2012
 - Contractor was excavating ditches to improve airfield drainage, small arms ammunition encountered
 - NASKW ESO identified larger munitions in one of the ditches and on the associated spoils pile
- As a result of the finds, two New MRP Sites identified:
 - A22 Drainage Ditch
 - A950 Spoils Pile





A22 Drainage Ditch and A950 Spoils Pile



A22 Drainage Ditch



A950 Spoils Pile



REMOVAL ACTIONS UNDERWAY

- Work began in June 2015
- Removal Action Activities
 - Vegetation removal, ditch dewatering, metal detector search, mechanical excavation, and soil screening
- Munitions constituent sampling of screened materials
- Anticipated completion - September 2015





REMOVAL ACTIONS UNDERWAY

- Vegetation Removal





REMOVAL ACTIONS UNDERWAY

- Dewatering





REMOVAL ACTIONS UNDERWAY

- Metal Detector Search





REMOVAL ACTIONS UNDERWAY

- Mechanical Excavation





REMOVAL ACTIONS UNDERWAY

- Soil Screening





Questions?





Defense Reutilization Marketing Office (DRMO) Slivers

Site Investigation/
Non-Time Critical Removal Action

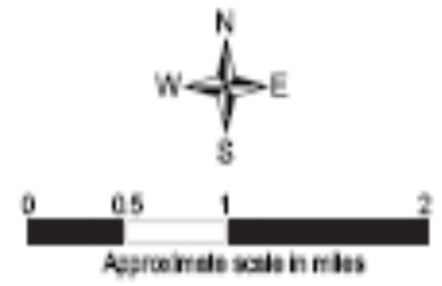
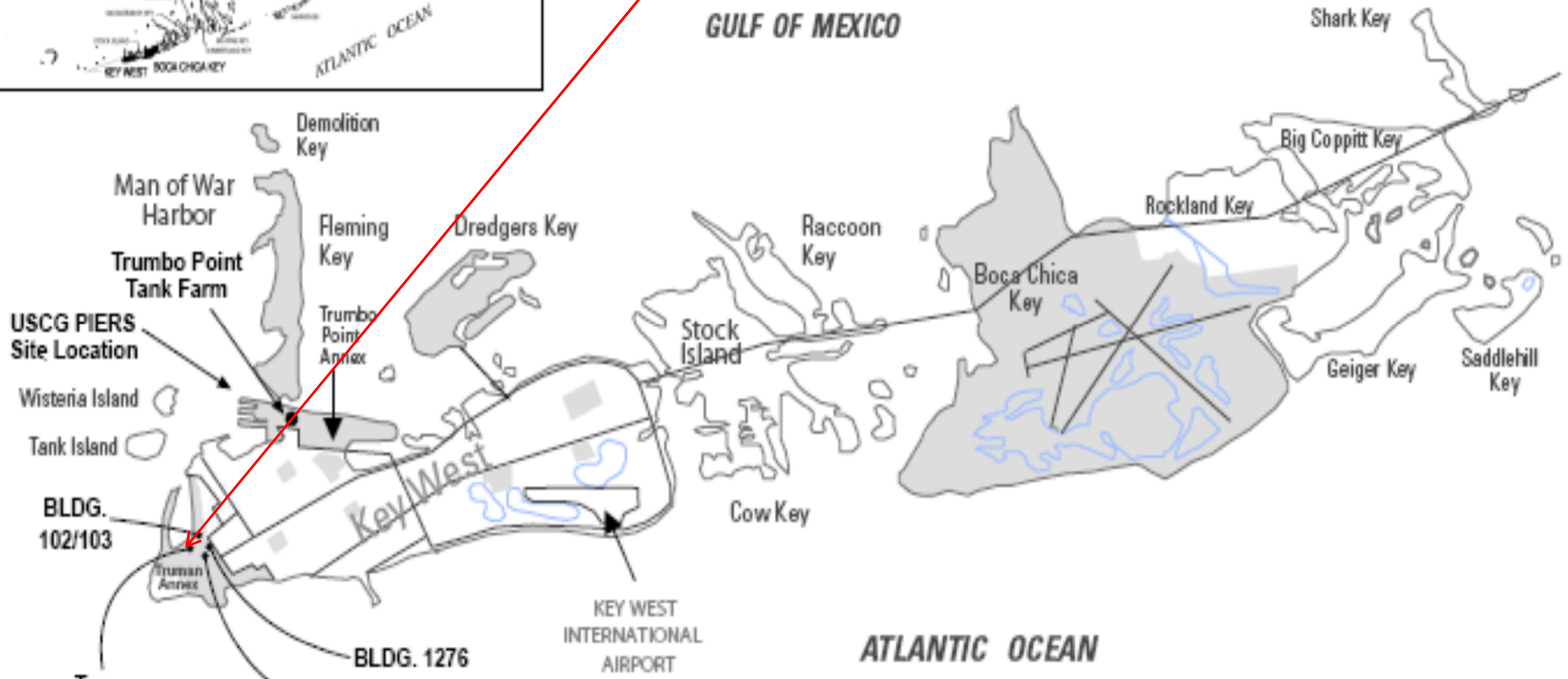
Amy Twitty, P.G./CH2M HILL

July 2015





Truman Annex DRMO



DRMO Slivers
 NAS Key West
Key West, Florida
 Site Location Map
 Trumbo Point Tank Farm
 NAS Key West
 Key West, Florida



Site Location





Site Background

- **The project consists of two former DRMO land slivers adjacent to the City-owned portion of the former DRMO on Truman Annex**
- **The land slivers were retained by the Navy during the Base Realignment and Closure (BRAC) in 2002**
- **The DRMO was formerly used as a storage facility for new and used military equipment**
- **The south DRMO sliver is approximately 600 feet long by 25 feet wide; the north DRMO sliver is approximately 200 feet long by 30 feet**





1999 DRMO

Feb 24, 1999

Old Fence Line

© 2010 Europa Technologies
Image U.S. Geological Survey
© 2010 Google

© 2009 Google

Imagery Date: Feb 25, 1999

24°32'56.46" N 81°48'29.40" W elev 7 ft

Eye alt 624 ft



2009 DRMO





DRMO Slivers

- According to the base master plan, the north DRMO sliver is zoned for commercial/industrial use and the south DRMO sliver is zoned for residential land use (military housing nearby)
- Soil samples were collected at both slivers in November 2010 and June 2011 and analyzed for arsenic, lead, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs)
- Samples from the north DRMO sliver exceeded the Residential standards but were below Industrial standards; Samples at south DRMO sliver exceeded both residential and industrial standards in some locations





2012 Remedial Action

- **Soil removal action was conducted in September – October 2012. The soil was removed to meet Residential standards at both slivers**
- **Confirmation samples collected at the walls of the excavations in 2012 indicate some residual soil contamination exists**
- **Further soil sampling was conducted in an effort to delineate residual contamination (August 2013, March 2014, and December 2014)**
- **Background samples were also collected to assess the background concentration for PAHs**





Risk Evaluation

- **A risk evaluation was conducted for soil at both slivers. Soil results were combined from the various sampling events from November 2010 through December 2014:**
 - **November 2010 – pre-excavation sampling**
 - **June 2011 – pre-excavation sampling**
 - **October 2012 – confirmation sampling during excavation**
 - **August 2013 – post-excavation sampling**
 - **March 2014 – post-excavation sampling**
 - **December 2014 – post-excavation sampling**





Risk Evaluation

- All of the “excavated” samples were removed from the data set and a risk-based screening evaluation was conducted for the residual soil
- Using the soil samples representative of residual concentrations in both slivers, risks were calculated for PAHs, PCBs, arsenic, and lead
- Based on the results of the risk evaluation, additional soil removal actions are recommended at the south DRMO sliver
- No removal actions are recommended for the north DRMO sliver





Recommended Removal Actions

- The total estimated volume recommended for removal at the south DRMO sliver is 45.5 cubic yards
- The estimated volume recommended for removal in the 0- to 0.5 foot depth interval is 39.4 cubic yards
- The estimated volume recommended for removal in the 0.5- to 2 feet depth interval is 6.2 cubic yards
- A technical memorandum summarizing the results of the risk evaluation has been submitted to the Navy and the Florida Department of Environmental Protection for review
- The additional soil removal action is anticipated to take place late fall



Proposed Excavation 0 – 0.5 ft bls



- Legend**
- ◆ Soil Boring (0 - 0.5' Sample)
 - ◆ Soil Boring (0 - 0.5' and 0.5' - 2' Samples)
 - ◆ Soil Boring (0.5' - 2' Sample)
 - ◆ Previous Soil Boring
 - ◆ Soil Boring to be Removed
 - Proposed Excavation 0 - 0.5 feet (2,125 square feet)
 - Communications Line
 - Electric Line
 - Water Line
 - 0.5 feet Deep Excavation (2,387 square feet)
 - 2 feet Deep Excavation (8,680 square feet)
 - Water Vault

Notes:
 BEQ = Benzo(a)pyrene Equivalent
 BTV = Background Threshold Value
 J = Estimated Value
 ND = Not Detected

Google Earth Aerial 3/7/2013
 0 15 30 Feet

Analyte	SCREENING STANDARDS			
	Residential SCTL	Residential 3X SCTL	BTV (Background UCL) 0 - 0.5 feet	BTV (Background UCL) 0.5 - 2 feet
Arsenic	2.1	6.3	—	—
BEQ	0.1	0.3	0.35	0.093
Aroclor-1260	0.5	1.5	—	—
Lead	400	1,200	—	—

All units in milligrams per kilogram

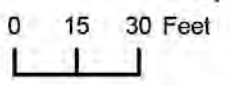
Figure 1
 Proposed Excavation Boundary (0 - 0.5 feet)
 South DRMO Land Sliver
 Former DRMO Slivers, Truman Annex
 NAS Key West
 Key West, Florida

Proposed Excavation 0.5 – 2 ft bls



- Legend**
- Soil Boring (0 - 0.5' Sample)
 - Soil Boring (0 - 0.5' and 0.5' - 2' Samples)
 - Soil Boring (0.5' - 2' Sample)
 - Previous Soil Boring
 - Soil Boring to be Removed
 - Proposed Excavation 0.5 - 2 feet (112 square feet)
 - Communications Line
 - Electric Line
 - Water Line
 - 0.5 feet Deep Excavation (2,387 square feet)
 - 2 feet Deep Excavation (8,680 square feet)
 - Water Vault

Notes:
 BEQ = Benzo(a)pyrene Equivalent
 BTV = Background Threshold Value
 J = Estimated Value
 ND = Not Detected
 Google Earth Aerial 3/7/2013



Analyte	SCREENING STANDARDS			
	Residential SCTL	Residential 3X SCTL	BTV (Background UCL)	
			0 - 0.5 feet	0.5 - 2 feet
Arsenic	2.1	6.3	—	—
BEQ	0.1	0.3	0.35	0.093
Aroclor-1260	0.5	1.5	—	—
Lead	400	1,200	—	—

All units in milligrams per kilogram



Figure 2
 Proposed Excavation Boundary (0.5 - 2 feet)
 South DRMO Land Sliver
 Former DRMO Slivers, Truman Annex
 NAS Key West
 Key West, Florida



Questions/Comments?





Base Realignment and Closure (BRAC)

Truman Annex Sites Update

July 2015 RAB

Key West, FL

David Barney - NAVFAC, BRAC Office

Amy Twitty – CH2M HILL





Truman Annex

- **Portions of Truman Annex were transferred from the Navy to the City of Key West in 2002 as part of the BRAC process. Some areas were environmentally impacted sites including:**
 - **Parcel C – Former Defense Reutilization and Marketing Office (DRMO)**
 - **A portion of Parcel K**
 - **Parcel E**
- **The City of Key West has been working on a plan to develop a 23-acre park referred to as Truman Waterfront Park**



Truman Waterfront Park



This site is subject to the Code of Federal Regulations Citation CFR 334.610, restricting access to any person and/or any vessel other than Government-owned vessels to the Truman Harbor.



Truman Waterfront Park
THE CITY OF KEY WEST
DATE: 10/8/2014

E Sciences
E Sciences, Incorporated
FL Engineering Lic. #8691
224 S. E. 9th Street
Fort Lauderdale, FL 33316
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Phone: 954-484-8500
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Truman Waterfront Park

Section 6, Township 68S, Range 25E
Key West, Monroe County, Florida

Proposed
Development Plan
September 2014

FIGURE

4

DRAWN BY: LG

CHECKED BY:

PROJECT NUMBER:
7-0070-002

SCALE: NTS

DATE:
10/8/2014



Former Defense Reutilization and Marketing Office (DRMO) Site

Truman Annex





DRMO Location





History

- **Subsequent to the 2002 transfer, the Navy discovered additional soil contamination**
- **The Navy conducted a number of soil removals 1999-2009**
 - **DRMO soil was cleaned up to allow unrestricted use (meets Florida Department of Environmental Protection [FDEP] residential use criteria)**
- **A follow-up groundwater investigation was conducted in 2014. The groundwater meets unrestricted use although it is not considered potable due to saline conditions**





Current and Future Activities

- A report summarizing history of the DRMO cleanup and demonstrating remediation completion was submitted to the FDEP in April 2015
- The report requests No Further Action for soil and groundwater at the site (unrestricted use)
- FDEP has concurred and will issue a Letter Concurrence for the City-Owned Portion of the DRMO
- The full Site Rehabilitation Completion Report will be revised once cleanup is completed at the Navy-owned DRMO Slivers
- Navy will modify deed to reflect unrestricted use for soil and groundwater





City-Owned Portion of Parcel K

Truman Annex





Parcel K (City-Owned) Location





History

- **In April 2009 the City collected soil samples**
 - **Lead, PCBs (polychlorinated biphenyls), petroleum constituents exceedances**
- **Navy delineated the soil contamination and worked with FDEP to develop recreational soil cleanup levels**
- **Navy conducted soil removal in January and February 2012**
- **FDEP asked for groundwater sampling in the highest lead area and along the site perimeter**
- **Lead concentrations were within acceptable levels for unrestricted use**





Current and Future Activities

- **Navy submitted Site Rehabilitation Completion Report to FDEP in April 2014**
 - **Recommend No Further Action with Land Use Controls (LUCs)**
 - residential use prohibited
 - acceptable for recreational use (proposed park)
- **FDEP has concurred and will issue a Site Rehabilitation Completion Order**
- **Navy will modify deed to allow recreational use**
- **The Navy is developing a LUC Implementation Plan (currently under review)**





Parcel E

Truman Annex





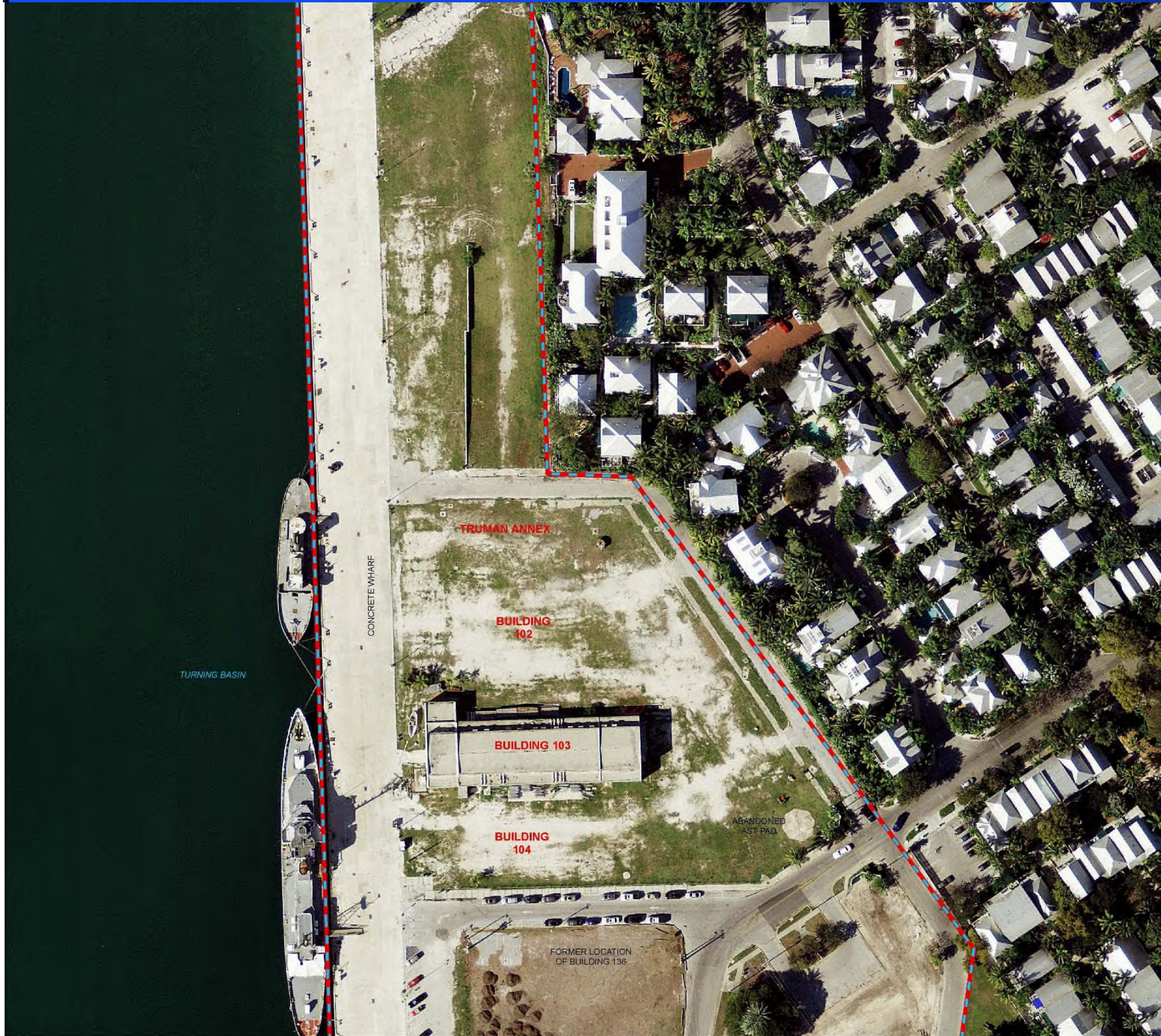
Parcel E

- **Parcel E consists of several sites including:**
 - **Building 102 - Former Torpedo Overhaul and Storehouse**
 - **Building 103 - Former Central Power Plant**
 - **Building 104 - Former Battery Overhaul and Storage**
 - **Building 136 – Former Shipfitters/Plate and Mold Shop**
 - **Building 189 - Former Liquor Store (No Further Action; 2001)**





Parcel E - Buildings 102, 103, 104





Parcel E - Building 136





History

- **Building 103 - Soil cleaned to depths of 2 to 6 feet including PCBs**
- **Former Buildings 102 and 104 - Soil cleaned to depth of 2 feet for polycyclic aromatic hydrocarbons (PAHs)**
- **Former Building 136 – Soil cleaned to depth of 2 feet for arsenic, iron, and PAHs; contaminants under the road required special handling. Last contaminant (arsenic) removed in 2007 excavation**
- **Building 189 – Was adjacent to an area affected by a petroleum leak from an underground pipeline. Received Site Rehabilitation Completion Order from FDEP in 2001**
- **The Navy is developing a LUC Implementation Plan**



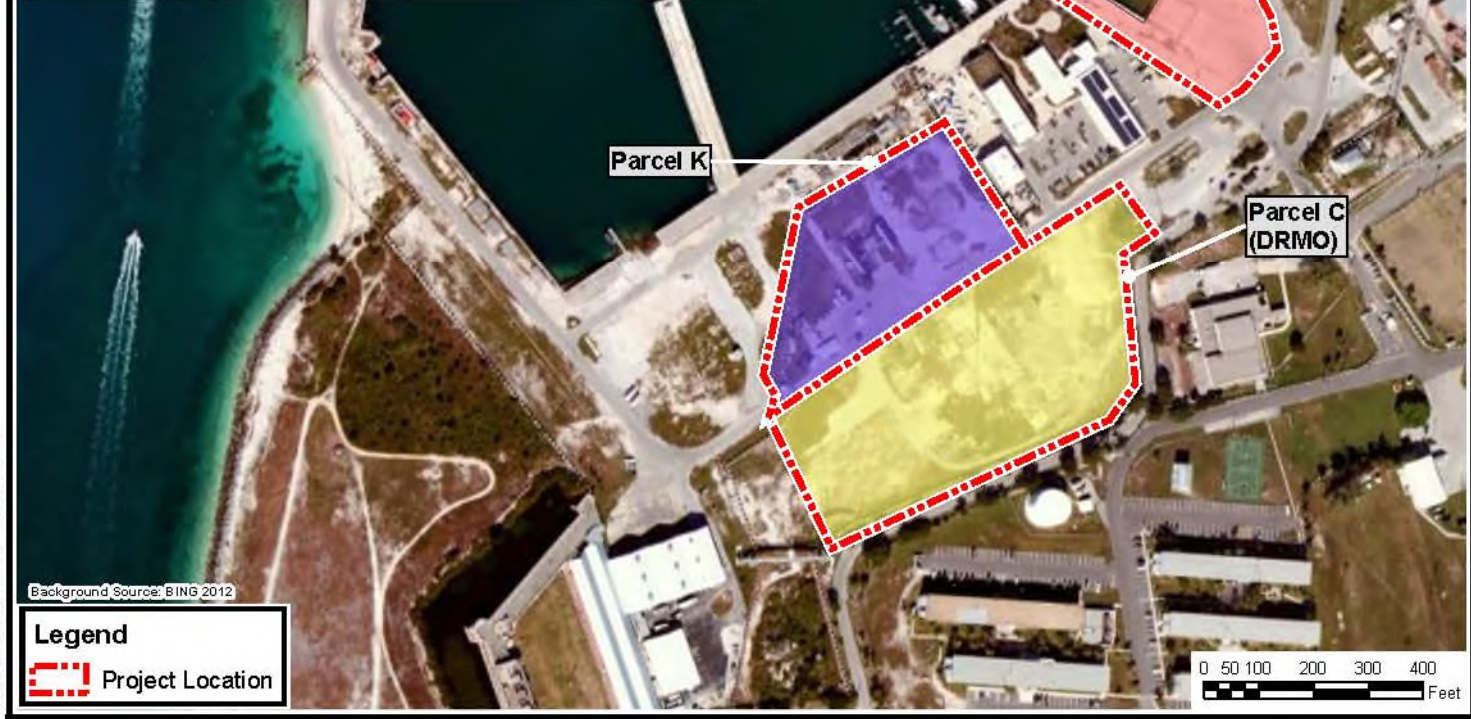


Soil and Groundwater Management Plan

- The City of Key West submitted a Soil and Groundwater Management Plan for the LUC areas at Truman Annex to the Navy and FDEP
- The plan was developed to provide procedures and precautions to be implemented for the management of impacted soil and groundwater during construction activities associated with the development of Truman Waterfront Park
- The plan has been approved by the Navy and FDEP



Soil and Groundwater Impacts and SMP/GMP Summary		
Impacts		Provisions
No Impacts	• No Impacts	• No import of soil from other parcels. • No re-use of soil beyond parcel boundaries.
Surface Soil	• Meets site-specific Recreational SCTLs • Above FDEP SCTLs	• No re-use of soil beyond parcel boundaries. • Subject to SMP provisions presented in Section 3.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Subsurface Soil	• Above FDEP SCTLs	• No re-use of soil beyond parcel boundaries. • Subject to SMP provisions presented in Section 3.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Surface Soil	• No Impacts	• No import of soil from other parcels. • No re-use of soil beyond parcel boundaries.
Subsurface Soil	• Above FDEP SCTLs	• Subsurface soil excavated shall not be used above 2 feet bls within the parcel boundaries unless covered with an engineering control. • No re-use of soil beyond parcel boundaries. • If excavated, upper two feet must be replaced with a minimum of two feet of non-impacted soil or alternative engineering control. • Subject to SMP provisions presented in Section 3.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Groundwater	• Groundwater Impacts documented.	• Subject to GMP provisions presented in Section 4.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Surface Soil	• Above FDEP SCTLs	• Soil must be excavated or covered with appropriate engineering controls. • No re-use of soil beyond parcel boundaries. • Subject to SMP provisions presented in Section 3.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Subsurface Soil	• Above FDEP SCTLs	• Soil must be excavated or covered with appropriate engineering controls. • No re-use of soil beyond parcel boundaries. • Subject to SMP provisions presented in Section 3.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Groundwater	• Groundwater Impacts documented.	• Subject to GMP provisions presented in Section 4.0 of Soil and Groundwater Management Plan dated February 6, 2015.



<p>E Sciences, Incorporated FL Engineering Lic. #9691 224 SE 9th Street Ft. Lauderdale, Florida 33316 www.esciencesinc.com Phone: 954-484-8500 Fax: 954-484-5146</p>	<p>Truman Waterfront Park</p> <p>Section 6, Township 68S, Range 25E Key West, Monroe County, Florida</p>		<p>SMP and GMP Reference Map</p>	<p>FIGURE 5</p>
	<p>DRAWN BY: LG</p>	<p>CHECKED BY: MP</p>	<p>PROJECT NUMBER: 7-0070-002</p>	<p>SCALE: 1"=350'</p>

Soil and Groundwater Management Plan - Land Use Controls





Parcel E2 Restrictions

Surface Soil	• No Impacts	<ul style="list-style-type: none">• No import of soil from other parcels.• No re-use of soil beyond parcel boundaries.
Sub surface Soil	• Above FDEP SCTLs	<ul style="list-style-type: none">• Sub surface soil excavated shall not be used above 2 feet bls within the parcel boundaries unless covered with an engineering control.• No re-use of soil beyond parcel boundaries.• If excavated, upper two feet must be replaced with a minimum of two feet of non-impacted soil or alternative engineering control.• Subject to SMP provisions presented in Section 3.0 of Soil and Groundwater Management Plan dated February 6, 2015.
Groundwater	• Groundwater Impacts documented.	<ul style="list-style-type: none">• Subject to GMP provisions presented in Section 4.0 of Soil and Groundwater Management Plan dated February 6, 2015.



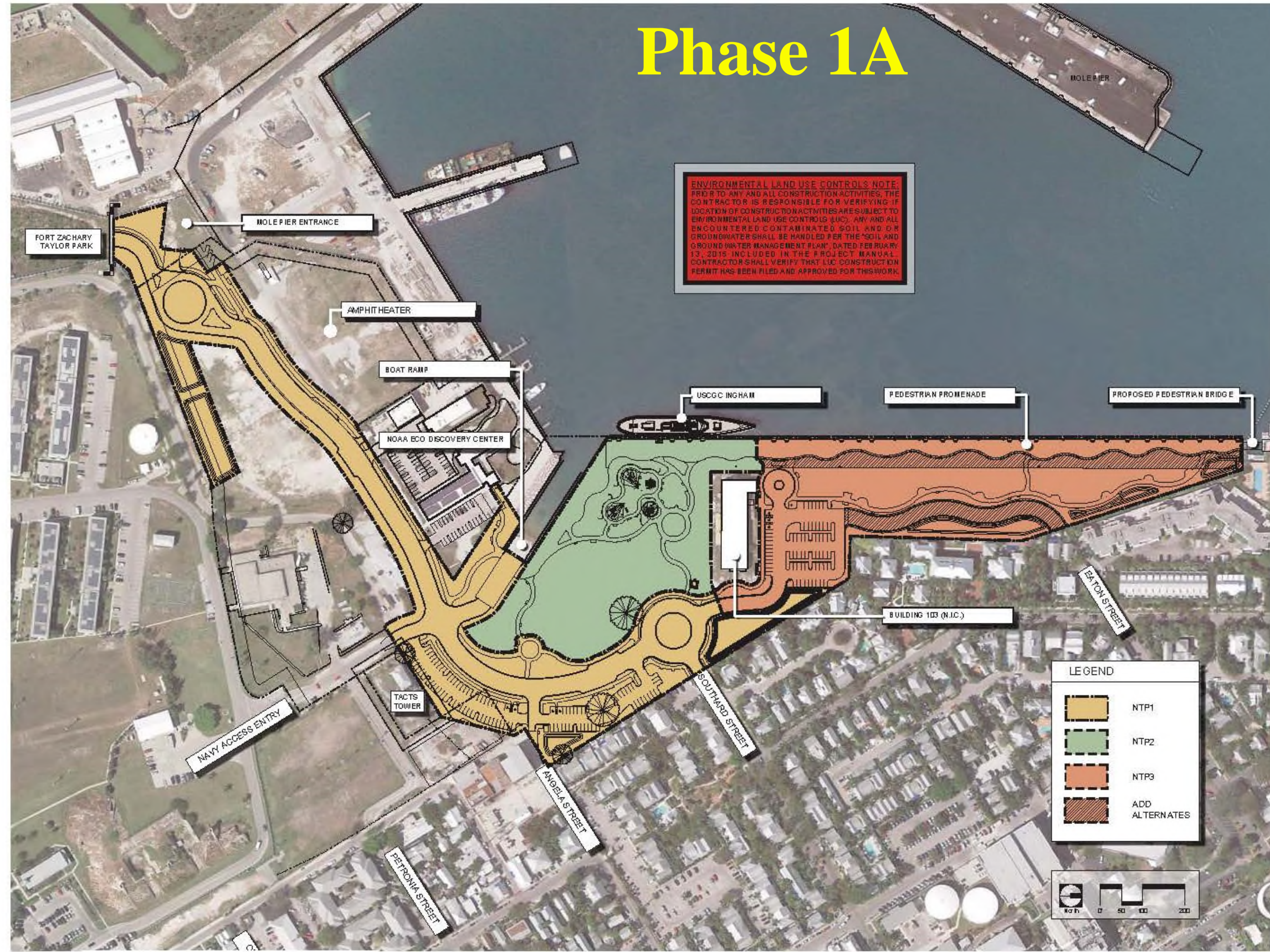


Truman Annex Summary

- **Navy will provide modifications to the 2002 Truman Annex deed for the DRMO, Parcel K, and Parcel E once the following are complete:**
 - **The City and the Navy complete the legal descriptions for the DRMO and Parcel E and submit to FDEP**
 - **FDEP incorporates the legal descriptions into the Letter Concurrence for the City-Owned Portion of the DRMO and the Site Rehabilitation Completion Order for Parcel K**
- **The City of Key West is proceeding with site development for the Truman Waterfront Park**
 - **100% Construction Document Submitted – 7/15**
 - **Commence Phase IA Construction to include the amphitheater – 11/15**



Phase 1A



ENVIRONMENTAL LAND USE CONTROLS NOTE:
 PRIOR TO ANY AND ALL CONSTRUCTION ACTIVITIES, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IF LOCATION OF CONSTRUCTION ACTIVITIES ARE SUBJECT TO ENVIRONMENTAL LAND USE CONTROLS (LUC). ANY AND ALL ENCOUNTERED CONTAMINATED SOIL AND/OR GROUNDWATER SHALL BE HANDLED PER THE SOIL AND GROUNDWATER MANAGEMENT PLAN, DATED FEBRUARY 13, 2015, INCLUDED IN THE PROJECT MANUAL. CONTRACTOR SHALL VERIFY THAT LUC CONSTRUCTION PERMIT HAS BEEN FILED AND APPROVED FOR THIS WORK.

LEGEND	
	NTP1
	NTP2
	NTP3
	ADD ALTERNATES

ba
 BERMELLO AJAMIL & PARTNERS INC.
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 Interior Design • Landscape Architecture
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 (305) 359-2050
 Fax: (305) 352-3700

OSCARA J. ORTIZ
 CITY OF KEY WEST, FL
 P.O. BOX 1469
 514 FLORIDA AVENUE
 KEY WEST, FL 32041



PROJECT NAME:
 TRUMAN WATERFRONT PARK

PROJECT LOCATION/ADDRESS:
 TRUMAN WATERFRONT PARK
 WEST OF PORT STREET AND THE
 TRUMAN ARMY DEVELOPMENT,
 NORTH OF KEY WEST NAVAL BASE

SUB-CONSULTANT DRAWING NO.:

PROFESSIONAL SEAL:

OSCAR J. ORTIZ
 FLORIDA REGISTERED LANDSCAPE ARCHITECT
 LICENSE NO. 14697
 SUBMITTAL DESIGN PROFESSIONAL SEAL

100% Construction
 Drawing
 July 15, 2015

REVISIONS:

NO.	DESCRIPTION

DRAWING SHEET INFORMATION:
 BA PROJECT NO.: 14841
 SCALE: 1" = 100'
 DATE:
 DRAWN BY: R.J.O.
 CHECKED BY: RPH

DRAWING FILE:
 PHASING NOTICE TO PROCEED PLAN

SHEET NO.
PP-00



Questions ?

