

NASKW EIS Oversight Committee
Thursday June 7, 2012
500 Whitehead Street, Suite 102
Key West, Florida

The NASKW EIS Oversight Committee convened at 11.00 A.M. at 500 Whitehead Street, Suite 102. Present were Commissioner Kim Wigington, Richard Shetzer, Don Riggs, Christine Hurley, Director Growth Management, Roman Gastesi, County Administrator, and by teleconference John Hammerstrom, Mayte Santamaria, Asst. Planning Director, Michael Davis, Keith and Schnars, John Abbott, Keith and Schnars, and Tyson Smith, Esq, Outside Legal Counsel for Monroe County.

There were no objections or additions to the agenda and a motion was made by Don Riggs and seconded by Dick Shetzer to approve the minutes of the April 26, 2012 meeting. Motion carried with no objections.

Christine Hurley outlined the process of the county's response to the Atlantic Fleet Training and Testing Draft Environmental Impact Statement / Overseas Environmental Impact Statement (AFTT DEIS/OEIS). Ms. Hurley explained the short timeframe for review and developing the county's comments regarding the AFTT DEIS/OEIS. (The AFTT DEIS/OEIS was unexpected and is separate from the expected Draft Environmental Impact Statement specifically for Naval Air Station Key West.) An agenda item will be prepared for the June 20, 2012 Regular County Commission Meeting in Marathon. The item will be a presentation by our Keith and Schnars consultants, staff and attorneys for BOCC discussion of the AFTT DEIS/OEIS that may impact the County. Staff will request authorization of the mayor to sign the County's comment letter which will be drafted by Keith and Schnars and Tyson Smith, Esq., and reviewed by the EIS Oversight Committee.

Michael Davis reported to the committee an update regarding the "expected" NASKW DEIS. June 29, 2012 is anticipated for release and public hearings in Key West are expected to be July 25, 2012 and July 26, 2012.

Mr. Davis and John Abbott attended the June 5th Public Meeting held in Jacksonville, Florida. The meeting was in a workshop form with information stations. Mr. Davis and Mr. Abbott reported to the committee their draft overview of the AFTT DEIS/OEIS, and questions for the Navy. Mr. Davis and Mr. Abbott also summarized the No Action Alternative of continuing baseline training/testing, Alternative 1 of expanding the study area with increased levels of activity, and the Navy's preferred Alternative 2 to further increase training/testing. The committee added to the list of primary questions, a request of what baseline was used and what aircraft was included. (See Keith and Schnars presentation provided as a part of these minutes.)

John Hammerstrom asked the committee and staff to discuss the county's interests and jurisdiction. The committee discussed environmental and economic interests as well as land use and nearshore waters jurisdiction. The committee discussed the record of county's concern with this DEIS being carried over to the next anticipated DEIS, specifically for NASKW, in which a more detailed analysis of land based impacts could be covered.

Mr. Hammerstrom asked if the committee had to date received any answer to the questions asked of the Navy in a June 2011 letter. Commissioner Wigington reported that last word from the Navy was that the requests were still being evaluated in a "harms analysis" to determine if any release of the information would pose any harm in the event of any legal action.

Mr. Abbott reported information received at the public meeting in Jacksonville that conflicted with the information in the AFTT DEIS/OEIS. For example, page 5-72 information stating the Navy will not conduct active sonar within the Florida Keys National Marine Sanctuary differs from information reported at the public meeting that stated "some" active sonar will be conducted. The County will be requesting clarification from the Navy concerning conflicting information reported in the AFTT DEIS/OEIS.

Don Riggs asked if the term "benign" as used in the AFTT DEIS/OEIS was clearly defined. The committee added to the list of primary questions a request to provide the basis for a conclusion that the subject matter or action is or will be "benign".

The committee discussed W174 and W465 areas in relation to Military Operation Areas and the vagueness of references to increases in air combat maneuver events (an increase of 20% and the inclusion of F-35s). The committee added to the list of primary questions a request to provide specific anticipated numbers of flight operations, number of aircraft (instead of "events" that may include any number of aircraft), and anticipated numbers of night-time flight operations. John Hammerstrom was tasked with obtaining more information on the warning areas W174 and W465 including aviation charts.

Mr. Davis reported that the draft comment letter will be provided by June 26, 2012 for the committee's review.

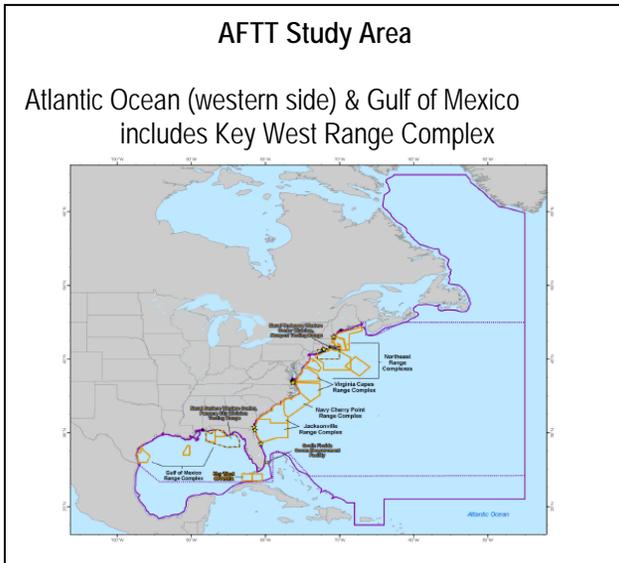
The next meeting will be Thursday, June 28, 2012 at 11 A.M. at 500 Whitehead St, Suite 102 and will be posted on the county website.

There being no more business the meeting was adjourned at 12:35 P.M.

DRAFT OVERVIEW

Atlantic Fleet Training and Testing (AFTT) Environmental Impact Statement / Overseas EIS*

Navy's AFTT website: <http://aftteis.com/>



Alternatives

No Action Alternative: continue baseline training and testing

Alternative 1: expand Study Area and increases levels of activities

Alternative 2 (Preferred Alternative): further increase training and testing activities

Schedule

AFTT Schedule:

May 11, 2012	AFTT Draft EIS/OEIS released, comment period began
June 5, 2012	Public Meeting held in Jacksonville
July 10, 2012	60-day public comment period closes
Summer/Fall 2013	Final EIS/OEIS, Record of Decision
January 2014	new training and testing to be implemented

Summary of Preferred Alternative in the Key West Range Complex

Increase in aircraft flights:
 Increase air combat maneuver events by 20% (including F-35s) in support of proposed increase at NASKW
 Increase aircraft cannon (machine gun) rounds by 56%

New activities in the area:
 Begin air to air missile explosions (8 high explosive missiles per year)
 Begin mine neutralization explosions (12 underwater high explosive charges per year)
 Begin sonobuoy tests (1512 underwater explosions per year)
 Begin large-caliber firing from surface ships (including 339 high-explosive rounds per year)

Overall increase in aircraft movement, ship movement, special operations, expended military materials, etc.

The images illustrate the types of activities mentioned in the text: an F-35 fighter jet in flight, an underwater explosion (likely a mine neutralization test), and a surface ship firing a large-caliber gun.

*The AFTT Draft EIS/OEIS is separate from the upcoming Draft EIS for NASKW, which is expected to be issued for public comment in late June 2012.

DRAFT OVERVIEW (Continued)

Primary Questions for the Navy

QUESTION: According to page 2-79, the number of Air Combat Maneuver (ACM) events in the Key West Range Complex ranges from 5,700 events for No Action to 6,840 events for Alternative 2. According to page 3.0-27, the number of events including aircraft movement in the Key West Range Complex (including but not limited to ACM, FLAREX, and CHAFFEX events) ranges from 9,646 events for No Action to 10,881 events for Alternative 2. Given that multiple aircraft may be involved in one event, and that multiple events may be completed during a single flight, and that the takeoffs and landings may occur at Naval Air Station Key West (NASKW), aircraft carriers, or other locations; it not clear how the number of events translates into the number of takeoffs and landings at NASKW. Provide the number of takeoffs and landings at NASKW.

QUESTION: According to page 2-71, the F-35 is projected to make up about one-third of the Navy's strike fighter inventory by 2020. According to page A-2, Air Combat Maneuver (ACM) events will be conducted using F-35 and other aircraft. According to page 3.0-27, the number of events including aircraft movement in the Key West Range Complex (including but not limited to ACM, FLAREX, and CHAFFEX events) ranges from 9,646 for No Action to 10,881 events for Alternative 2. In the Key West Range Complex for each alternative, how many of the events involving aircraft will include F-35 aircraft, and how many of the takeoffs and landings at NASKW will involve F-35s.

QUESTION: Page 2-67 states that the Preferred Alternative will "*Expand areas within the VACAPES, Navy Cherry Point, JAX, and Key West Range Complexes where anti-air warfare events, such as air combat maneuvers and gunnery and missile exercises, would be conducted in order to allow for greater operational flexibility.*" Describe how areas within the Key West Range Complex would be expanded and provide associated maps showing baseline and proposed areas.

QUESTION: In the Key West Range Complex for each alternative, quantify how much activity (including but not limited to aircraft overflights, ACMs, flares, chaff, air to air missile explosions, CSSQT gunnery, sonobuoy explosions, mine neutralization EOD explosions, etc) would be visible or audible to the public on the land, and how much activity would be visible or audible to the public offshore (including recreational and commercial mariners).

QUESTION: Some parts of the Key West OPAREA and Special Use Airspace are close to the islands of the Florida Keys, and parts of the Special Use Airspace are above areas frequently used by the public (e.g., W-174 is above the route often taken between Key West and the Dry Tortugas). Can Navy activities be shifted farther offshore to offset the proposed increase in activities in the Key West Range Complex?

Description of the Key West Range Complex

- Key West OPAREA: 8,288 nm² of sea space and undersea space [p. 2-11].
- Special Use Airspace with associated warning areas: Includes approximately 20,647 nm² of special use airspace. Flight altitudes range from the surface to unlimited.
 - Warning areas within the Key West Range Complex: include W-174 (A, B, C, E, F, G), W-465 (A, B) [p. 2-11].
 - Bonefish Air Traffic Control Assigned Airspace: The Bonefish ATCAA is a special-use airspace extending W-174B www.globalsecurity.org/military/facility/moa-keywest.htm The only activities listed for Bonefish ATCAA are Air Combat Maneuvers [p. A-2] and counter targeting flare exercises (FLAREX) [p. A-54].
 - Tortugas Military Operations Area: an air exclusion zone designed to minimize military aircraft noise to protect Fort Jefferson and Dry Tortugas National Park. It is bounded by a line 12 nm from and parallel to the shoreline of the Dry Tortugas Islands, creating a circular area [p. 3.10-15]. Voluntary flight restrictions include a 5,000-ft. (1.5-km) aboveground level floor for air combat maneuver flights, and a “no sonic boom” area below 18,000 ft altitude. Air combat maneuver training occurs regularly in the Special Use Airspace above and beside the Military Operations Area. Consequently, aircraft noise, including sonic boom noise, is sometimes audible in the Dry Tortugas National Park [p. 3.6-47] [p. 3.10-15]. NPS staff recorded 25 sonic booms in 2007 and 40 in 2008 [p. 3.6-36]. Avoidance and mitigation measures were enacted in May 2009 to generate fewer sonic booms in the area [p. 3.10-15].

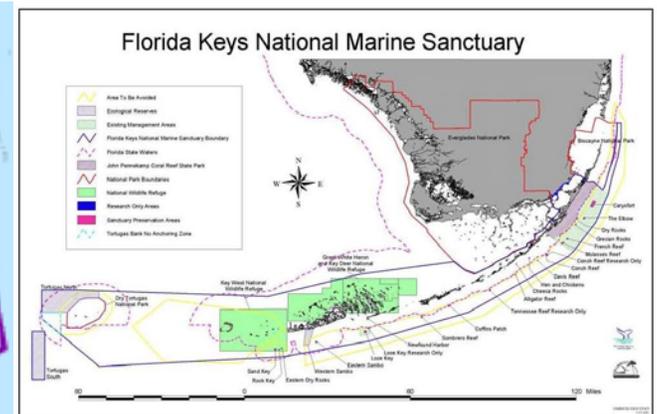
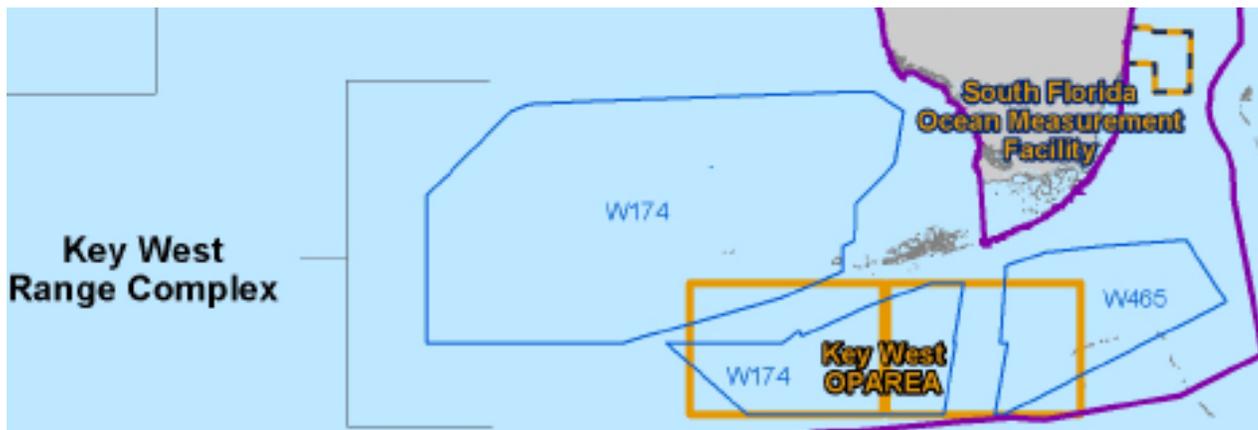
QUESTION: In the Key West Range Complex, the location maps show special use airspace warning areas W174 and W465, but not the Tortugas Military Operations Area nor the Bonefish Air Traffic Control Assigned Airspace nor the subdivided areas of W-174 (A, B, C, E, F, G) and W-465 (A, B). Provide a map that shows all these areas.

QUESTION: Page 2-67 states that the Preferred Alternative will “Expand areas within the VACAPES, Navy Cherry Point, JAX, and Key West Range Complexes where anti-air warfare events, such as air combat maneuvers and gunnery and missile exercises, would be conducted in order to allow for greater operational flexibility.” Describe how areas within the Key West Range Complex would be expanded and provide associated maps showing baseline and proposed areas. Also, specifically identify any expansion into the FKNMS.

QUESTION: Page 6-23 states the FKNMS overlaps the Key West OPAREA and W-174. Include a map that overlays the FKNMS on the Key West OPAREA and associated special use airspace.

QUESTION: Why is the Key West OPAREA shown on the maps as two adjacent rectangles? Is there any difference in activities in the two halves – either under the baseline or the Preferred Alternative?

QUESTION: Monroe County, including the Florida Keys, is located between the components of the Key West Range Complex (Key West OPERA, W-174, and W-465). Describe any increase in activities within or over Monroe County, including but not limited to nearshore air, surface, or undersea activities.



Florida Keys National Marine Sanctuary

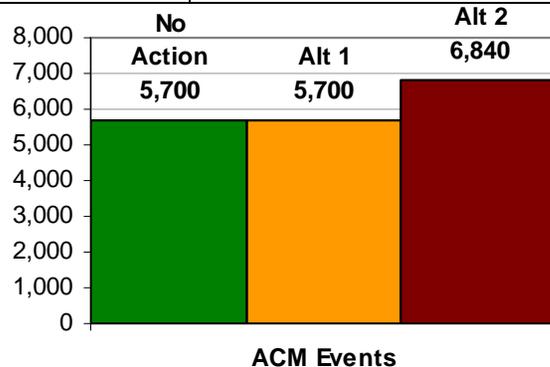
The Navy concluded that the proposed activities could fall into the following two categories [p. 6-13]:

1. Activities that may be conducted within the Sanctuary boundary without consultation because they were carried out within the Sanctuary boundary prior to the effective date of Sanctuary designation, or because they are not prohibited according to Sanctuary regulations and would not cause potential destruction, loss of, or injury to Sanctuary resources. In the FKNMS, these include the following:
 - o Vessels and in-water devices
 - o Aircraft overflights
 - o Sonar and other non-impulsive acoustic sources (Page 5-72 states the Navy will not conduct low-frequency, hull-mounted or non-hull mounted mid-frequency, or high-frequency active sonar within FKNMS)
 - o Military expended materials including chaff, flares, non-explosive practice munitions, non-explosive missiles, non-explosive sonobuoys
2. Activities that are considered new due to changes in location and frequency or use according to the Sanctuary regulations or would require consultation prior to conducting. In the FKNMS, these include the following:
 - o In-air, underwater, and surface explosions
 - o Seafloor devices
 - o Military expended materials other than those listed in category 1

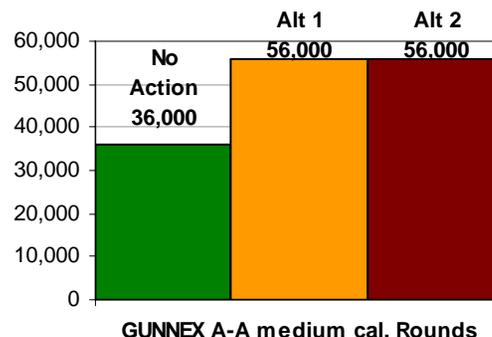
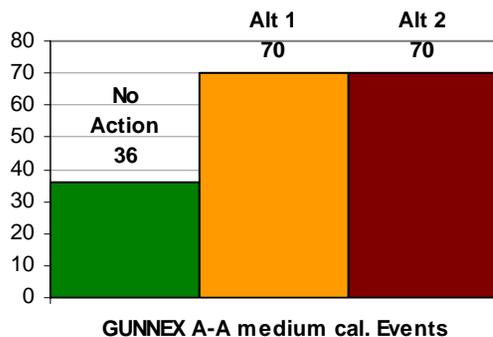
The Navy does not intend to conduct the activities listed in category 2 above within the FKNMS or within 2.7 nm of the Sanctuary as part of its Preferred Alternative [p. 6-13].

QUESTION: FKNMS general prohibitions include, but are not limited to, removal or injury of coral or live rock, alteration of the seabed, and discharge or deposit of most materials. Page 6-12 states that prohibitions (for the FKNMS) do not apply to existing classes of DoD military activities conducted prior to the effective date of Sanctuary regulations as identified in the EIS and Management Plan for the Sanctuary (15 C.F.R. § 922.163(d)(1)), and that new military activities in the Sanctuary are allowed and may be exempted from the prohibitions summarized after consultation between the Director and the Navy. Further clarify what activities would occur within the FKNMS, and specifically identify those activities that would violate FKNMS general prohibitions if the Navy were not exempt.

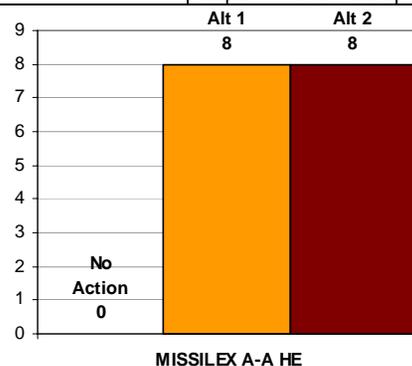
Air combat maneuver (ACM) events	
Description	Basic flight maneuvers in which aircrew engage in offensive and defensive maneuvering against each other. During air combat maneuver engagements, no ordnance is fired, however countermeasures such as chaff and flares may be used. These maneuvers typically involve two aircraft; however, based upon the training requirement, air combat maneuver exercises may involve over a dozen aircraft. [p. A-2]
Information Typical to the Event (AFTT)	Platform: Fixed-wing aircraft (F/A-18, F-35, F-5) Systems: None Ordnance/Munitions: None. No ordnance [p. 2-79]. Targets: None Duration: Event duration is 1-2 hours.
Location (in KWRC)	Key West: W 174 A/B/C/E/F/G, W-465 A/B, Bonefish ATCAA
Potential Impact Concerns	Acoustic: Aircraft noise Energy: None Physical Disturbance and Strike: Aircraft strike (birds only) Entanglement: None Ingestion: None
Military Expended Material	None. Flare and chaff accounted for separately.
Assumptions in EIS	No munitions fired. All flare and chaff accounted for in flare exercise and chaff exercise events. Alternative 2 events in Key West Range Complex account for the proposed increase in Key West Range Complex Environmental Impact Statement (underway) [p. A-2].
Alternative 1 vs No Action	No change from 5700 events/yr [p. 2-79].
Alternative 2 vs No Action	Increase from 5700 to 6840 events/yr [p. 2-79] which is a 20% increase [p. 3.5-93]. "in support of proposed increase utilization of NASKW" [p. 2-76].
QUESTIONS	According to page 2-71, the F-35 is projected to make up about one-third of the Navy's strike fighter inventory by 2020. According to page A-2, ACM events will be conducted using F-35 and other aircraft. In the Key West Range Complex, what fraction of the 5700 ACM events for No Action and Alternative 1 will include F-35 aircraft, and what fraction of the 6840 ACM events for Alternative 2 will include F-35 aircraft? Was a noise analysis performed specifically for F-35 aircraft in the Key West Range Complex? How does the AFTT EIS/OEIS Preferred Alternative relate to the alternatives in the NASKW EIS? Within the Key West Range Complex, describe any ACM activities that may occur outside W 174 A/B/C/E/F/G, W-465 A/B, or Bonefish ATCAA. Describe aircraft activities that will occur between NASKW and the Key West OPAREA and special use airspace W-174 A/B/C/E/F/G, W-465 A/B, and Bonefish ATCAA. For Alternatives 1 and 2 vs the baseline No Action, quantify whether the average number of aircraft involved in each ACM event will change. If the Preferred Alternative will have any effect on public airports in Monroe County, FL (Key West, Marathon), describe those effects.



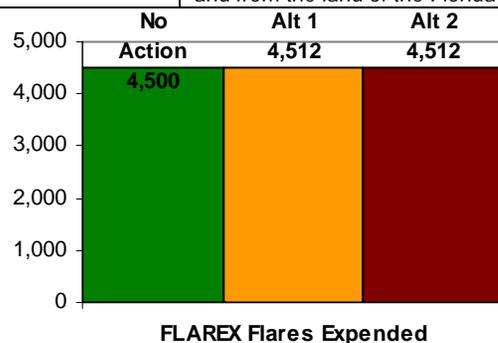
Gunnery Exercise (Air-to-Air) – Medium-Caliber (GUNEX [A-A]) - Medium-Caliber	
Description	Fighter jet aircrews defend against threat aircraft with cannons (machine gun). An event involves two or more fighter jet aircraft and a target banner towed by a contracted aircraft (e.g., Lear jet). The banner target is recovered after the event.
Information Typical to the Event (AFTT)	Platform: Fixed-wing aircraft (F/A-18, F-35) Systems: None Ordnance/Munitions: Medium-caliber (non-explosive) [p. 3.0-113]. Targets: Towed banner Duration: Event duration is 1-2 hours.
Location (in KWRC)	Key West: W-174A
Potential Impact Concerns	Acoustic: Aircraft noise Energy: None Physical Disturbance and Strike: Military expended material (non-explosive projectiles) strike; aircraft strike (birds only) Entanglement: None Ingestion: Medium-caliber projectiles; casings Impact on marine habitat = 1165 m ² [p. 3.3-37].
Military Expended Material	Projectiles; casings
Assumptions in EIS	Only non-explosive munitions are used. Target is recovered.
Alternative 1 vs No Action	Increase from 36,000 rounds (36 events/yr) to 56,000 rounds (70 events/yr). [p. 2-79]
Alternative 2 vs No Action	Increase from 36,000 rounds (36 events/yr) to 56,000 rounds (70 events/yr). [p. 2-79].
QUESTIONS	Provide quantities of any projectiles that may fall within the FKNMS.



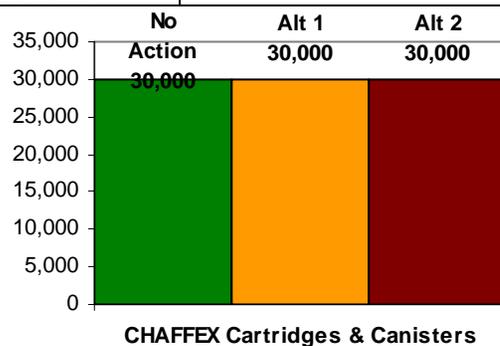
Missile Exercise (Air-to-Air) (MISSILEX [A-A])	
Description	An event involves two or more jet aircraft and a target. Missiles are either high-explosive warheads or non-explosive practice munitions. The target is either an unmanned aerial target drone, a Tactical Air-Launched Decoy, or a parachute suspended illumination flare. Target drones deploy parachutes and are recovered by boat or helicopter; tactical air-launched decoys and illumination flares are expended and not recovered. These events typically occur at high altitudes. Anti-air missiles may also be employed when training against threat missiles.
Information Typical to the Event (AFTT)	Platform: Fixed-wing aircraft (F/A-18, F-35) Systems: None Ordnance/Munitions: Air-to-air missiles: AIM-7, AIM-9, AIM-120, AIM-132 (non-explosive and high explosive) Targets: BQM-34, BQM-74, tactical air-launched decoy, LUU-2 illumination flare Duration: Event duration is 1-2 hours per event.
Location (in KWRC)	Key West: W-174A, W-174B, W-174F
Potential Impact Concerns	Acoustic: Aircraft noise; in-air explosives Energy: None Physical Disturbance and Strike: Military expended material strike (target and missile fragment); aircraft strike (birds only) Entanglement: Parachutes Ingestion: Military expended materials (missile fragments, parachutes, flare casings, target fragments) [p. 3.0-115].
Military Expended Material	Missile and target fragments; parachutes; flare casings
Assumptions in EIS	All missiles are explosive (Alternatives 1 and 2) and all missiles explode at high altitude. All propellant and explosives are consumed. Assume 1.5 flares per MISSILEX event
Alternative 1 vs No Action	Increase from N/A to 8/yr [p.2-79]. Page 3.0-67 indicates the baseline = 0. All 8 use high explosives [p.2-79]. In-air explosions [p. 3.0-67].
Alternative 2 vs No Action	Increase from N/A to 8/yr [p.2-79]. Page 3.0-67 indicates the baseline = 0. All 8 use high explosives [p.2-79]. In-air explosions [p. 3.0-67].
QUESTIONS	How loud are these explosions? Within the Key West Range Complex, what will be the altitude at which these explode? If a missile were to fail to explode on the target, how far would it travel and how would public safety be ensured, and what would be the environmental impacts of this unexploded ordnance?



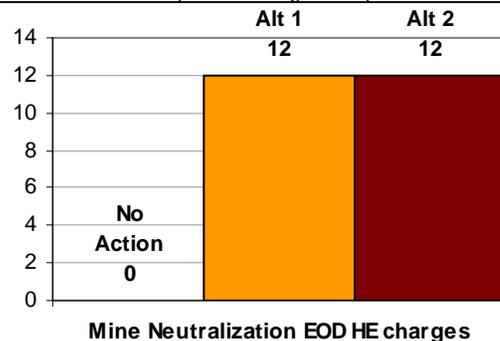
Counter targeting flare exercises (FLAREX)	
Description	Fixed-wing aircraft and helicopter crews deploy flares. This exercise trains aircraft personnel in the use of defensive flares designed to confuse infrared sensors or infrared homing missiles, thereby causing the sensor or missile to lock onto the flares instead of the real aircraft. Typically an aircraft will expend five flares while operating above 3,000 ft. Flare exercises are often conducted with chaff exercises, rather than as a stand-alone exercise. The flare device consists of a cylindrical cartridge approximately 1.4 in. (3.6 cm) in diameter and 5.8 in. (14.7 cm) in length. Flares are designed to burn completely. The only material that would enter the water would be a small, round, plastic end cap (approximately 1.4 in. [3.6 cm] in diameter). [p. 3.0-136]
Information Typical to the Event (AFTT)	Platform: Fixed-wing aircraft; helicopters Systems: None Ordnance/Munitions: None. No ordnance [p. 2-86]. Targets: None Duration: Event duration is from 1 to 2 hours.
Location (in KWRC)	Key West: W-174 A/B/C/E/F/G, W-465 A/B, Bonefish ATCAA
Potential Impact Concerns	Acoustic: Aircraft noise Energy: None Physical Disturbance and Strike: Aircraft strike (birds only) Entanglement: None Ingestion: Expended components of flares (pistons) Impact on marine habitat = 2045 m ² [p. 3.3-37].
Military Expended Material	Flares
Assumptions in EIS	Approximately 5 flares per aircraft
Alternative 1 vs No Action	No change from 900 events [p. 2-86]. Increase in flares expended from 4500 to 4512 [p. 3.0-136].
Alternative 2 vs No Action	No change from No Action (900 events) to Preferred Alternative (900 events) [p. 2-86]. Increase in flares expended from 4500 to 4512 [p. 3.0-136]. Most flare use in AFTT would continue to be in Key West Range Complex [p. 3.1-79].
QUESTIONS	Some military flares such as the LUU-2 paraflare have a parachute. In the Key West Range Complex, if military expended material from flares will include parachutes, quantify the number of parachutes. In the Key West Range Complex, estimate the fraction of flare use that will occur at night, and explain whether the flares will be visible from the FKNMS and from the land of the Florida Keys.



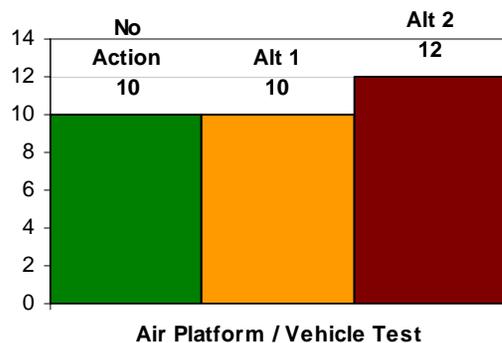
Counter targeting chaff exercises (CHAFFEX) - Aircraft	
Description	Fixed-wing aircraft and helicopter crews deploy chaff. The chaff cloud deceives the inbound missile. All chaff proposed for Key West Range Complex is from aircraft, not ships [p. A-56]. Chaff is typically packaged in cylinders approximately 6 in. x 1.5 in. that weigh about 5 ounces and contain a few million fibers. The chaff fibers are approximately the thickness of a human hair, and range in length from 0.3 to 2 in. The major components are glass fibers with an aluminum coating [p. 3.1-74]. Chaff is a very light material and can remain suspended in air anywhere from 10 minutes to 10 hours and can travel considerable distances from its release point. Doppler radar has tracked chaff plumes containing approximately 900 g of chaff drifting 200 mi. from the point of release, with the plume covering greater than 400 mi ³ . After falling from the air, chaff fibers would be expected to float on the sea surface for some period and then sink. [p. 3.0-134].
Information Typical to the Event (AFTT)	Platform: Fixed-wing aircraft; helicopters Systems: None Ordnance/Munitions: None. No ordnance [p. 2-86]. Targets: None Duration: Event duration is 1.5 hours.   
Location (in KWRC)	Key West: W-174 A/B/C/E/F/G, W-465 A/B
Potential Impact Concerns	Acoustic: Aircraft noise Energy: None Physical Disturbance and Strike: Aircraft strike (birds only) Entanglement: None Ingestion: Expended components of chaff (end caps, pistons, chaff) Impact on marine habitat = 6 m ² [p. 3.3-37] Several literature reviews and controlled experiments indicate that chaff poses little risk to organisms, except at concentrations substantially higher than those that could reasonably occur from military training [p. 3.0-135].
Military Expended Material	Chaff cartridges; plastic end caps; pistons
Assumptions in EIS	Chaff is usually expended while conducting other training activities, such as air combat maneuvering.
Alternative 1 vs No Action	No change from No Action (3,000 events) to Preferred Alternative (3,000 events) [p. 2-86]. No increase in chaff cartridges and canisters expended (30,000 cartridges & canisters).
Alternative 2 vs No Action	No change from No Action (3,000 events) to Preferred Alternative (3,000 events) [p. 2-86]. No increase in chaff cartridges and canisters expended (30,000 cartridges & canisters). Most chaff use in AFTT would continue to be in Key West Range Complex [p. 3.1-79].
QUESTIONS	



Mine neutralization explosive ordnance disposal (EOD)	
Description	Navy divers, typically explosive ordnance disposal personnel, disable threat mines with explosive charges. May involve detonation of one or more explosive charges from 10 to 60 pounds of TNT equivalent. These operations are normally conducted during daylight hours for safety reasons. Time delay fuses may be used for these events.
Information Typical to the Event (AFTT)	Platform: Helicopters, small boats Systems: None Ordnance/Munitions: Underwater detonation charges Targets: Minefields Duration: Event duration is up to 4 hours.
Location (in KWRC)	Key West: Demo Key
Potential Impact Concerns	Acoustic: Underwater explosives; vessel noise; aircraft noise Energy: None Physical Disturbance and Strike: Vessel strike; aircraft strike (birds only); seafloor devices Entanglement: None Ingestion: Target fragments
Military Expended Material	Target fragments; mooring blocks
Assumptions in EIS	Charge placed anywhere in water column, including bottom. Mine shapes will be recovered.
Alternative 1 vs No Action	Increase from N/A to 12 charges/yr [p.2-87]. All 12 use high explosives [p.2-87]. New explosives use, source classes E5, E6, and E7. [p. 3.0-75]
Alternative 2 vs No Action	Increase from N/A to 12 charges/yr [p.2-87]. All 12 use high explosives [p.2-87]. New explosives use, source classes E5, E6, and E7. [p. 3.0-75]
Notes	Source classes [p. 2-39]: E5 5-in. projectiles 6-10 lb net explosive weight (NEW) E6 15 lb. shaped charge 11-20 lb NEW E7 40 demo block/shaped charge 21-60 lb NEW
QUESTIONS	The baseline No Action number of mine neutralization explosive ordnance disposal (EOD) at Key West Range Complex is listed at N/A on page 2-87; clarify the number of mine neutralization EOD events being performed currently (does N/A = 0?). At what water depths will these explosions occur at the Key West Range Complex, and how deep is the water at the proposed locations? Page A-58 states that mine neutralization explosive ordnance disposal (EOD) at Key West Range Complex will occur in Demo Key, but there are no other references to Demo Key in the EIS/OEIS. Provide a location map of Demo Key and describe the proposed location of mine neutralization EOD at Key West Range Complex. What is the greatest distance that these explosions could be visible or heard?



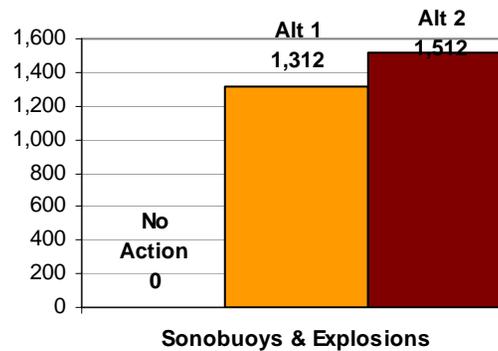
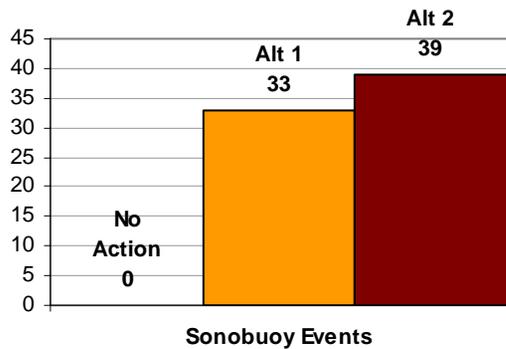
Air platform / vehicle test	
Description	Testing performed to quantify the flying qualities, handling, airworthiness, stability, controllability, and integrity of an air platform or vehicle. No weapons are released during an Air Platform/Vehicle Test. Events may involve two or more fighter jet aircrafts and a towed target tractor by a contracted aircraft (e.g., Lear jet).
Information Typical to the Event (AFTT)	Platform: Fixed and rotary-wing aircraft, includes unmanned aerial systems Systems: None Ordnance/Munitions: None. No ordnance [p. 2-90]. Targets: None Duration: 2-8 flight hours/event
Location (in KWRC)	Key West
Potential Impact Concerns	Acoustic: Aircraft noise Energy: In-air low energy laser Physical Disturbance and Strike: Military expended material strike (fuel tanks or similar), aircraft strike (birds only) Entanglement: None Ingestion: None
Military Expended Material	Fuel tanks, carriages, dispensers, or similar types of support systems on aircraft may be jettisoned depending on test.
Assumptions in EIS	It is estimated that 2-4 fuel tanks are expended per event; however this can vary based on requirements. The in-air low energy laser stressor was used in analysis of potential impacts on human resources.
Alternative 1 vs No Action	No increase from 10/yr [p.2-90].
Alternative 2 vs No Action	Increase from 10 to 12/yr [p.2-90].
QUESTIONS	In the Key West Range Complex, what types of aircraft are used for air platform / vehicle tests for the baseline and the Preferred Alternative (e.g., F-35 aircraft)?



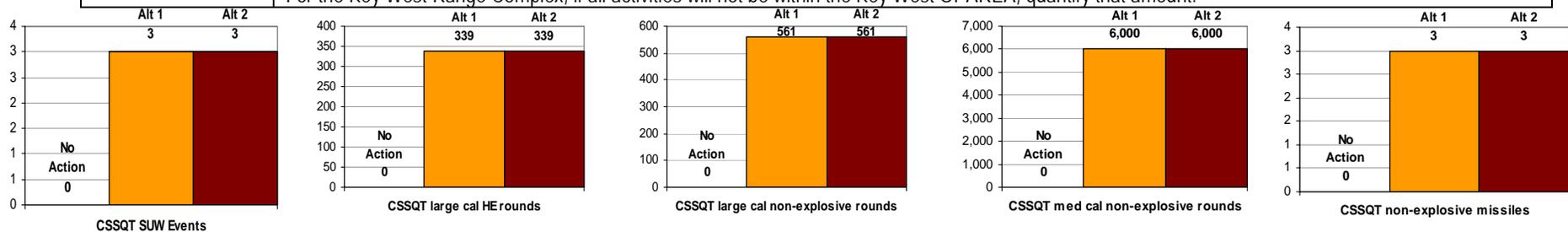
Sonobuoy lot acceptance test	
Description	Sonobuoys are deployed from surface vessels and aircraft to verify the integrity and performance of a lot or group of sonobuoys in advance of delivery to the fleet for operational use. Some sonobuoys are explosive. Charges in sonobuoys explode, when commanded, creating a loud acoustic signal; the echoes from the explosive charge are then analyzed to determine the position of the target.
Information Typical to the Event (AFTT)	Platform: Surface vessels, fixed-wing aircraft, rotarywing aircraft Systems: Sonobuoys (AN/SSQ-62x DICASS, AN/SSQ-110x IEER, AN/SSQ-125 MAC, MK-61 SUS, MK-64 SUS, MK-82 SUS, MK-84 SUS, and Mini Source) Ordnance/Munitions: None Targets: None Duration: 6 flight hours/event
Location (in KWRC)	Key West
Potential Impact Concerns	Acoustic: Sonar (sonobuoys: AN/SSQ-62x DICASS, AN/SSQ-110x IEER, AN/SSQ-125 MAC, MK-61 SUS, MK-64 SUS, MK-82 SUS, MK-84 SUS, and Mini Source), underwater explosives, vessel noise, aircraft noise Energy: None Physical Disturbance and Strike: Military expended material strike, vessel strike, aircraft strike (birds only) Entanglement: Parachutes Ingestion: Parachutes; target fragments; sonobuoy fragments Impact on marine habitat = 857 m ² [p. 3.3-39]
Military Expended Material	Parachutes; target fragments; sonobuoy fragments
Assumptions in EIS	Assume one parachute per sonobuoy. Assume an average of 80 non-explosive sonobuoys per event; however the number of sonobuoys used in each event may vary.
Alternative 1 vs No Action	Increase from 0 sonobuoys (0 events) to 1312/yr (33 events/yr) [p. 2-91]. All 1312 use high explosives [p.2-91]. All 1312 would be underwater explosions [p. 3.0-71]. All 1312 may result in fragments [p. 3.0-114].
Alternative 2 vs No Action	Increase from 0 (0 events) to 1512/yr (39 events/yr) [p. 2-91]. All 1512 use high explosives [p.2-91]. All 1512 would be underwater explosions [p. 3.0-71]. All 1512 may result in fragments [p. 3.0-114]. This is a new use of sonar [p. 3.0-65]. This is a new explosive use, source classes E3 and E4 [p. 3.0-75]. Under the Preferred Alternative, the Key West Range Complex would have the most underwater sonobuoy explosions in the AFTT (47%) [p. 3.1-45].
Notes	Source classes [p. 2-39]: E3 Large-caliber projectiles 0.6-2.5 lb net explosive weight (NEW) E4 Improved extended echo ranging sonobuoy 2.6-5 lb NEW



<p>QUESTIONS</p>	<p>At what water depths will these explosions occur at the Key West Range Complex, and how deep is the water at the proposed locations? Page 3.1-45 states that charge sizes for sonobuoys range from 5 to 10 lb new explosive weight. Page 3.0-75 states that the source classes are E3 and E4. The cited charge sizes of 5 to 10 lb NEW seems to conflict with the E3 (0.6-2.5 lb) and E4 (2.6-5 lb) NEW given in the table of source classes on page 2-39. Confirm the charge sizes and source classes for sonobuoys in Key West Range Complex.</p> <p>For the Key West Range Complex, page 2-91 states that sonobuoy lot acceptance tests will increase from 0 (0 events) under No Action to 1512/yr (39 events/yr) under the Preferred Alternative, and all 1512 sonobuoys will use high explosives. But in Appendix A.2.4.3 page A-101 it states that the assumption used for the analysis is an average of 80 non-explosive sonobuoys per event. If the analysis was based on non-explosive sonobuoys, but many sonobuoys in the Key West Range Complex will be explosive, provide a separate analysis for explosive sonobuoys in the Key West Range Complex.</p>
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Combat system ship qualification trial (CSSQT) – surface warfare (SUW)	
Description	Surface warfare events are gun weapons system tests conducted in a clear environment to demonstrate shipboard sensors capabilities to detect and track surface targets, relay the data to the gun weapon system, and engage targets. The event qualified the ship's surface warfare gun capability to receive track data from the sensors, filter it, calculate ballistics, recommend aimpoint corrections (spots), generate gun orders, select ammunition properly for targets at differing ranges, and deliver surface direct fire on the surface targets. 
Information Typical to the Event (AFTT)	Platform: Surface combatant, amphibious warfare ship Systems: Gun weapons system, missile systems Ordnance/Munitions: Large-caliber projectiles (e.g., 155 mm, 5 inch) (non-explosive and explosive), medium caliber projectiles (non-explosive), missiles (non-explosive) Targets: Mobile surface targets (e.g., High-Speed Maneuvering Surface Target), towed surface targets (e.g., Low Cost Modular Target) Duration: Event duration is 1 week.  
Location (in KWRC)	Key West
Potential Impact Concerns	Acoustic: In-air explosives, weapons firing noise, vessel noise Energy: None Physical Disturbance and Strike: Military expended material strike (nonexplosive practice munitions, projectile fragments), vessel strike, in-water device strike Entanglement: None Ingestion: Medium-caliber projectiles, fragments Impact of 561 non-explosive large-caliber rounds on marine habitat = 210 m ² [p. 3.3-39]. Impact of 339 explosive large-caliber rounds on marine habitat = 127 m ² [p. 3.3-39]. Impact of 6000 non-explosive medium-caliber rounds on marine habitat = 125 m ² [p. 3.3-39]. Impact of 3 non-explosive missiles on marine habitat = 17 m ² [p. 3.3-39]
Military Expended Material	<ul style="list-style-type: none"> • 300 large-caliber gun rounds/event • 1 surface-to-surface missile/event QUESTION: Why is this 1 missile, when page 2-96 indicates 3 missiles? • 2,000 medium-caliber rounds • Munitions fragments
Assumptions in EIS	Explosive large-caliber rounds are air-burst.
Alternative 1 vs No Action	Increase from N/A to 3 events/yr [p. 2-96]. Increase from 0 to 900 large-caliber rounds (561 non-explosive, 339 high explosive) [p. 2-96], 339 in-air explosions [p. 3.0-67]. Increase from 0 to 6000 medium-caliber rounds [p. 2-96] - non-explosive practice rounds for testing [p.3.0-133]. Increase from 0 to 3 missiles [p. 2-96], non-explosive [p. 3.3-39] for testing [p.3.0-112].
Alternative 2 vs No Action	Increase from N/A to 3 events/yr [p. 2-96]. Increase from 0 to 900 large-caliber rounds (561 non-explosive, 339 high explosive) [p. 2-96], 339 in-air explosions [p. 3.0-67]. Increase from 0 to 6000 medium-caliber rounds [p. 2-96] - non-explosive practice rounds for testing [p. 3.0-133]. Increase from 0 to 3 missiles [p. 2-96], non-explosive [p. 3.3-39] for testing [p. 3.0-112].
QUESTIONS	Will these be audible or visible within the FKNMS? Will these be audible or visible on land on the Florida Keys? For the Key West Range Complex, if all activities will not be within the Key West OPAREA, quantify that amount.



Special warfare	
Description	Special warfare includes testing of submersibles capable of inserting and extracting personnel and payloads into denied areas from strategic distances. Testing could include the use of special operations forces deployed from submerged submarines while at sea.
Information Typical to the Event (AFTT)	Platform: Surface craft/other, submarines Systems: Submarine sonars, Doppler sonar, underwater communications Ordnance/Munitions: None. No ordnance. Targets: None Duration: Event duration is up to 30 days.
Location (in KWRC)	Key West
Potential Impact Concerns	Acoustic: High-frequency sonar (e.g., HF1), underwater communications (e.g., MF9), vessel noise Energy: None Physical Disturbance and Strike: Vessel strike Entanglement: None Ingestion: None
Military Expended Material	None
Assumptions in EIS	Test will not occur constantly throughout duration
Alternative 1 vs No Action	Increase from 2 to 3 events/yr [p. 2-96].
Alternative 2 vs No Action	Increase from 2 to 4 events/yr [p. 2-96].
QUESTIONS	Page A-200 indicates Special Warfare, which may include Submarine sonars, Doppler sonar, and underwater communications, will be conducted in the Key West Range Complex. Page 5-72 states the Navy will not conduct low-frequency, hull-mounted or non-hull mounted mid-frequency, or high-frequency active sonar within Florida Keys National Marine Sanctuary. Verify that the Navy proposes no sonar, including Submarine sonars and Doppler sonar, within FKNMS.

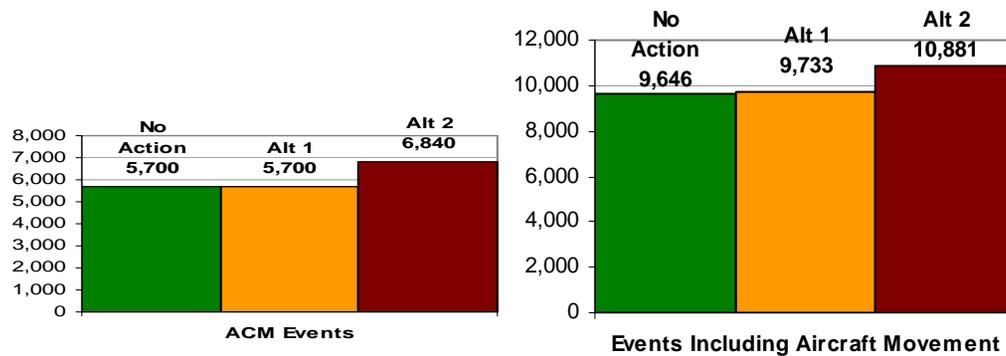


Events Including Aircraft Movement



	No Action	Alt 1	Alt 2	
Training Events Including Aircraft [p. 3.0-127]	9,636	9,690	10,830	
Testing Events Including Aircraft [p. 3.0-127]	10	43	51	Apparently Air Platform / Vehicle Tests + Sonobuoy events
Training + Testing Events Including Aircraft =	9,646	9,733	10,881	

Number of Events including aircraft movement (from Tables 2.8-1 to 2.8-3)	No Action	Alt 1	Alt 2	
ACM	5,700	5,700	6,840	
GUNNEX A-A	36	70	70	
MISSILEX A-A	0	8	8	Are these different flights from ACM?
FLAREX events	900	900	900	Are these different flights from ACM?
CHAFFEX events	3,000	3,000	3,000	Are these different flights from ACM?
Air Platform / Vehicle Test	10	10	12	Are these different flights from ACM?
Sonobuoy events	0	33	39	Also included on "Number of events including vessel movement"
Mine Neutralization EOD events	0	12	12	Also included on "Number of events including vessel movement"
Total Events including Aircraft Movement	9,646	9,733	10,881	

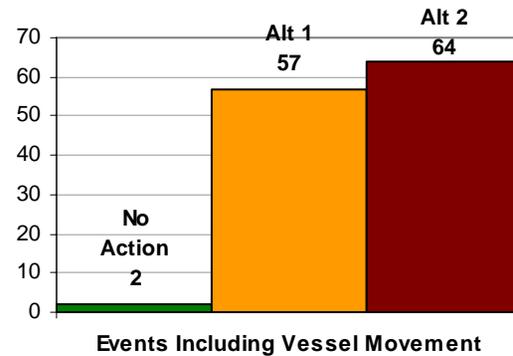


QUESTION: Clarify the number of Events Including Aircraft Movement in the Key West Target Range. Page A-2 states that ACM may include the use of flares and chaff. On Tables 2.8-1 through 2.8-3, it states that the Preferred Alternative includes 6840 ACM events as well as 900 FLAREX events and 3000 CHAFFEX events. Page 3.0-127 indicates that the number of events including aircraft movement (training + testing) is 10,881 events. Are the 900 FLAREX events and 3000 CHAFFEX events separate flights from the ACM flights, or will the FLAREX and CHAFFEX events occur during and as part of the ACM flights?

Events Including Vessel Movement



	No Action	Alt 1	Alt 2
Training Events Including Vessels [p. 3.0-97]	0	12	12
Testing Events Including Vessels [p. 3.0-97]	2	45	52
Training + Testing Events Including Vessels =	2	57	64



Number of Events including vessel movement (from Tables 2.8-1 to 2.8-3)	No Action	Alt 1	Alt 2	
Mine Neutralization EOD events	0	12	12	Also included on "Number of events including aircraft movement"
Sonobuoy events	0	33	39	Also included on "Number of events including aircraft movement"
CSSQT SUW events	0	3	3	
Special Warfare events	2	3	4	
??	0			Missing 6 events from Alternatives 1 and 2 – what are they?
Total	2	51	58	This total doesn't match page 3.0-9 (missing 6 events from Alts 1 & 2)

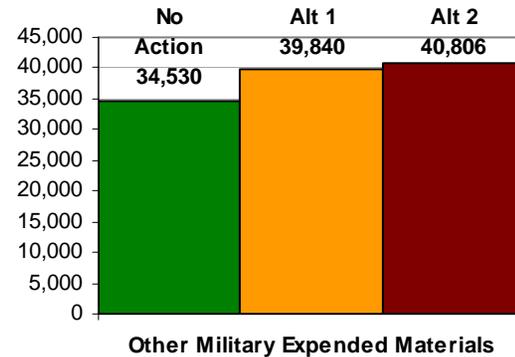
QUESTION: Clarify the number of Events Including Vessel Movement in the Key West Target Range. Page 3.0-97 indicates that the number of events including vessel movement (training + testing) is 12+52=64 events for the Preferred Alternative. On Tables 2.8-1 to 2.8-3, the total appears to be 58 events, so 6 events are unaccounted for – what are these 6 events?

QUESTION: What are the typical and maximum operating speeds of these vessels in the Key West Target Range?

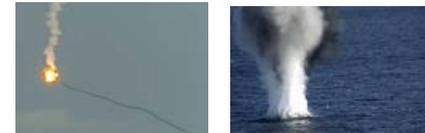
Other Military Expended Materials



	No Action	Alt 1	Alt 2	
anchor blocks [p. 3.0-118]	0	6	6	Impact of 6 anchor blocks on marine habitat = 7 m ² [p. 3.3-37]
non-explosive sonobuoys [p. 3.0-119]	0	2,640	3,120	These are in addition to the explosive sonobuoys. Impact of 3120 non-explosive sonobuoys on marine habitat = 1769 m ² [p. 3.3-39]
parachutes (training) [p. 3.0-119]	0	12	12	Impact of 12 parachutes small on marine habitat = 6 m ² [p. 3.3-37]
parachutes (testing) [p. 3.0-119]	0	2,640	3,120	Impact of 3120 parachutes large on marine habitat = 1649 m ² [p. 3.3-39]
aircraft stores, ballast, weapon cartridges [p. 3.0-119]	30	30	36	Impact of aircraft stores, ballast, weapon cartridges on marine habitat = 187 m ² [p. 3.3-39]
pistons or endcaps [p. 3.0-120]	34,500	34,512	34,512	Impact of pistons or endcaps on marine habitat = 24 m ² [p. 3.3-37]
Total Other Military Expended Materials	34,530	39,840	40,806	



Explosions



In-Air Explosions:

	No Action	Alt 1	Alt 2	
Missiles: MISSILEX A-A [p. 3.0-67]	0	8	8	These events typically occur at high altitudes [p. A-5]
Large-caliber high explosive: CSSQT [p. 3.0-67]	0	339	339	EIS assumes large-caliber rounds are air-burst [p. A-148]
Total In-Air Explosions	0	347	347	

Surface Explosions (NEW = net explosive weight):

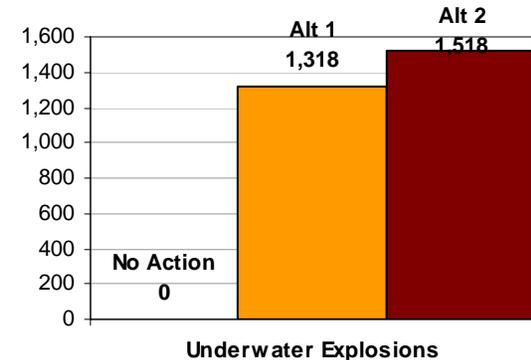
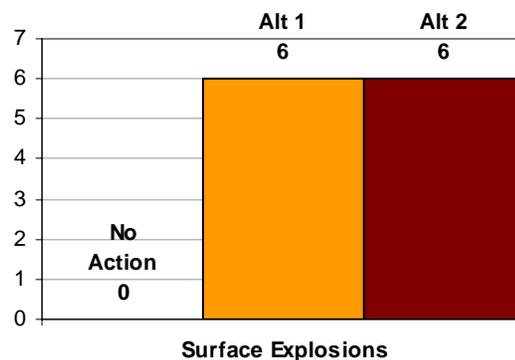
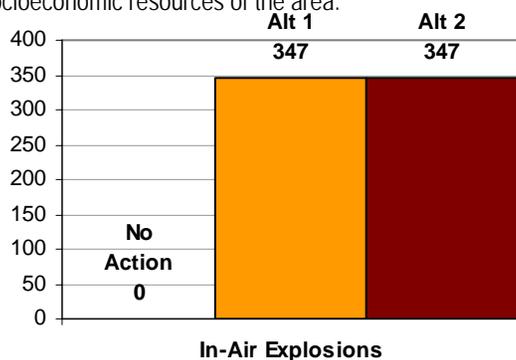
	No Action	Alt 1	Alt 2	
60 lb NEW charges [p. 3.0-68]	0	2	2	Is it correct to assume these occur just below the water surface?
20 lb NEW charges [p. 3.0-68]	0	2	2	Is it correct to assume these occur just below the water surface?
10 lb NEW charges [p. 3.0-68]	0	2	2	Is it correct to assume these occur just below the water surface?
Total Surface Explosions	0	6	6	See note *

Underwater Explosions:

	No Action	Alt 1	Alt 2	
60 lb NEW charges [p. 3.0-72] (Number on or near bottom) [p. 3.3-26]	0 (0)	2 (1)	2 (1)	See note*. Impact of one 60 lb NEW charge on or near bottom on marine habitat = 434 m ² [p. 3.3-26].
20 lb NEW charges [p. 3.0-72] (Number on or near bottom) [p. 3.3-26]	0 (0)	2 (1)	2 (1)	See note*. Impact of one 20 lb NEW charge on or near bottom on marine habitat = 135 m ² [p. 3.3-26].
10 lb NEW charges [p. 3.0-72] (Number on or near bottom) [p. 3.3-26]	0 (0)	2 (1)	2 (1)	See note*. Impact of one 10 lb NEW charge on or near bottom on marine habitat = 85 m ² [p. 3.3-26].
Sonobuoys (explosive) [p. 3.0-71]. Charge sizes for sonobuoys range from 5 to 10 lb NEW [p. 3.1-45]	0	1,312	1,512	
Total Underwater Explosions	0	1,318	1,518	

*Confirm that these numbers are based on half of the 12 HE Mine Neutralization EOD explosions (i.e., half explode on surface, half explode underwater).

QUESTION: The Florida Keys are an environmentally sensitive area with an Area of Critical State Concern, a National Marine Sanctuary, two National Parks, National Wildlife Refuges, and other protected areas), yet new explosives are proposed to be introduced to the Key West Range Complex (including air to air missiles, explosive sonobuoys, mine neutralization EOD charges, and CSSQT large caliber high explosive rounds). Provide an avoidance and impact analysis of the introduction of explosives on the environmental and socioeconomic resources of the area.



IMPACT ANALYSES:

Sediments and Water Quality

- Explosives and explosion byproducts
- Metals
- Chemicals other than explosives
- Other materials

Preferred Alternative would increase chemical, physical, or biological changes to sediment or water quality from “not detectable” to “measurable”, but would still be below applicable standards, regulations, and guidelines [p. 3.1-81] because [p. 3.1-80]:

- Although individual training and testing activities may occur within a fairly small area, overall military expended materials and activities are widely dispersed in space and time;
- When multiple stressors occur at the same time, it is usually for a brief period;
- Many components of expended materials are inert or corrode slowly;
- Numerically, most of the metals expended are small- and medium-caliber projectiles, metals of concern comprise a small portion of the alloys used in expended materials, and metal corrosion is a slow process that allows for dilution;
- Most of the components are subject to a variety of physical, chemical, and biological processes that render them benign;
- Potential areas of negative impacts would be limited to small zones immediately adjacent to the explosive, metals, or chemicals other than explosives; and
- The failure rate is low for explosives and materials with propellant systems, limiting the potential impacts from the chemicals other than explosives involved.

The EIS/OEIS does not provide a site-specific analysis for Key West Range Complex.

Air Quality

Air pollutant emissions in Key West Range Complex will increase by 74 to 148% (varies by pollutant) for training, and 199 to 370% for testing [p. 3.2-40 and 3.2-42].

Nearshore communities near Key West Range Complex are NAAQS Attainment Areas [p. 3.2-10].

Most emissions in AFTT Study Area would be at least 3 nm offshore and above 3000 ft altitude, with sufficient dispersion [p. 3.2-46].

Marine Habitats (non-living substrate)

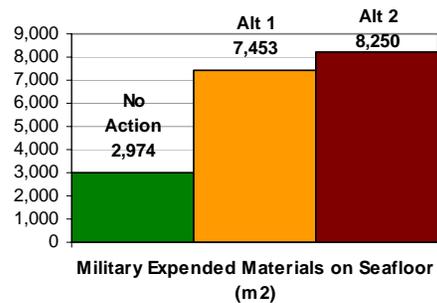
- Acoustic (explosives on or near the bottom only)
- Physical disturbance or strikes (vessels and in-water devices, military expended materials, seafloor devices) [p. 3.3-1].

Impact of one 60 lb NEW charge on or near bottom on marine habitat = 434 m² [p. 3.3-26]

Impact of one 20 lb NEW charge on or near bottom on marine habitat = 135 m² [p. 3.3-26]

Impact of one 10 lb NEW charge on or near bottom on marine habitat = 85 m² [p. 3.3-26]

Impact of military expended materials (large-caliber projectiles, medium-caliber projectiles, missiles, chaff, flares, sonobuoys, parachutes, anchor blocks, endcaps and pistons, and aircraft stores, ballast, and weapon cartridges) on marine habitat will increase from 2974 m² [p. 3.3-35 + 3.3-36] to 7453 m² for Alternative 1 [p. 3.3-36 + 3.3-38] to 8250 m² for Alternative 2 [p. 3.3-37 + 3.3-39].



Marine Mammals

The use of vessels may result in mortality or Level A harassment (injury) of certain marine mammal species [p. 3.4-1].

Sonar and other active acoustic sources: May Affect, Likely to Adversely Affect endangered manatees [p. 3.4-279]. But also see page 3.4-130 and 3.4-132 which shows little impacts.

Level A Harassment = injury

Level B Harassment = disturbance.

Sea Turtles and Other Marine Reptiles

The use of sonar, other active sources, and explosives; and the use of vessels; may affect and are likely to adversely affect ESA-listed sea turtles [p. 3.5-1].

The use of in-water devices and military expended materials; entanglement with fiber optic cables, guidance wires and parachutes; and ingestion of munitions; may affect but are not likely to adversely affect ESA-listed sea turtles [p. 3.5-1].

The use of sonar, other active sources, and explosives may affect but are not likely to adversely affect the American crocodile or American alligator [p. 3.5-1].

Birds

The endangered roseate tern breeds in the Florida Keys and other places [p. 3.6-19]. Near-total failure of sooty tern nesting in the Dry Tortugas in the Key West Range Complex was reported in 1969 during a period when the birds were regularly exposed to sonic booms [p. 3.6-45].

Dry Tortugas: The Tortugas Military Operations Area is an air exclusion zone established to protect Fort Jefferson and Dry Tortugas National Park.

Marquesas Keys: Critical habitat for wintering piping plovers is designated in the Marquesas Keys [p. 3.6-48].

QUESTION: On page 3.6-52 for Alternative 2, it states "Although noise due to aircraft and vessels would increase over Alternative 1, the types of impacts on Bermuda petrels, piping plovers, and roseate terns, as well as to piping plover critical habitat, would not differ substantially from those under Alternative 1." The text states the "types" of impacts would not increase, but quantify the amount of increase (in the Preferred Alternative compared to No Action), in particular for the Florida Keys including but not limited to the Dry Tortugas and Marquesas Keys. For example, quantify the increased number of sonic booms and explosions that would be audible at bird nesting areas in the Florida Keys including but not limited to the Dry Tortugas and Marquesas Keys.

QUESTION: On page 3.6-36, it states the National Park Service staff recorded 25 sonic booms in 2007 and 40 in 2008 in the Dry Tortugas. What was the behavioral or physiological reactions of birds to those sonic booms?

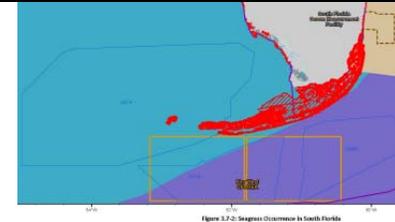
QUESTION: Table 3.6-5 on page 3.6-90 indicates that the Proposed Alternative "may affect but not likely to adversely affect" threatened or endangered birds. Is this effects determination supported by a Biological Opinion or other document, and is that document available?

Marine Vegetation

No effect on ESA-listed Johnson's seagrass or its critical habitat [p 3.7-1].

The majority of underwater explosions in the Study Area would likely occur over unvegetated seafloor [p 3.7-17].

QUESTION: Most of the analysis in Section 3.7 is for Johnson's seagrass and Sargassum. There is little to no analysis for other seagrasses including manatee grass, paddle grass, shoal grass, turtle grass et al. Provide an assessment of impacts to other seagrasses.



Marine Invertebrates

The use of military expended materials and seafloor devices may affect, but is not likely to adversely affect, ESA-listed coral species. The use of military expended materials may affect, but is not likely to adversely affect critical habitat [p 3.8-1]. The risk here is from physical disturbance and strike, not acoustics, ingestion or entanglement.

The use of all non-impulsive and impulsive acoustic sources; the use of vessels, in-water devices, and seafloor devices; the use of fiber optic cables, guidance wires and parachutes; will have no effect on ESA-listed coral species and would have no effect on critical habitat [p 3.8-1].

Fish

"Pursuant to the ESA, the use of explosives and other impulsive acoustic sources may affect and is likely to adversely affect ESA-listed smalltooth sawfish" and other fish [p. 3.9-1]. The Key West Range Complex does not overlap critical habitat areas of the smalltooth sawfish [p. 3.9-75] and the Preferred Alternative will have no effect on smalltooth sawfish critical habitat [p. 3.9-1].

Alternative 2 may have an adverse effect on EFH [p. 3.3-45], but the EIS/OEIS does not identify whether the adverse effects would be minimal, more than minimal but less than substantial, or substantial. The AFTT EFH report (Navy, 2012) is not readily-found.

QUESTION: Page 3.3-48 (Section 3.3.4.2) states that explosives and military expended materials (apparently in general and not specific to any alternative) may have an adverse effect on EFH, and that the AFTT Essential Fish Habitat Assessment report (US Navy, 2012) identifies whether the adverse effects would be minimal, more than minimal but less than substantial, or substantial. The EIS/OEIS does not state whether the adverse effects would be minimal, more than minimal but less than substantial, or substantial for each alternative. The AFTT EFH report is not available on the AFTT website under the Supporting Technical Documents. Please make the AFTT EFH report available, and for each alternative clarify whether the adverse effects would be minimal, more than minimal but less than substantial, or substantial. Include an EFH analysis and conclusion specifically for the Key West Range Complex.

Cultural Resources

"Acoustic and physical stressors could adversely affect submerged prehistoric sites and unrecorded submerged historic resources in accordance with Section 106 of the National Historic Preservation Act".

Page 3.10-20 (Section 3.10.3.1.3.1) states that the Key West Range Complex is the only area within the AFTT Study Area that contains a cultural resource that could be susceptible to damage from sonic booms (NRHP-listed Fort Jefferson at Dry Tortugas National Park).

QUESTION: Please make the following document available (referenced on page 3.10-30): James, M., Downing, M., Bradley, K. & Garrellick, J. (2009). Sonic boom structural damage potential for Fort Jefferson at Dry Tortugas National Park. Prepared by Blue Ridge Research and Consulting, LLC and Applied Physical Sciences, Inc.

Socioeconomic Resources

"Because the Navy clears areas before performing training and testing activities and the Navy does not train in areas close to infrastructure or civilian activities, physical disturbances and strikes are unlikely. Therefore, the activities would not result in a direct loss of income, revenue or employment, resource availability, or quality of experience." [p. 3.11-45]

"Impacts from the Preferred Alternative would be short term and temporary. Therefore, impacts on socioeconomic resources would be negligible." [p. 3.11-1]

QUESTION: For the proposed activities in the Key West Range Complex, will there be any additional restrictions (areal extent, frequency of closure, type of access) to the public including commercial or recreational fishermen, divers, boaters, etc, due to the increase in ACMs, GUNEX A-A, MISSILEX A-A, mine neutralization EOD, sonobuoy lot acceptance tests, CSSQT events, special warfare, or other proposed activities?

Public Health and Safety

Due to Navy standard operating and safety procedures, public health and safety impacts from underwater energy, in-air energy, and physical interactions would be "unlikely".

QUESTION: Page 3.12-12 (for Alternative 1 and page 3.12-13 for Alternative 2) states there will be an "increase" in active sonar testing activities and an "increase" in testing activities involving underwater explosions in the Key West OPAREA and other places, and states that Alternatives 1 and 2 would "adjust locations and tempo" of the testing. But the term "increase" is an understatement for the Key West Range Complex because there would be entirely new activities including exploding sonobuoy lot acceptance tests, CSSQT large caliber high explosive projectiles, mine neutralization EOD charges, high explosive air-to-air missiles, etc. The EIS/OEIS suggests these are entirely new activities in Key West Range Complex. Include a health and safety analysis specifically for new activities in the Key West Range Complex.

OTHER QUESTIONS:

Page 1-14 refers to the related document "Final Environmental Assessment/Overseas Environmental Assessment on the Key West Range Complex" (January 2010). Please make that document available.
Page 2-79, Tables 2.8-1 through -3 and many other places in the EIS/OEIS indicate the number of testing and training activities per year. Is this a yearly maximum or a yearly average?
Page 3.0-67, page 3.0-97, page 3.0-112 and many other tables. These tables identify the number of explosions, events, missiles, etc., but do not indicate whether this is the yearly total or a total number.
Table ES-1 states that impacts for Alternatives 1 and 2 are "the same" as the No Action Alternative. Explain how impacts can be "the same" when the data in the tables in Chapter 3 show more impacts for Alternatives 1 and 2.
The EIS/OEIS describes the amount of military expended materials (projectiles, sonobuoys, parachutes, flares, chaffe, etc). Will the Preferred Alternative result in other waste disposal at sea such as garbage and waste water. If so, explain the types and amount in the Key West Range Complex.
Will the Preferred Alternative result in additional ballast water being disposed? If so, explain the precautions the Navy will take in the Key West Range Complex to reduce the likelihood of spreading invasive, exotic, or nuisance species through ballast water.
Will the Preferred Alternative result in additional risk of groundings on reefs or seagrass beds? If so, explain the precautions the Navy will take in the Key West Range Complex to minimize that risk.
Will the Preferred Alternative result in additional risk of fuel leaks, waste water leaks, or other accidents that could release contamination? If so, explain the precautions the Navy will take in the Key West Range Complex to minimize that risk.
Page A-18 indicates that Anti-Surface Warfare Maritime Security Operations (including but not limited to small-arms fire and anti-swimmer grenades) may occur in all OPAREAs and littoral areas proximate to homeports. Page 2-81 does not indicate that any MSO activities will occur in the Key West OPAREA. Clarify that no MSO will occur in the Key West Range Complex, or define the amount and locations of MSO in the Key West Range Complex.
Page 2-80 indicates that Gunnery Exercise (Surface-to-Air) – Medium-Caliber (GUNEX [S-A]) – Medium-Caliber is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.
Page 2-81 indicates that Gunnery Exercise (Surface-to-Surface) – Ship Small-Caliber (GUNEX [S-S] - Ship) – Small-Caliber is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.
Page 2-82 indicates that Gunnery Exercise (Surface-to-Surface) – Ship Medium-Caliber (GUNEX [S-S] - Ship) – Medium-Caliber is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.
Page 2-82 indicates that Gunnery Exercise (Surface-to-Surface) – Ship Large-Caliber (GUNEX [S-S] - Ship) – Large-Caliber is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.
Page 2-82 indicates that Gunnery Exercise (Surface-to-Surface) – Boat Small-Caliber (GUNEX [S-S] - Boat) – Small-Caliber is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.

<p>Page 2-89 and A-74 indicates that Surface Ship Sonar Maintenance (in OPAREAs and Ports) is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Page 5-72 states the Navy will not conduct low-frequency, hull-mounted or non-hull mounted mid-frequency, or high-frequency active sonar within Florida Keys National Marine Sanctuary. Verify that the Navy proposes no sonar, including Surface Ship Sonar Maintenance (in OPAREAs and Ports), within FKNMS.</p>
<p>Page 2-89 and A-75 indicates that Submarine Sonar Maintenance (in OPAREAs and Ports) is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Page 5-72 states the Navy will not conduct low-frequency, hull-mounted or non-hull mounted mid-frequency, or high-frequency active sonar within Florida Keys National Marine Sanctuary. Verify that the Navy proposes no sonar, including Submarine Sonar Maintenance (in OPAREAs and Ports), within FKNMS.</p>
<p>Page A-84 indicates that Intelligence, Surveillance, and Reconnaissance Test is proposed in the AFTT Study Area. Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.</p>
<p>Page 2-91 indicates that ASW Tracking Test – Maritime Patrol Aircraft (including 184 to 368 high explosive sonobuoys) is proposed in Other AFTT Areas (outside of range complexes testing ranges but still within the AFTT Study Area) (typically while vessels are in transit). Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.</p>
<p>Page 2-94 and A-131 indicates that Other Class Ship Sea Trials – Propulsion Testing (including full power and endurance runs) is proposed in the AFTT Study Area. Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.</p>
<p>Pages A-134 through A-136 indicate that Surface Warfare Mission Package Testing– Gun Testing Small-Caliber, Medium-Caliber, and Large-Caliber is proposed in the AFTT Study Area. Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.</p>
<p>Page 2-98 indicates that Anti-Surface Warfare (ASUW) / Anti-Submarine Warfare (ASW) Testing, including Missile Testing, Kinetic Energy Weapons Testing, Torpedo (Explosive) Testing, and Countermeasure Testing – Acoustic System Testing, is proposed in the AFTT Study Area. Describe the amounts of these activities that are proposed within 50 nm of Monroe County, Florida.</p>
<p>Page 2-99 indicates that Hydrodynamic Testing is proposed in the AFTT Study Area. Describe the amount of this activity that is proposed within 50 nm of Monroe County, Florida.</p>
<p>Page 3.0-25 indicates that the water depths in the Key West Operating Area generally range from 18 to 30 m. Water depths in the Key West OPAREA are generally much deeper than 30 m. Why is the general bathymetry described as being so shallow?</p>
<p>Page 3.1-79. Section 3.1.3.4.7.3, under the paragraph for Training Activities, the 4th line refers to Alternative 1, but it should refer to Alternative 2.</p>
<p>Page 3.12-16. Section 3.12.3.3 states that if all military expended materials were located side by side in the Study Area, the footprint would be 0.185 square meters. That should be 0.185 square miles.</p>
<p>Page 3.0-115. On Table 3.0-71, the number of missiles for Key West under the Testing columns are blank. Complete the table.</p>
<p>Page A-2 states that Alternative 2 events in Key West Range Complex account for the proposed increase in Key West Range Complex Environmental Impact Statement (underway). Shouldn't that read: Alternative 2 events in Key West Range Complex account for the proposed increase in the Naval Air Station Key West Airfield Operations Environmental Impact Statement (underway)?</p>