Outlying Landing Field Coupeville:
An Examination of Six Critical Deficiencies

A White Paper by Citizens of Ebey's Reserve
December 5, 2020

The Navy maintains that Outlying Landing Field Coupeville (OLFC) is *the best site in the world* for conducting field carrier landing practice (FCLP). There are six significant reasons why this myth is far from true:

1. Clear Zone and Primary Surface do not meet Navy safety standards.
2. Runway too short for emergency land as soon as possible.
3. Coupeville middle and high school on the very edge of APZ-1.
4. Bird strike avoidance protocols cannot be satisfied.
5. Wind direction mostly fails to replicate carrier landing conditions.
6. Weather conditions force frequent cancellations of practice sessions.

COER examines each of these shortfalls below, which leads to the logical conclusion that OLFC is not at all the ideal site it is made out to be. Operation of OLFC is actually an illegal operation, endangering the aircrews and civilians. Our conclusion is that the Navy should have and could have identified an appropriate FCLP training venue without the shortcomings and risks associated with this outdated and deficient training location that fails to meet most of the Navy's runway and safety buffer standards.

1. Clear Zone and Primary Surface do not meet Navy safety standards

1.1 Standards Failure: Although OLFC is a Class B runway [GRR00032253 or 2005 AICUZ, page 5-7], it does not meet the requirements for the Primary Surface or the Clear Zone. The Primary Surface "*is centered lengthwise on the runway, extending 200 feet beyond each end of the runway. The width is 1500 feet per Class B runway. The Primary Surface is normally highly protected and free of all obstructions.*" [GRR00032253 or AICUZ page 5-7] The Clear Zone extends 3000 feet beyond the Primary Surface *and "has the highest potential for accidents* [28%]. *It measures 1,500 feet wide at the end of the runway and 2,284 feet wide at its outer edge. A Clear Zone is required for all active runways and should remain undeveloped.*" [GRR00150372 or FEIS, page 3-56]

In discussing CZs and accident potential zone requirements, the Navy states that it is bound to follow Department of Defense Instruction 4165.57. [GRR00032895] As depicted in Figures 1 and 2, the Clear Zone (CZ) standards in those Navy instructions are not met at OLFC. Per the directives for Class B runways[1], the CZ should be graded and free of obstructions, and roads within the CZ are not allowed for Type-II CZs, like OLFC [DoDI 4165.57, page 17, items 42 and 46][2]. Those requirements also apply

[1] https://www.wbdg.org/FFC/DOD/UFC/ufc_3_260_01_2019_c1.pdf (see pages 69-72).
[2] https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/416557p.pdf?ver=2019-04-15-094510-673.

to the Primary Surface (PS), which is a 750-foot buffer area running along either side of the runway centerline. [GRR00032258 or 2005 AICUZ, page 5-13]. Hence, the width of the PS and the CZ are

both 1500 feet wide at each end of the runway [Figure 5-4 at GRR00032255 or 2005 AICUZ, page 5-9].

As mandated by UFC 3-260-01, "*the ground surface in this area* [the CZ] ***must be clear of fixed or mobile objects*** *and graded to the requirements of Table 3.2, items 14 and 14*" (17 Nov 2008, Table 3.2 Runways, item 12, pages 31 and 32)[3]. However, the northwest CZ and PS (Figure 1) do not comply with that directive. They are crossed by two well traveled roads and interrupted by a string of jersey barriers, 60-foot trees, and parked cars with spectators, all within 100 to 500 feet of the runway (see photos in Appendix A). The areas are further obstructed by road signs and large tree stumps, and roadway drainage ditches that interrupt grading. Trees occupy about 35 acres of the CZ and PS, most by owners not under DoD control. [GRR00032255 or 2005 AICUZ, page 5-9; see ownership at https://icgeomap.islandcountywa.gov/Html5Viewer/Index.html?viewer=ICGeoMap] At the south end about 1000 feet of busy State Road WA 20 loops through the PS, coming to within just 500 feet of the runway, or 250 feet inside the PS (Figure 2). Given these issues, the CZ and PS are clearly deficient and breach DoD standards.

2. Runway too short for emergency land as soon as possible

2.1 Emergency Landing Needs: The Navy should not be practicing at OLFC when the runway is wet because it is too short for an emergency landing. Navy directives require 5000 feet of dry hard surface for an emergency landing (CVWP Core SOP 3120.3H 19 122.a; 112 Emergency Landing Procedures). [#37-GRR00167485] Likewise, internal Navy correspondence stipulates that "*the Electronic Attack Wing SOP specifies 5000 feet as the minimum runway for an emergency landing*." [#38-GRR00161980] Emergency landing distance should more correctly be called "landing roll"—i.e., the stopping distance following touchdown. That distance varies with speed, density altitude, weight of the aircraft, headwind or tailwind, wet or dry or icy surface, the technique of the individual pilot, and the nature of the aircraft's problem and where on the runway the pilot actually touches down.

A Growler with a landing weight of 46,000 pounds involved in an emergency landing at OLFC in dry conditions and a 10-knot headwind would need 3400 feet of landing roll[4]. But the same aircraft under the same conditions, except on a wet runway, would require 5800 feet, putting the jet a minimum of 400 feet into the OLFC CZ if it was able to touch down at the runway threshold. If there was no headwind, the same aircraft would need 3978 feet on a dry runway and 6786 feet on a wet runway putting it 1386 feet into the clear zone. Typically, summer weather provides very little headwind—instead instead a cross wind—and in fall and winter the runway is often rain-soaked (see Section 5 below). Also note that the metrics in the operations manual were derived by using test pilots flying new

[3] https://www.wbdg.org/FFC/DOD/UFC/ARCHIVES/ufc_3_260_01_2008.pdf. This is the DOD doc that was in effect until 2019 so this was the guiding doc during the NEPA process.

[4] NATOPS Flight Maual, Performance Data, Navy model FA-18E/F (165533 and up aircraft).

aircraft under perfect conditions. The student pilots practicing at OLFC are unlikely to possess the expertise of text pilots and are flying older, worn aircraft often in less than ideal conditions.

Figure 1. --Depiction of northern end of Outlying Field Coupeville, showing the runway and its adjacent primary surface, and the trapezoidal clear zone. The red line indicates the break between the type I and II portions of the CZ, which are shown because type I has stricter grading requirements. Note the intrusion of Keystone Hill Road and Patmore Road in the primary surface and clear zone.

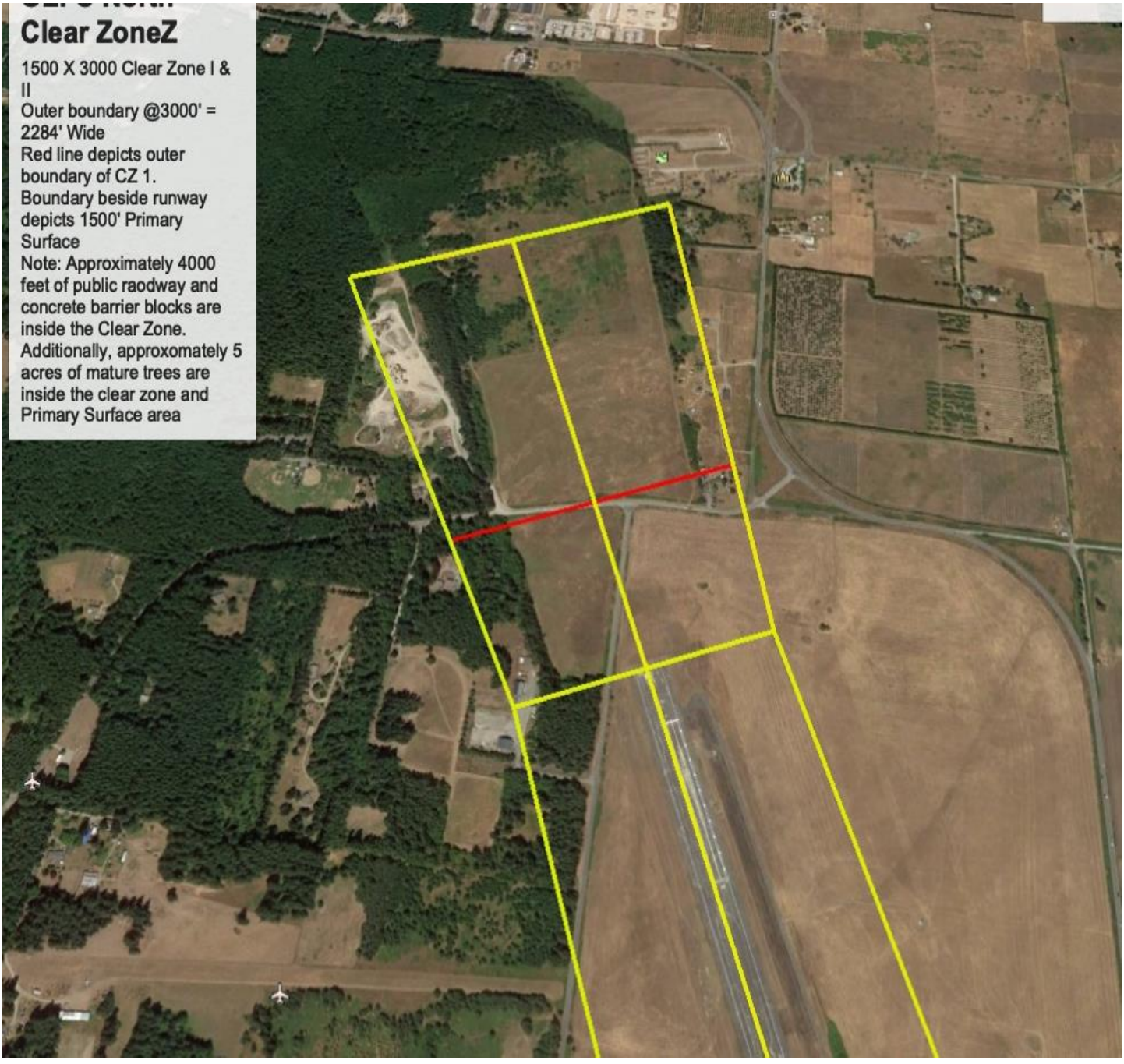
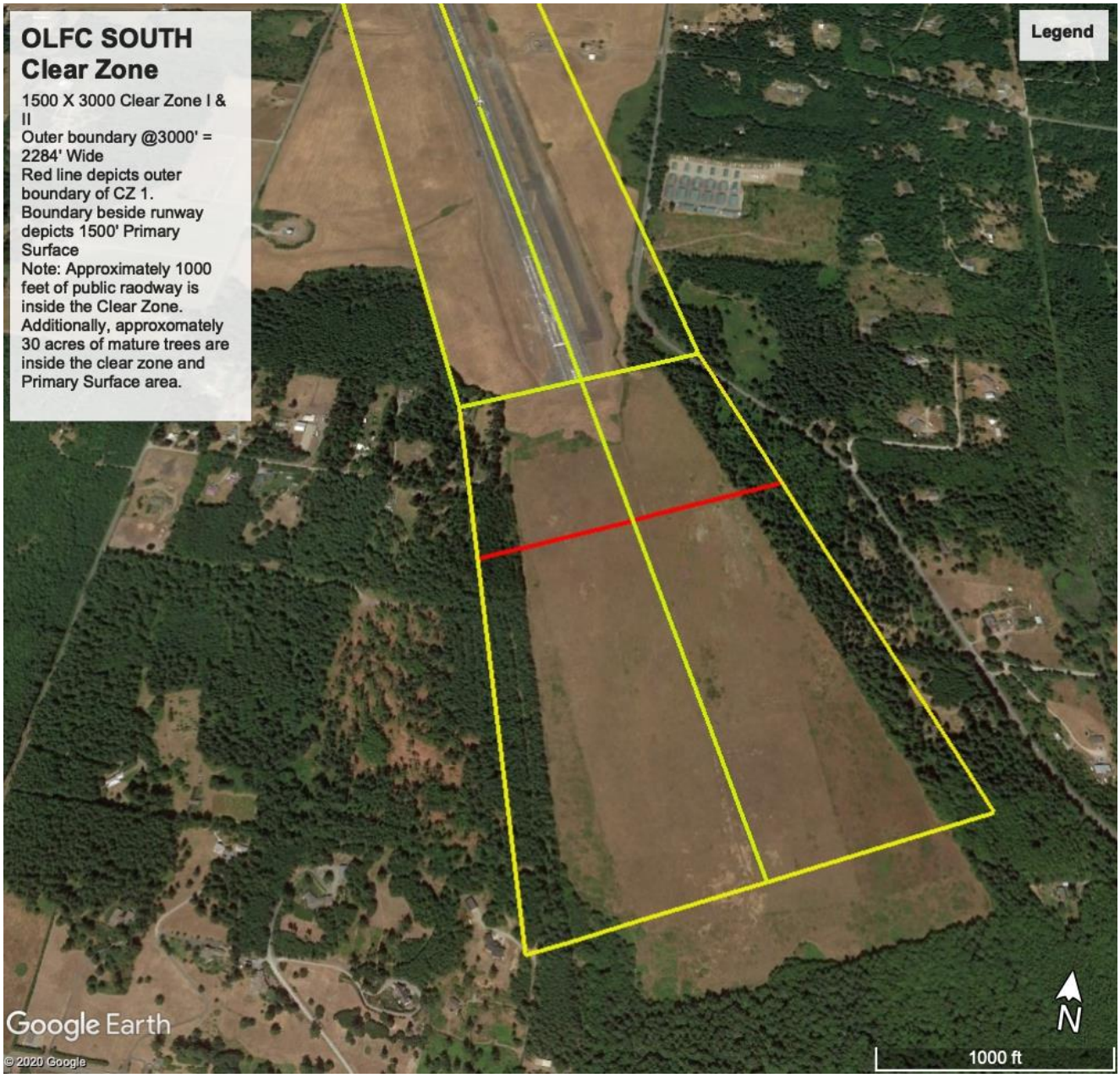


Figure 2. Depiction of southern end of Outlying Field Coupeville, showing the runway and its adjacent primary surface, and the trapezoidal clear zone. The red line indicates the break between the type I and II portions of the CZ, which are shown because type I has stricter grading requirements. Note the loop of busy State Road WA 20 in the southeastern corner of the primary surface.



Furthermore, in a distressed landing event, the touchdown could be anywhere. If the plane loses power before or after the bounce, it could put the touchdown at the end of the 3000-foot clear zone, or near the runway threshold. And, at some point the pilot will probably eject, leaving the jet to go where it will. The CZ and PS are prescribed in an effort to save aircraft and pilot and limit collateral damage by keeping people and buildings out of the area of greatest danger. Hence, it is unrealistic and disingenuous for the Navy to proclaim the 5400-foot OLFC runway is adequate for emergency landings.

Retired Northwest Airlines Captain[5] and military flight instructor explains the risks as follows [In: *Outlying Field Coupeville: Its Time Has Passed* (page 41), noted in Bricklin cover letter as in the AR GRR00113534].

> It is my opinion that FCLPs at OLF utilizing runway 32, with the potential for engine failure, mechanical disability, or control loss during low level approaches, would dictate immediately maintaining runway heading and climbing for altitude to assess the situation if possible. Directly ahead within approximately a quarter mile is the location of Whidbey Island's Transit Fuel Depot, and an additional mile further, the township of populated Coupeville. Operating on runway 14 would put the community of Admiral's Cove, within approximately 1 to 1.25 miles, directly in line for potential disaster considering similar circumstances. The EA-18G Growler has a high approach speed ... greater than the EA-6 Prowler, and therefore travels a greater distance whether in a banked turn or straight ahead, thus creating greater potential for reaching the locations previously mentioned. Impacting the ground at high speeds utilizing aircraft carrier approach, landing, and go around techniques could easily carry the aircraft's momentum to these distant locations with disastrous results.
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> Of the many reasons for dismissing naval carrier practice at OLF, to include noise and others, this safety issue must be the most predominate…My first impression of this 5400 foot runway is that it is not able to accommodate the high speeds that the EA-18G needs to maintain in a safe training environment and especially if an emergency arises with only one course of action that may or may not put the surrounding population in jeopardy!

2.2 Safety Issues: Section 3.3.1.3 of the DEIS states, "*In the 1970s and 1980s, recognizing the need to identify areas of accident potential, the armed services conducted studies of historical aircraft accidents throughout the U.S. The studies showed that most aircraft mishaps occurred on* ***or near the runway, with mishaps diminishing in likelihood with distance****….In this ElS potential impacts attributable to the number of operations conducted at NAS Whidbey Island and OLF Coupeville are analyzed in accordance with OPNAVINST 11010.36C, which sets APZ 25 requirements for Navy airfields."* [GRR00102529] A widely

[5] Mark Harmon, Captain, Retired, Northwest Airlines, 38 years of experience, totaling 28,000 hours in a variety of jet and propeller powered aircraft; holds licenses in ground instruction for FAA basic, advanced, instructor, and flight engineer certification.

cited study of 369 Air Force accidents[6] found that found that 61 percent of the accidents were during landing, and 39 percent were on takeoff. Fighter and training aircraft accounted for 80 percent of those accidents. The Growlers at OLFC are both—i.e., the F-18 fighter airframe often piloted with relatively inexperienced flyers practicing the most difficult of aviation landings. Unseasoned pilots are more prone to mishaps:

> *Studies have shown a relationship between career flight hours and increased pilot mishap causal factors. A 2009 CNA study found that P-3 Orion pilots with low career flight hours tended to have greater numbers of pilot error mishaps. A second 2009 CNA study of Marine Corps aviators reported that junior F/A-18, AV8B, CH-46E, and AH-1W/UH-1N pilots had greater numbers of pilot error mishaps than their more senior counterparts. A 2010 CNA study described a "well-established relationship between low pilot career flight hours and higher mishap frequency."*[7]

Obstructions and fenced roads in the CZ and PS are not only a safety issue for the aircrew but also for civilians. The northwest end of the OLFC runway (takeoff end for Track 32 and the landing end for Track 14) is just 90 feet (188 feet from centerline) from concrete Jersey barriers along well-traveled Keystone Hill Road (Figure 1),[8] which has a long parking area along its shoulder. That parking area, at just 200 to 500 feet from the edge of the runway, is well within the PS, the area in which 25% of aviation accidents occur. Yet the Navy tolerates civilian gatherings there, ignoring military directives forbidding roads and cars (see photographs in Appendix A). And at the southern end of the runway (takeoff for Track 14 and landing for Track 32) about 1000 feet of busy State Road WA 20 loops through the PS, coming to within just 500 feet of the runway, or 250 feet inside the PS (Figure 2). And at the north end about 1 mile of SR 20 passes through the APZ-1 area (see next section). At rush hour in 2012 vehicles were enumerated at a rate of 580 per hour or about 1 vehicle/15 seconds or if evenly spaced, 1 car about every 367 yards at 50 mph.[9]

These are serious breaches of DoD and Navy directives that clearly put civilians at unacceptable risk of a Growler mishap:

> *Airfield safety violations, in the form of flight obstructions, occur when any object (natural, manmade, stationary, or mobile) penetrates the imaginary surfaces, as outlined in NAVFAC P-80.3. These airfield safety violations require waivers, which are agreements that certain airfield safety violations will not be enforced due to the overriding operational needs of the station. According to NAS Whidbey Island ATC and Public Works personnel,* ***there are no existing airfield safety violations and waivers on record at NAS Whidbey Island****. To prevent any airfield safety violations and waivers in the future, all new construction must follow the established criteria in NAVFAC P-80.3.* [GRR00032259 or 2005 AICUZ, page 5-15]

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6 http://www.mncppcapps.org/planning/publications/pdfs/193/Apendix%20B%20Clear%20Zones%20and%20Accident%20Potential%20Zones.pdf (see page B-3 and B-4). Cited in nearly every Air Force AICUZ post CY 2000.

7 https://www.militaryaviationsafety.gov/newsroom/NCMAS_Final_Report.pdf (page 60)

8 All measurements in this paragraph were measured using Google Maps Distance Calculator at https://www.daftlogic.com/projects-google-maps-distance-calculator.htm.

9 Island County Transportation study. https://www.islandcountywa.gov/Planning/2016CompPlan/2016_08-Transportation.pdf PG 19, FIG 2.4

For years the Navy has ignored the need to secure the multiple waivers for gross “safety violations” at OLFC, as required by NAVFAC P-80.3. There are no waivers because waivers cannot be justified, and likely would not and should not be granted were they pursued.

3. Coupeville middle and high school on the very edge of APZ-1

The majority of the land uses under or near the OLFC track 32 flight tracks existed either before the Navy decided to make OLFC into a carrier landing practice field, around 1969, and nearly all were in place before the 2018 Record of Decision (ROD). Development since 2005 was largely consistent with the long-range Navy plans (2005 AICUZ) for 6120 annual FCLP operations at OLFC. [ARR00032220, or 2005 AICUZ, page 3-7, Table 3-3] The ROD dishonored that AICUZ commitment increasing the operations fourfold and, in so doing, put the development it had green-lighted in jeopardy of Growler mishaps.

3.1 Accident Potential Zones (APZs): Under the Navy’s ROD, Track 32 for OLFC will experience 8000+ annual FCLP operations at both ends of the runway, which exceeds the 5000-operations threshold that calls for establishment of Accident Potential Zones (APZs). [GRR00150749 or FEIS 4-175] Whether the County adopts APZs or not has no bearing on the attendant risk factors. Either way the mishap risks remain the same.

Airport clear and accident potential zones (APZs 1 and 2) are based on standard straight in/out landing and takeoff practices in which the aircraft on landing and takeoff follow a single straight centerline or flight line across those three zones, which taken together extend nearly 3 miles beyond the runway. [see Figure 5-4 at GRR00032255 or 2005 AICUZ, page 5-9; GRR00150327 or FEIS page 3-11] The clear zone (CZ) is flat, open land, free of obstructions and extending 3000 feet from the end of the runway. Beyond that are the APZ-1 followed by APZ-2. The Navy, recognizes these areas "*possess a potential for accidents and their use is restricted in accordance with DODI 4165.57*."10[GRR00032895]. The APZ-1 extends 5000 feet beyond the CZ and is 3000 feet wide, or 1500 feet on either side of the flight line. The APZ-2 is the same width and extends another 7000 feet beyond the APZ-2. [GRR00032255 or 2005 AICUZ, page 5-9]

An Air Force study of aircraft accidents from 1968 to 1995, found 25% of the accidents occur on or adjacent to the runway ("primary surface"). However, 28% of the accidents occur in the CZ, 10% in the APZ-1 , and 6% in the APZ-2; hence, these three zones together are the area most likely to experience crashes11:

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[10] https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/416557p.pdf?ver=2019-04-15-094510-673. (See Figure 1 of Appendix 1, page 15).

[11] http://www.mncppcapps.org/planning/publications/pdfs/193/Apendix%20B%20Clear%20Zones%20and%20Accident%20Potential%20Zones.pdf (See Figure B.3, page B-6).

> Because the purpose of the study was to identify accident hazards, the study plotted each of the 369 accidents in relation to the airfield. This plotting found that the accidents clustered along the runway **and its extended centerline.**

The APZ lengths and widths were designed as safety buffers for destination-based flights that when landing and taking off follow a single straight line to approximately the end of the APZ-2 before deviating from that flight line. However, carrier landing practice (FCLPs) at OLFC do not conform to that boilerplate flight pattern. Instead, the jets (usually 3 or 4 in close proximity) follow at least three discrete flight lines (or tracks), as shown in Figure 3 below. [GRR00159472 or FEIS, page A.4-30] The width of the APZ is always measured on either side from the flight line. So, for OLFC runway 32 this should mean that the APZ widths should extend 1500 feet in from the innermost tracks (32FCP1) and 1500 feet out from the outermost tracks (32FCP3). The distance between the inner and outermost track is about 3100 feet, so the actual APZ should be at least 6100 feet wide (3100 +1500 +1500). The same applies for runway 14, which also has three tracks (14FCP1 to 14FCP3), albeit under the ROD runway 14 does not meet the 5000-operations threshold.

That 6100-foot-wide APZ-1 and -2 area is the high-risk crash zone. The Navy, however, inappropriately merges the three discrete flight lines into one central conceptual flight line and then measures 1500 feet from that single, unreal line, hence, reducing the APZ width from 6100 feet to just 3000 feet (Figure 4). The Navy's risk-masking by merging of the three tracks into one in the middle ignores and disrespects Department of Defense Instruction (DODI 4165.57, page 10)12, which calls for APZs to be be adjusted to properly accommodate multiple flight track safety risks [GRR00032895]:

> (1) Where multiple flight tracks exist and significant numbers of aircraft operations are on multiple flight tracks, modifications may be made to create APZs that conform to the multiple flight tracks.

The low 300-foot to 1000-foot FCLP altitudes [GRR00150328, Figure 3.1-6] exacerbate risks because it reduces space and distance for the pilot to maneuver the jet to an open crash site (e.g., water bodies), as revealed in this video of an F-18 crash in Virginia Beach: https://youtube.com/watch?v=iR_PcZPy-6g . As stated above, the whole purpose of the CZ and APZ is to identify areas of greatest crash risk, not hide or distort those areas. Instead of presenting APZs that reflect the actual risk, the Navy zeroed-out about half of the true risk area. That is, it ascribed no risk of a jet crashing 1500 feet outside the edge of its actual flight line for tracks 32FCP1 & 32FCP3 and 14FCP1 & 14FCP-3. Exacerbating that risk even further, the flight paths actually being flown are wider by 1000 to 5000 feet than the paths depicted in Figure 3 (as acknowledged by the Navy in Appendix B below). That masking and distortion of risk cannot be rationally defended, and the Navy needs to be held to account for and correct the misleading impacts.

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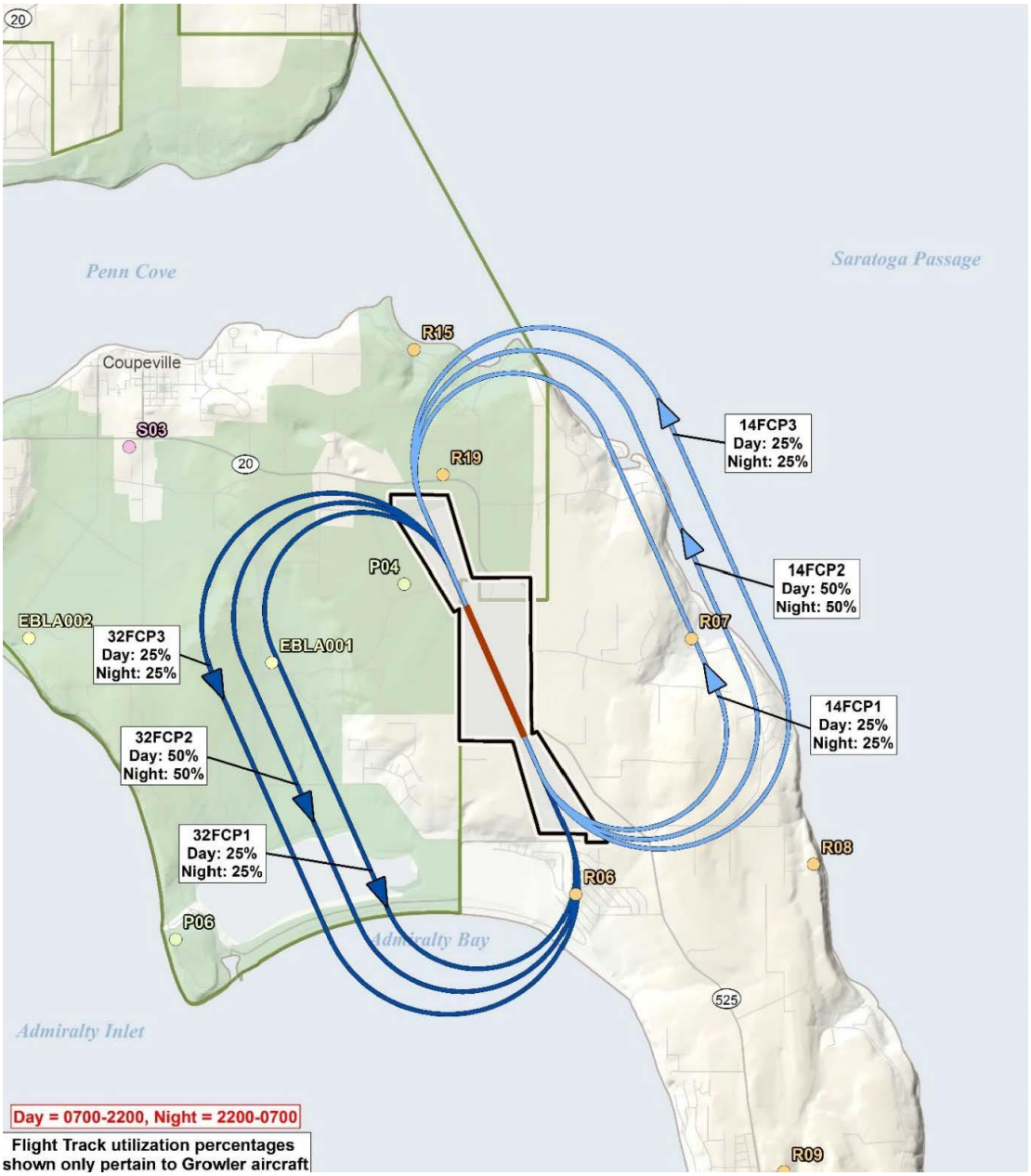
12 https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/416557p.pdf?ver=2019-04-15-094510-673

Figure 3. Field carrier landing practice (FCLP) flight tracks for used by Growlers at OLF Coupeville. Flight tracks are designate in light blue (Track 14) and dark blue (Track 32) Noise measurement locations (yellow circles) analyzed by Navy noise modeling are labeled with their idenification codes (Source final Evironmental Impact Statement).[ARR00104555 or FEIS, page A4-30]



3.2. Side-Stepped Executive Order (EO) 13045: In addition, the APZ size suppression allowed the Navy to side-step Executive Order (EO) 13045. That order requires the Navy to evaluate the effects of planned federal actions on children and explain why its proposed action is preferable to other potentially effective and reasonably feasible alternatives. Instead of dealing forthrightly with EO-13045, the Navy's obfuscation of the APZs and actual risks facilitated the following conclusion [GRR00150753 or FEIS Page 4-179]:

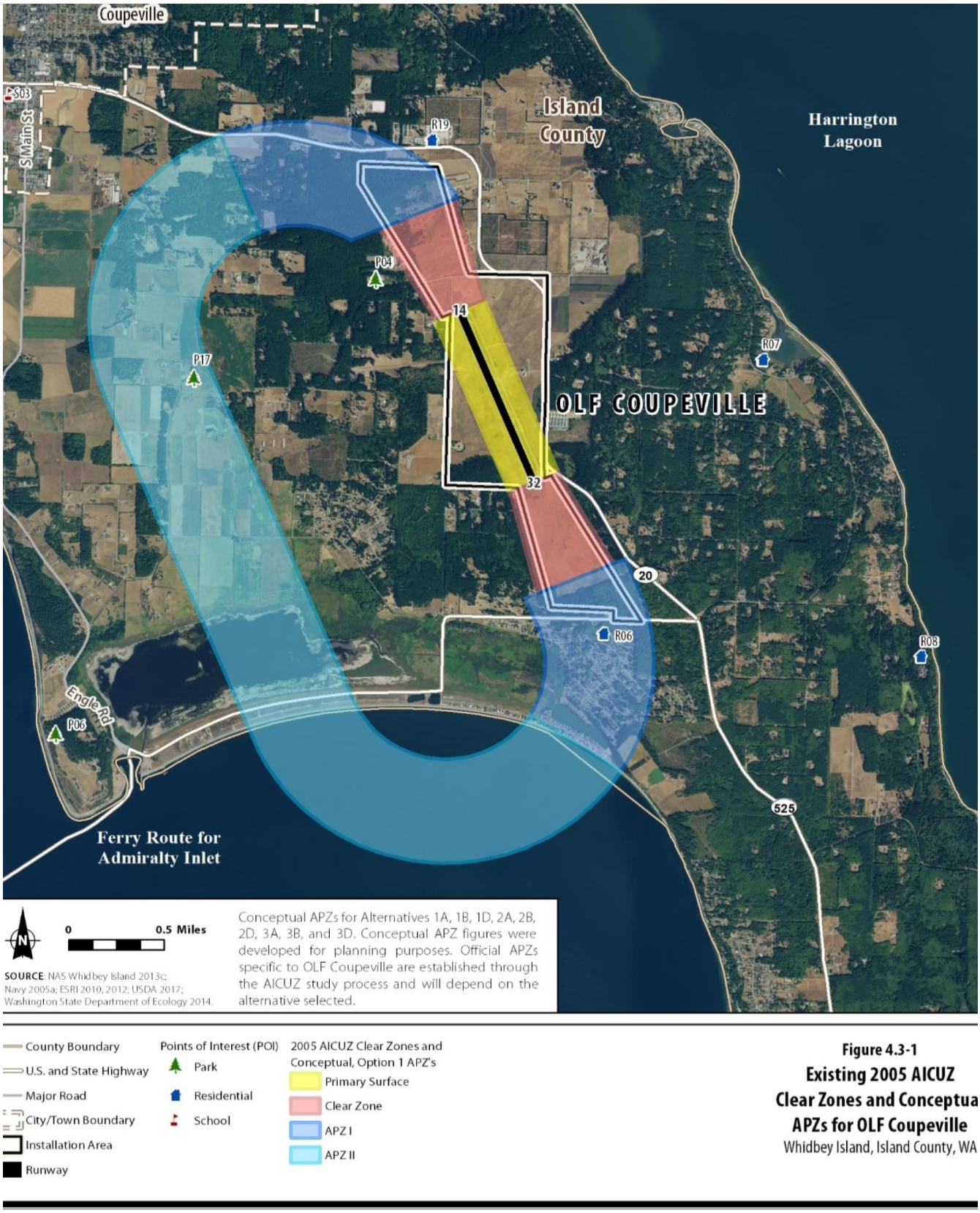
> *However, as described in Section 3.3.2.4, unless there is a place where children congregate within an APZ, such as a school, there would not be a disproportionate safety risk to children.* ***There are no schools or daycare centers*** *within the existing Clear Zones, existing APZs or conceptual APZs at Ault Field and OLF Coupeville under any of the alternatives or scenarios. A small portion of Rhododendron Park falls within the Clear Zone and within the conceptual APZs at OLF Coupeville.* ***However, this area of the park is used for passive recreation and is not expected to be an area where children congregate.*** *Therefore, there are no disproportionate environmental health and safety risks to children as a result of possible aircraft mishaps under any alternative or scenario for both the average year and high-tempo FCLP year.*

Using honest APZ designations of at least 6100 feet wide Coupeville's high school and middle school and a daycare center lie in or within just a few feet of the APZs for track 32. In addition, the youth athletic field at Rhododendron Park is in the APZ-1 and is definitely an area where kids congregate periodically (just as presence at schools is periodic). The Admirals Cove Beach Club olympic size swimming pool, also an area where youths congregate periodically (e.g., Lyon's Club swim classes), is in the APZ-1. In addition, within just 2000 to 3000 feet of western boundary of the APZ for Path 32 is Fort Casey and its swimming pool and multiple barracks used by youth groups numbering welll into the hundreds.

Between 1975 and 2005 there were 9 accidents involving landings and takeoffs an Ault Field and OLF, or nearly 1 every 3 years. [ARR00032256 or 2005 AICUZ, Table 5-2, page 5-10] One-third of the mishaps impacted land or water outside the PS, CZ, and APZ boundaries. One of those, a Prowler conducting FCLPs at OLF, crashed to the west of the primary surface. Similarly the F-18 crash in Virginia Beach was just outside the APZ-2; this video provides disturbing insight on what a crash actually looks like (https://youtube.com/watch?v=iR_PcZPy-6g).

Whether the County adopts APZs or not is irrelevant, either way the risks are the same and increase with increased FCLP numbers. Were it not for the schools, the daycare center, and the youth athletic fields, and the swimming pools—all places where youths congregate—there would be no disproportionate risks to childern. But there are. The Navy's distortion of the actual APZs and the attendant masking of the disproportionate risks to children disrespects Executive Order (EO) 13045.

Figure 4. Depiction of Primary Surface, Clear Zone, APZ-1, and APZ-2 for Track 32 at OLFC as presented in the final EIS. Track 14 is under the FCLP threshold for APZs.



4. Bird strike avoidance protocols cannot be satisfied

The draft EIS admits in Section 3.3.1.2 that bird strike (BASH) events are a safety concern because of the potential for major risks to aircraft, pilots, and civilians [ARR00150371]

> The presence of resident and migratory birds at NAS Whidbey Island is attributable to both the installation's location within the Pacific Flyway and the occurrence of water-filled ditches, freshwater wetlands, marine shoreline, perch sites, tall brush, and short grass in the vicinity of the runways. All of these conditions attract numerous bird species, and their presence creates a potential BASH risk…most reported bird strikes occur **at an elevation of less than 1,000 feet AGL**…**To reduce the potential for BASH, the FAA and the military recommend that land uses that attract birds (e.g., agricultural fields, landfills) be located at least 10,000 feet from an airfield**.

The downwind FCLP leg for OLFC Track 32 takes the Growler pilot directly over sprawling agricultural fields frequented by harriers and waterfowl. Next, at about 600 feet, the pilot crosses 430-acre Crockett Lake and its additional extensive marshlands; it is a major waterfowl refugia and stopover during the migration season as well as year-round resident waterfowl. The pilot then crosses this preserve. "*Every year, more than 230 species of birds breed, nest, feed and rest here — from shorebirds that blanket the lake and fill the sky in spring and fall, to ducks that overwinter in the shallow marshes and mudflats to raptors in search of an easy meal.*"[13]

From Crockett the pilot then crosses marine waters of Admirals Cove, which hosts a variety of waterfowl, raptors, and gulls, many trading between Crockett Lake and salt water. The pilot then proceeds immediately over 12-acre Admirals Lake as it begins its final approach. This lake, as a part of the Class-A Crockett Lake wetland, is heavily used by waterfowl, herons, gulls and eagles throughout the year. As a freshwater lake--Crockett being very saline--it provides for waterfowl hydration, bathing, and loafing. Jets cross that lake at about 500 feet above. [GRR00150328, Figure 3.1-6] Immediately surrounding Admirals Lake is a dense suburban development in harms way of a bird strike event. Even in the runway area eagles and harriers are frequently observed soaring in search of rodents.

So from the beginning of the downwind leg around the south end of the turn and across the final approach to the south end of the runway, and even within the primary surface and clear zone there is significant bird strike risk. Hence, none of those above-stated FAA/DoD recommendations[14] to avoid BASH risks can be met at OLFC and obviously none of those lands can be relocated to someplace 10,000 feet from the FCLP flight track.

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[13] ://www.wclt.org/projects/crockett-lake-preserve/

[14] https://www.icao.int/Meetings/AMC/MA/2001/acilac/06_leboeuf_usaf_bash.pdf

Photo: American white pelicans flying over Crockett Lake and thousands of gulls loafing on the shallow flats.

One pertinent anecdotal example was noted in COER's comments on the draft EIS:

> As phoned into the Navy's comment line, on August 17, 2016, afternoon FCLPs provoked 100s (up to perhaps 1000) gulls to rise up off the Admirals Cove lake and the adjacent nearshore sound waters. They rose up in huge swirls and settled back down after each jet past, over and over until after about an hour they finally departed in mass and headed south across the Puget Sound. While many did not rise high enough to be struck, a significant number did. There was no indication that that ground control or the pilots were aware of the situation, but they may have monitored the rest of that practice week.

The draft EIS goes on to state:

> With an increase in operations, **the potential for BASH increases slightly**; however, the risk is **managed through continued application of BASH measures**, and the risk of BASH would be expected to remain **similar to existing levels**. [ARR00113594 or DEIS, page 4-116]

If bird strike risk is X for 6000 operations, then reasonably enough, for 24,000 operations the risk is approximately 4X. How does a 4-fold increase in risk under the Record of Decision equate to remaining "*similar to existing levels*"? And what BASH management measures might those be? The FCLP pattern is rigidly set, so they really cannot modify elevation or path. The only thing they can do is try to harass the birds away and that is not an option.

5. Wind direction mostly fails to replicate carrier landing conditions

Wind direction very often diminishes training efficacy by failing to replicate carrier landings, which are always into the wind. Carrier landing practice at OLFC on the afternoon of June 29, 2020 (about 1515 to 1700 hours) used runway #32 during a consistent southeast tailwind of about 10+ mph.[15] The Growler Environmental Impact Statement [GRR00150291 or FEIS; page 2-3] states:

> The Navy established requirements for FCLP airfields **in order to ensure that FCLP realistically trains naval aviators to land on an aircraft carrier**…. These requirements are crucial because landing on an aircraft carrier is perhaps the most difficult operation in military aviation.

Landings/take-offs on an aircraft carrier are always into the wind, so landing with a 10+ mph tailwind does not mimic carrier landings. And it exacerbates safety risks due to the higher ground-speed needed with a tailwind. Furthermore, the OLFC runway, even when landing into the wind and, hence, at slower ground speed, is barely the minimum length needed for an emergency landing on a dry runway (see section 2 above).

Though not common, practice sessions with a tailwind at OLFC have been observed before (as noted in COER comments on the draft EIS). Very commonly observed, however, are FCLPs with a 5-20 mph westerly crosswind. In fact, the vast majority of the OLF spring and summer FCLPs are with winds that align roughly perpendicular to the runway. The FEIS states, "*To be suitable for FCLP... the runway [should be] aligned with the prevailing winds.*" [GRR00150291 or FEIS; page 2-3] During the predominant spring/summer west and southwest winds, the OLF is not properly aligned, whereas runway 07/25 at Ault Field is and would allow training that mimics carrier landings. Putting other uses of runway 07/25 ahead of replicating carrier landing conditions, while at the same time arguing that realistic training is critical, is disingenuous at best.

6. Weather conditions force frequent cancellations of practice sessions

Weather also constrains OLFC use. In 2017 and 2018, 32% and 23% practice sessions were canceled at OLFC versus 0% and 3% at Ault Field (FOIA data). And in an internal email Captain Moore (July 28, 2017) laments, "*In 2015/2016, 33 of 101* [one-third] *scheduled OLF Coupeville fly days were canceled--primarily for wind constraints and weather ceilings. In addition on five occasions we started at the OLF and had to move to Ault Field due to [ceiling and weather].*" Captain Moore goes on to explain that the high cancellation rate could require more flying at OLFC going into the early morning hours

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[15] The wind prog chart showed winds from the southeast at 10-12 knots. TAF KNUW 2923/3023 15010KT 9999 FEW035 SCT180 SCT250 QNH2994INS TEMPO 2923/3001 23013G20KT FEW020 SCT035 BKN180 BKN250

and initiation of flying on weekends. That sort of usage would be sure to heighten controversy, which the Navy knows is always an issue of concern affecting base closure considerations.

Conclusion

None of COER's revelations here are consistent with Navy rhetoric that OLFC is a uniquely great training venue. Yes, handy and convenient, but otherwise failing on far too many critical and fundamental elements, as summarized in Table 1. Other locations would provide more realistic training, without the insurmountable problems attended to OLFC. For example, this July 12, 2017, internal Navy document states, "*The unmodified carrier landing pattern at NAF El Centro and the unique at-sea ambient lighting and environmental conditions of nearby San Clemente Island provided higher quality of training than could be achieved at either Ault Field or Coupeville.*" [GRR00121559] The Navy knows all this, so it is difficult to understand, why it retreated from efficacious consideration of other promising sites. One has to wonder if the Navy is so locked into intransigent thinking that it just cannot find the key to unlock the box it has placed itself in.

Table 1.--Land-use standards that cannot be achieved at OLFC but the Department of Defense stipulates as inappropriate within Clear Zones and Accident Potential Zones (APZs). Incompatible standards were taken from DODI 4165.57[a] [GRR00032217 to 32276 or 2005 AICUZ, pages 6-12 to 6-15]

Incompatible land-use item[a]	**Acceptable?[a]**	**Incompatibility comments and details**
Incompatible land uses in the Clear Zone[b]		
Motor vehicle transportation	Not Acceptable	Two roads (Patmore and Keystone Hill Road) are in the Clear Zone and State Highway 20 is in the Primary Surface (see Figures 1 and 2).
Automobile parking	Not Acceptable	Groups of jet enthusiasts park along the shoulder of Keystone Road just 100 to 500 feet from the OLFC runway.
Incompatible land uses in the APZ-1		
Single dwelling units	Not Acceptable	About 700 homes in APZ-1 for Runway 32.
Transient lodgings	Not Acceptable	Ryan's House (.https://www.ryanshouseforyouth.org/the-campus.html) is a refuge for late teens disassociated from familial homes. Aside from the Drop-In Center,

		14 transient residential dorm rooms house up to 32 young adults (ages 18 to 24).
Solid waste disposal	Not Acceptable	Central Whidbey recycle and trash disposal center.
Other transportation, communication, and utilities	Conditions, but not met[1]	Island County Transit with its above- ground fuel storage tanks.
Educational services [schools]	Not Acceptable	Middle and high school and large daycare center in or on the very edge of actual APZ-1 risk.
Child care services, etc.	Not Acceptable	Large daycare center in or on very edge of actual APZ-1 risk.
Public assembly	Not Acceptable	•Nordic Lodge: frequent events of 100-200 people •Admirals Cove Club House: weddings, birthdays, and special group gatherings
Recreational activities (including...water recreation)	Conditions, but not met[2]	Olympic size swimming pool at Admirals Cove: used for Lyons Club swim lessons and swim team practice, and youth recreation. Adjacent to pool are a playground, basketball court, and beach recreation.
Resorts and group camps	Not Acceptable	County campground at Rhododendron Park
Parks	Conditions, but not met[3]	•Patmore Park: well used dog park. •Rhododendron Park: youth soccer and baseball fields and nature trails.
Water areas	Conditions, but not met[4]	Bird strike risk is high throughout Track 32 FCLP circuit[4] (see Section 4 of this report). Bird strike avoidance protocols cannot be satisfied).
Incompatible land uses in the APZ-2		
Single dwelling units	Conditions, but not met[5]	Admirals Cove Development and portions of Crockett Lake Estates (about 700 homes) exceed the <2-unit maximum. Trailer park below high school on edge of APZ-2.
Educational services [schools]	Not Acceptable	High & middle schools on edge of APZ-1 and APZ-2
Child care services, etc.	Not Acceptable	Large daycare is on edge of APZ-1 and APZ-2
Cultural activities	Not Acceptable	Portions of Ebey's Landing Historical Reserve in

		middle APZ-2 and on its edge is Fort Ebey with its historic bulwarks and cannons.
Public assembly	Not Acceptable	On the edge or within APZ-2: •High school and middle school, •Crockett Barn and Jenne Farm for weddings and assemblies.
Recreational activities	Not Acceptable	On APZ-2 edge: Bowling alley & Pool at Fort Ebey.
Resorts and group camps	Not Acceptable	On the edge of the APZ-2 are the barracks and recreational fields, pool and tennis courts at Fort Casey (Pacific U. owned) for large youth athletics (e.g. soccer camps) and other group events.
Trade and services: •Eating & drinking •Medical facilities	Not Acceptable	Both of these trade and services items are on the very edge of the APZ-1 and APZ-2.
Water areas	Conditions, but not met)[4]	Bird strike risk is high throughout Track 32 FCLP circuit[4] (see Section 4. Bird strike avoidance protocols cannot be satisfied).

a. https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/416557p.pdf?ver=2019-04-15-094510-673. See Appendix 2.)

b. "No structures (except airfield lighting), buildings, or above-ground utility/ communications lines should normally be located in Clear Zone areas on or off the installation. The Clear Zone is subject to severe restrictions. See NAVFAC P-80.3 or Tri-Service Manual AFM 32-1123(I); TM 5-803-7, NAVFAC P-971, *Airfield and Heliport Planning & Design*, May 1, 1999, for specific design details." [GRR00032276 (see footnote 4) or 2005 AICUZ, page 6-15]

1. Condition: Acceptable if no above ground passenger terminals and no above ground power transmission or distribution lines. The above ground fuel storage makes this more unsafe than the power line concern. Hence, conditions cannot be reasonably met.

2. Facilities must be low intensity, and provide no playgrounds, etc. Facilities such as club houses, meeting places, auditoriums, large classes, etc., are not recommended. Hence, conditions cannot be reasonably met.

3. Facilities must be low intensity, and provide no playgrounds, etc. Rhododendron Park has youth athletic fields. Hence, conditions cannot be reasonably met.

4. Naturally occurring water features (e.g., rivers, lakes, streams, wetlands) are pre-existing, incompatible land uses. Naturally occurring water features that attract waterfowl present a potential threat [ARR00150371]. Hence, conditions cannot be reasonably met.

Appendix A

Photographs 1 and 2: Two Photographs showing proximity of Keystone Hill Road to the north end of the OLFC runway and the Jersey barriers that surround the northern half of OLFC. Note telephone poles in uppermost photo showing location of SR 20 on east (other) side of runway.

Photographs 3 and 4: Two photographs of jet enthusiasts in the Primary Surface area parked along Keystone hill road. The second photograph looks up Keystone Hill Road to its intersection with Patmore Road as a jet approaches about 50 feet over the heads of

the onlookers.

Appendix B

Pilots conducting field carrier landing practice at the OLF are not able to conduct their takeoff turns in keeping with the planned flight paths displayed in the final EIS. That failure significantly increases the noise exposure projected in the EIS for Coupeville and Admirals Cove.

The takeoff turns on Track 14 are supposed to begin well north of SR 20, and do not cross SR20 or enter into Admirals Cove (see FEIS, page A4-30). In reality, however, every jet crosses SR 20 and proceeds south well into Admirals Cove before turning back to the northwestern downwind leg. That amounts to the track being outside the track by about 4000 to 5500 feet. Likewise on Track 32, the actual takeoff path is 1000 to 2500 feet outside the projected widest pathand that much closer to the schools.

This was acknowledged in the following email exchange (July 2020) between the Navy and COER member Bob Wilbur who was seeking an explanation for why FCLP pilots are flying well outside the widest flight tracks designated in the EIS (i.e., tracks 32FCP-3 and 13FCP-3 in Figure 3 above). Basically, Brian Tyhuis was affirming that to be correct, because when there are 3-5 jets flying they cannot stay within those depicted flight tracks. This means that the actual flight lines are closer to the schools than projected in the EIS.

FROM: Tyhuis, Brian P P CIV USN NAVFAC NW SVD (USA) <brian.tyhuis @navy.mil>
To: Bob Wilbur <bbwilbur@frontier.com
DATE: Thu, 16 Jul 2020 17:05:48+0000
Mr. Wilbur,

Thank you for your email. I totally understand the questions about the EIS maps and what you are experiencing on the ground as we have received similar comments. The Field Carrier Landing Practice (FCLP) flight tracks shown in the EIS represent the average aircraft distribution tracks and were used in the noise modeling analysis. Depending on multiple factors (i.e. squadron deployments/detachments, training syllabus, aircraft maintenance cycles, etc…) the number of total aircraft in the FCLP pattern during a session can vary between 1 to 5 aircraft. The number of aircraft in the pattern during a session will cause the track to be shorter or longer so as to maintain safe aircraft separation distances throughout the session. Less aircraft in the pattern will mean a shorter track while more aircraft will require extending the track for proper separation. A three aircraft pattern was the average number of aircraft between the total range (1 to 5) and so was the reason it was used during the EIS to model aircraft noise. The maps you see in the EIS reflect this average track. However, from day to day, and session to session, the number of aircraft in the pattern will determine if they are flying shorter than the average or, in the case of what you describe below, stretching further south on the extended Runway 14 centerline before the left turn to the east. Most likely what you experienced was a 2-3 aircraft pattern during the first session and then a greater than 3 aircraft pattern during the other sessions.

Hope this information helps in understanding the tracks shown in the EIS.

Regards,
Brian Tyhuis
Community Planning Liaison Officer

NAS Whidbey Island
1115 W. Lexington St. B103
Oak Harbor, WA 98278

From: Bob Wilbur <wilbob@frontier.com>
Sent: Thursday, July 16, 2020 6:12 PM
To: Tyhuis, Brian P CIV USN NAVFAC NW SVD WA (USA) <brian.tyhuis@navy.mil>
Subject: Re: [Non-DoD Source] Track 14 today July 10, 2020

Thanks Brian, that is indeed a reasonable explanation. So are you saying the FCLP flight tacks shown FEIS Appendix 4 only depict times when there are 2 jets in the pattern, and when there are more, the tracks are considerably larger to keep the jets from bumping into one another?

Thanks much,
Bob Wilbur

FROM: Tyhuis, Brian P P CIV USN NAVFAC NW SVD (USA) <brian.tyhuis @navy.mil>
To: Bob Wilbur <bbwilbur@frontier.com
DATE: Thu, 17 Jul 2020 15:21:07+0000

Mr. Wilbur,

The FCLP flight tracks shown in Appendix 4 depict times when there are about 3 jets in the pattern. When there are less aircraft the track tends to be smaller (but not always) and when there are more aircraft the track will extend to provide safe separation distances between the aircraft. It's also important to note that the tracks shown on the maps are not centerlines in the sky that aviators will fly exactly every single time. They depict where flights tend to occur most of the time and was used to model aircraft noise. But aircraft will be either left or right, or north or south of these tracks depending on wind direction, wind speed, fuel loads, number of aircraft, experience, etc…

Regards,
Brian Tyhuis
Community Planning Liaison Officer
NAS Whidbey Island
1115 W. Lexington St. B103