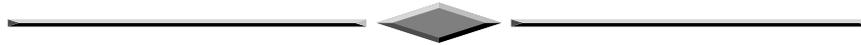


APPENDIX D

DESCRIPTION OF AIRSPACES



Appendix D

Description of Airspaces

Introduction

Appendix D contains the proposal submitted to the Federal Aviation Administration (FAA) per FAA Order 7400.2J for the proposed Establishment and Modification of Oregon Military Training Airspace. This proposal includes 1) Modifications to Warning Area (W-) 570 and the Bass/Bass South Air Traffic Control Assigned Airspaces (ATCAAs); 2) Establishment of Eel Military Operations Area (MOA) and Modification of the Eel ATCAA; 3) Expansion of the Juniper/hart MOA Complex; and 4) Establishment of the Redhawk MOA Complex. Together these elements would provide properly configured and located military airspace to provide realistic mission-oriented training with adequate size in order to support the advanced 21st century air-to-air tactical fighter technologies as well as the current and evolving training mission requirements of the Oregon ANG. Additional information regarding the purpose and need for the Proposed Action can be found in Section 1, Introduction of the Draft Environmental Impact Statement (EIS).

Table of Contents

W-570 and Eel MOA/ATCAA Aeronautical Proposal.....	D-2
Juniper/Hart MOA Complex Aeronautical Proposal.....	D-16
Redhawk MOA Complex Aeronautical Proposal	D-29

FAAO 7400.2J
Section 3. SUA PROPOSALS

21-3-3. PROPOSAL CONTENT

a. Proponent's Transmittal Letter. See proceeding.

b. Area Description.

W-570A Warning Area, OR Renamed from W-570

Boundaries.	Remain the same as published
Altitudes.	Remain the same
Times of use.	Remain the same
Controlling agency.	Remain the same
Using agency.	Change to: USAF, Air National Guard, 142 FW, Portland ANGB, OR

W-570B Warning Area, OR

Boundaries.	Beginning	at lat. 45°51'35"N, long. 125°30'00"W; to lat. 46°20'00"N, long. 124°46'00"W; to lat. 46°20'00"N, long. 124°21'00"W; thence south 12nm from and parallel to US shoreline to lat. 46°09'59"N, long. 124°20'05"W; to lat. 45°44'59"N, long. 125°30'05"W; to the point of beginning.
Altitudes.		1,000 feet MSL up to but not including FL500
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

W-570C Warning Area, OR

Boundaries.	Beginning	at lat. 46°09'59"N, long. 124°20'05"W;
--------------------	-----------	--

thence south 12nm from and parallel to US shoreline
to lat. 45°58'00"N, long. 124°15'53"W;
thence south 12nm from and parallel to US shoreline
to lat. 45°36'00"N, long. 124°13'29"W;
thence south 12nm from and parallel to US shoreline
to lat. 45°12'00"N, long. 124°15'26"W;
thence south 12nm from and parallel to US shoreline
to lat. 44°41'53"N, long. 124°20'22"W;
to lat. 44°37'59"N, long. 124°28'04"W;
to lat. 44°50'35"N, long. 124°21'21"W;
to lat. 44°54'02"N, long. 124°20'04"W;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including FL500

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW, Portland ANGB, OR

W-570D Warning Area, OR

Boundaries. Beginning at lat. 45°10'00"N, long. 126°34'30"W;
to lat. 45°17'00"N, long. 126°22'00"W;
to lat. 45°51'35"N, long. 125°30'00"W;
to lat. 45°44'59"N, long. 125°30'05"W;
to lat. 44°10'59"N, long. 125°30'05"W;
to lat. 44°04'00"N, long. 125°48'30"W;
to lat. 43°43'30"N, long. 126°28'00"W;
to lat. 43°55'00"N, long. 126°37'00"W;
to lat. 45°00'00"N, long. 126°30'00"W;
to the point of beginning.

Altitudes. 1,000 feet MSL up to but not including FL500

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel A MOA, OR

Boundaries. Beginning at lat. 46°20'00"N, long. 124°21'00"W;
to lat. 46°20'00"N, long. 123°50'00"W;
to lat. 46°07'00"N, long. 123°30'00"W;
to lat. 45°58'00"N, long. 123°30'00"W;
to lat. 45°58'00"N, long. 124°15'53"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.
to lat. 46°09'59"N, long. 124°20'05"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including
FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel B MOA, OR

Boundaries. Beginning at lat. 45°58'00"N, long. 124°15'53"W;
to lat. 45°58'00"N, long. 123°30'00"W;
to lat. 45°36'00"N, long. 123°30'00"W;
to lat. 45°36'00"N, long. 124°13'29"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including
FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel C MOA, OR

Boundaries.	Beginning	at lat. 45°36'00"N, long. 124°13'29"W; to lat. 45°36'00"N, long. 123°30'00"W; to lat. 45°12'00"N, long. 123°30'00"W; to lat. 45°12'00"N, long. 124°15'26"W; then north 12nm from and parallel to US shoreline to the point of beginning.
Altitudes.		11,000 feet MSL up to but not including FL180
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

Eel D MOA, OR

Boundaries.	Beginning	at lat. 45°12'00"N, long. 124°15'26"W; to lat. 45°12'00"N, long. 123°30'00"W; to lat. 45°07'00"N, long. 123°30'00"W; to lat. 44°41'53"N, long. 124°20'22"W; then north 12nm from and parallel to US shoreline to the point of beginning.
Altitudes.		11,000 feet MSL up to but not including FL180
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

c. Airspace Statement of Need and Justification.

1. Describe the purpose and need for the proposed airspace.

Currently, there is a need to modify the configuration and vertical limits of W-570 and convert the Bass / Bass South ATCAAs into Warning Areas to more effectively meet the training requirements for the 142d Fighter Wing (FW). Additionally, due to frequent

persistent poor weather which causes dangerous sea states and prohibits over-water training due to Air Force regulations, there is a need to establish a MOA underneath the existing Eel ATCAA and to expand the vertical confines of the existing airspace. By establishing this increased airspace it will provide the 142 FW a viable training area, close to base, to conduct mission requirements of Basic Fighter Maneuvers (BFM) and Air Combat Maneuvers (ACM) training when weather conditions preclude over-water flights.

The 142 FW employs a fourth generation F-15C Single Seat Fighter Jet which can rapidly transit altitudes from the surface to 50,000 feet and fly at speeds exceeding 12 NM per minute. Although, the over-water airspace of W-570 is uniquely suited for air-to-air combat training by providing the pilots the ability to train high and low altitude, conduct supersonic flight tactics and featureless terrain, the current boundaries severely limit the tactical training available. W-570 is roughly 90 by 50 NM in size, which was adequate for training with F-4 Phantoms and older versions of the F-15. The advancements in avionics and weapons systems in the current generation of the F-15 have made the vertical and lateral boundaries of W-570 constrained and are insufficient to maximize pilot proficiency and experience to meet current training requirement.

The W-570 Bass/ Bass South ATCAAs proposal is a unique situation in that there are no changes to the current airspace lateral dimensions or altitudes based on scheduling agreements. Yet this configuration change dramatically improves the realistic mission-oriented training of the 142 FW pilots. As advancements in threat technologies and tactics have improved, the requirement to train at all altitudes and longer ranges has increased. By simply reconfiguring the internal divisions of W-570 Bass/Bass South ATCAAs and increasing the vertical dimensions of Eel ATCAA you instantly provided the increased training and flexibility of scheduling. This airspace also improves the viability of the Oregon ANG and the 142 FW to potentially receive the latest Fifth Generation aircraft like the F-22 Raptor or F-35 Lightning II.

Adjustments to the W-570 Bass/ Bass South ATCAAs are proposed to be broken up as W-570A, B, C, and D segments. These segments would only be activated on an as-needed basis individually, or as a whole, based upon mission requirements. This increased flexibility would allow for more responsible and efficient stewardship of the airspace by the 142 FW by not activating un-needed extra airspace. For example, if a training mission requirement only called for basic fighter maneuvers (BFM), which does not require large volumes of airspace, then W-570 C and D would not be activated while only W-570 A and B are. If rough seas or high wind velocity are reported in only one of the segments of W-570, a different segment could be activated individually and provide the appropriate training opportunities.

As mentioned to above, weather conditions over the Pacific Ocean, referred to as sea-states, prohibit training when wind velocity are greater than 25 knots and sea conditions that have wind-wave heights exceeding 5 feet. Due to operational safety guidelines contained in Air Force Instructions (AFI), these conditions prohibit over-water training operations, specifically in W-570 and the Bass/Bass South ATCAAs. Historically on

average, sea-states were out of limits approximately 23 percent of the scheduled time (2008-2011); reaching as high as 75 percent in a given month. In addition to inclement weather, factors such as adversary support, naval operations, and over-land training requirements further restrict airspace availability, requiring the 142 FW to utilize compatible backup airspace elsewhere, primarily utilizing the Juniper/Hart MOA Complex. This annual average of unavailability represents a significant impact to training.

Options for other suitable airspace areas are limited by their distance from Portland, size, or by scheduling needs of other military units in the region. In most cases, for distance, scheduling and availability, the only suitable over-land airspace is the Eel ATCAA, located adjacent to W-570 along the Oregon coast. Even though the over-land portions of Eel ATCAA are available when sea states preclude over-water training, it is rarely utilized (except for air-to-air refueling) due to the limited (i.e., vertically constrained) altitude structure of 18,000 feet MSL to 27,000 feet MSL. This limited altitude block provides almost no benefit for F-15 mission requirement subsets of Advanced Handling Considerations (AHC), BFM, and ACM, and cannot accommodate larger Offensive Counter-Air (OCA) or Defensive Counter-Air (DCA) training missions. Since realistic combat training requires a block of altitude much lower and higher than what is currently available within Eel ATCAA, the 142 FW currently utilizes the Juniper South and Hart North MOAs for BFM, ACM, Tactical Intercepts (TI), Aerospace Control Authority (ACA), OCA, and DCA training missions as a poor-weather, over-land backup airspace. The nearest border of Juniper South and Hart North MOAs however, is located approximately 170 NM from Portland. The closest over-land airspace suitable for BFM is the the Boardman MOA which is located 140 NM away, and the closest over-land airspace most appropriate to support both BFM and ACM airspace when not using the Juniper/Hart or Boardman MOAs is the Olympic MOA, which is also located 140 NM from Portland. The large distance and length of time required to reach these training areas cause mission degradation. Between 22 and 36 percent of fuel that could be used for training is expended during transit to and from the Juniper/Hart, Boardman, or Olympic MOAs. This results in reduced time for training in the MOA and less flexibility to repeat a difficult mission task, which be the difference between a successful training flight and a failed mission.

With the over-water weather conditions unique to the Northwest and the lack of a suitable over-land alternative, approximately 320 additional transit hours are flown by the 142d FW to and from the Juniper/Hart MOA complex per year. This equates to nearly 10 percent of the 142 FW's annual flying hour allocation and is enough hours to maintain three pilot's combat mission ready requirements throughout the year. These hours – if reallocated – would be used to better provide 142 FW pilots with sufficient flying hours to achieve higher mission readiness. Finally, increased transit time results in additional fuel and maintenance costs for the F-15. This issue is further exacerbated by the implementation of the Domestic Reduced Vertical Separation Minimum (DRVSM) airspace. The long distances flown to other over-land airspaces that would normally be flown at higher altitudes, to conserve fuel, are now more difficult to schedule due to the FAA-mandated procedures for non- DRVSM approved aircraft such as the F-15.

Potential suitable airspace for the 142 FW include the Juniper/Hart MOA Complex and the Boardman and Olympic MOAs which all exceed the researched maximum desired distances to training airspace (RAND Corporation 2001). Airspace areas that meet the prescribed maximum desired distance criteria from the 142 FW in Portland that could potentially be modified include W-570 and the Bass/Bass South ATCAAs (both over-water) as well as the Eel ATCAA. Establishment of a new MOA underneath the existing Eel ATCAA would provide over-land training airspace that would comply with the maximum desired distance to airspace for training missions.

142 FW is the primary ACA, or alert squadron, for the Pacific Northwest Western Area Defense Sector (WADS). To maintain proficiency in operating air defense combat air patrols, protecting Temporary Flight Restrictions (TFR) for President of the United States (POTUS) support missions, and intercepts escorting distressed civilian aircraft, the 142 FW conducts weekly practice scrambles out of its alert facility. This end-to-end system training provides WADS controllers, PDX Tower, FAA TRACON, Seattle Center controllers, and pilots proficiency for this critical no fail mission in defense of the United States. Often, due to poor over-water weather conditions, this training is cancelled for lack of adequate airspace or the ability to move a supporting Target of Interest (TOI) to over-land airspace. These cancelations could be avoided by increasing the vertical confines of Eel ATCAA/MOA and therefor allowing increased training opportunity of the ACA mission.

Moreover, the majority of mission ready pilots in the 142 FW are what is known as, "traditional guardsmen." Traditional guardsmen have full time employment outside the Air National Guard. This limits the number of days they are available to participate in training. Regardless, these pilots are required to perform the same RAP requirements as full time pilots but accomplish them with approximately only 20 percent of the flying opportunities. Consequently, when weather prohibits use of W-570 and Juniper/Hart MOAs are not available, the time constraints for these pilots increase the difficulty of maintaining their CMR status. Furthermore, the increased transit time and loss of on station training time available compounds this problem for our "traditional guardsmen." This year, the 142 FW requested 3700 flying hours to maintain proficiency and conduct training requirements. The NGB has only authorized the 142 FW to fly 3319 hours for the year. Budgetary requirements are beginning to reduce the much needed flying hours and the trend is anticipated to only continue. As flight hours are reduced, the cumulative effect of 320 plus hours of transit time is magnified through the lack of on station training time available to each pilot. The ability to fly for a reduced time while maintaining, or increasing training time is profound in its ability to generate more sorties and improve the overall fighting ability of the unit.

In the current economic climate, Air National Guard units must find ways to maintain mission readiness and avoid losing critical capabilities by increasing training efficiency in difficult budgetary times. By creating alternative airspace closer to the home station, units are able to balance their needs against fiscal challenges and, in this case, increase training efficiency by as much as 36 percent per flying hour. To be good stewards of our tax-payers dollars it is appropriate to expand Eel ATCAA and create a

MOA to provide the 142 FW the ability to bolster the nation's combat effectiveness through reduce transit and increased on-station training time.

Reconfiguring the W-570 and Bass/ Bass South ATCAAs and the creation of Eel MOA and Eel ATCAA vertical expansion will allow the 142 FW to be to be good stewards of our tax-payers dollars, ensure the full implementation of the F-15's combat capability and tactics against current and future threats, and providing future mission operations compatibility with Fifth Generation aircraft. The increased training of the 142 FW in their primary airspace will insure the success of the United States in any future conflict or defense of the Pacific Northwest.

PROPOSED ACTION

Under the Proposed W-570, Bass ATCAA, and Bass South ATCAA Action, the vertical limits and lateral configuration of W-570, Bass ATCAA, and Bass South ATCAA would be modified within their existing boundaries to meet training requirements of the 142 FW. W-570 would be renamed as W-570A, a new segment to be named W-570C would be created adjacent to the eastern boundary of W-570A from 11,000 feet above Mean Sea Level (MSL) to FL 500, Bass ATCAA and Bass South ATCAA would be converted and reconfigured to W-570B and W-570D respectively and the floor of these segments would be lowered from FL 180 (18,000 feet MSL) to 1,000 feet MSL. The ceilings of W-570A as well the existing Bass South ATCAA (to be renamed W-570C and portion of W-570D) would remain at Flight Level (FL) 500 (50,000 feet MSL) while the ceiling of the existing Bass South ATCAA (remaining portion to be renamed W-570D) would be raised from FL 270 (27,000 feet MSL) to FL 500. The proposed modification of the W-570 and Bass/Bass South ATCAA Complex would not have an increase in total 142 FW sorties; however, it would result in increased operations and time spent within the airspace complex over existing conditions. This increase of approximately 253 hours annually within the airspace would be in part due to the expanded vertical limits of the airspace accommodating additional training operations that cannot currently be supported.

Under the Proposed Action, the western-most ~3 NM of the existing Eel ATCAA would be converted into W-570C and the vertical limits of Eel would be expanded to include airspace from 11,000 feet MSL to FL 500 (50,000 feet MSL). The proposed Eel MOAs would be established directly underneath the resulting configuration of Eel ATCAA from 11,000 feet MSL up to but not including FL 180 (18,000 feet MSL). In addition, the proposed Eel High ATCAAs would be established directly above the existing Eel ATCAA from FL 270 (27,000 feet MSL) to FL 500 (50,000 feet MSL). Finally, the Eel MOA/ATCAA Complex would be divided into four segments (A, B, C, and D). The proposed establishment and modifications to the Eel MOA/ATCAA Complex would not result in an increase of total of 142 FW scheduled sorties per year largely because W-570 would remain the primary airspace and the expanded horizontal limits of Eel remain mostly unchanged. Aircraft currently transit through this airspace on their way to W-570. The Eel MOA/ATCAA Complex would see an increase of activity of approximately

305 hours annually over existing conditions. This increase would be from additional training operations that cannot currently be supported inside the Eel ATCAA.

Aeronautical impact:

The proposed action will have minimal impact on Jet routes, civilian traffic or Victor Route 27 which runs below the existing Eel ATCAA. When the Eel MOA is in use, it would be active down to 11,000' which would impact VFR traffic on this route however this would remain only a backup option in poor weather conditions. Through a Letter of Agreement with Seattle ARTCC, when the Victor Routes are needed, controllers can curtail military operations in order to allow joint use of the airspace and ensure deconfliction. Additionally, coordination is already in place to de-conflict with other aircraft requiring transit through the airspace.

2. Joint use. The Airspace will be available for joint use. The FAA joint-use policy per FAAO 7400.2J para 21-1-8 will be recognized. A Letter of Agreement with Denver ARTCC will outline procedures for scheduling, activating, and de-activating the airspace.

d. Air Traffic Control Assigned Airspace (ATCAA). Yes, the existing ATCAAs will also be expanded to support the proposed airspace. The existing Bass ATCAA will be incorporated into the proposed W-570 complex.

Eel A ATCAA, OR

Boundaries.	Beginning	at lat. 46°20'00"N, long. 124°21'00"W; to lat. 46°20'00"N, long. 123°50'00"W; to lat. 46°07'00"N, long. 123°30'00"W; to lat. 45°58'00"N, long. 123°30'00"W; to lat. 45°58'00"N, long. 124°15'53"W; thence north 12nm from and parallel to US shoreline to the point of beginning. to lat. 46°09'59"N, long. 124°20'05"W; thence north 12nm from and parallel to US shoreline to the point of beginning.
Altitudes.		FL180 up to but not including FL270
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

Eel B ATCAA, OR

Boundaries. Beginning at lat. 45°58'00"N, long. 124°15'53"W;
to lat. 45°58'00"N, long. 123°30'00"W;
to lat. 45°36'00"N, long. 123°30'00"W;
to lat. 45°36'00"N, long. 124°13'29"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL180 up to but not including FL270

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel C ATCAA, OR

Boundaries. Beginning at lat. 45°36'00"N, long. 124°13'29"W;
to lat. 45°36'00"N, long. 123°30'00"W;
to lat. 45°12'00"N, long. 123°30'00"W;
to lat. 45°12'00"N, long. 124°15'26"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL180 up to but not including FL270

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel D ATCAA, OR

Boundaries. Beginning at lat. 45°12'00"N, long. 124°15'26"W;
to lat. 45°12'00"N, long. 123°30'00"W;
to lat. 45°07'00"N, long. 123°30'00"W;
to lat. 44°41'53"N, long. 124°20'22"W;
then north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL180 up to but not including FL270
Times of use. Intermittent by NOTAM
Controlling agency. FAA, Seattle ARTCC
Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel A High ATCAA, OR

Boundaries. Beginning at lat. 46°20'00"N, long. 124°21'00"W;
to lat. 46°20'00"N, long. 123°50'00"W;
to lat. 46°07'00"N, long. 123°30'00"W;
to lat. 45°58'00"N, long. 123°30'00"W;
to lat. 45°58'00"N, long. 124°15'53"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.
to lat. 46°09'59"N, long. 124°20'05"W;
thence north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL270 up to but not including FL500
Times of use. Intermittent by NOTAM
Controlling agency. FAA, Seattle ARTCC
Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel B High ATCAA, OR

Boundaries. Beginning at lat. 45°58'00"N, long. 124°15'53"W;
to lat. 45°58'00"N, long. 123°30'00"W;
to lat. 45°36'00"N, long. 123°30'00"W;
to lat. 45°36'00"N, long. 124°13'29"W;
then north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL270 up to but not including FL500
Times of use. Intermittent by NOTAM
Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel C High ATCAA, OR

Boundaries. Beginning at lat. 45°36'00"N, long. 124°13'29"W;
to lat. 45°36'00"N, long. 123°30'00"W;
to lat. 45°12'00"N, long. 123°30'00"W;
to lat. 45°12'00"N, long. 124°15'26"W;
then north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL270 up to but not including FL500

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Eel D High ATCAA, OR

Boundaries. Beginning at lat. 45°12'00"N, long. 124°15'26"W;
to lat. 45°12'00"N, long. 123°30'00"W;
to lat. 45°07'00"N, long. 123°30'00"W;
to lat. 44°41'53"N, long. 124°20'22"W;
then north 12nm from and parallel to
US shoreline to the point of beginning.

Altitudes. FL270 up to but not including FL500

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

e. Activities.

1. For areas that will contain aircraft operations.

(a) The number and types of aircraft that will normally use the area.

F-15C: W-570 – 6,200 sorties per year
Eel MOAs – 1,600 sorties per year
Eel ATCAAs – 6,300 sorties per year

(b) Specific Activities and the maximum altitudes required for each type of activity planned.

Tactical combat maneuvering by fighter fixed wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Maximum altitude FL510.

(c) Supersonic Flight. N/A. Supersonic flight operations will be conducted only over open water within the W-570 Warning Areas down to 10,000 feet MSL.

2. Surface-to-surface or surface-to-air weapons firing. N/A.

f. Environmental and land use information.

1. Mr. Kevin Marek
NGB/A7AM, Bldg 3501
JB Andrews, MD 20762-5157
kevin.p.marek@mail.mil
2. 142 FW agrees to provide reasonable and timely aerial access to the underlying public and private land. This access will be coordinated via a proposed direct communication line with the 142 FW Airspace Office.
3. Not applicable.

g. Communications and Radar.

1. Ground based radar and radio communications will be used by Seattle ARTCC to monitor the airspace.
2. Longracks MRU may provide occasional military radar coverage.

h. Safety considerations.

1. Activity will be contained within the MOA using geographic references, inertial navigation, global positioning systems and TACAN radial/DME references. In addition, the 142FW uses a Situational Awareness DATA Link (SADL) display in which airspace boundaries are depicted and area borders easily defined.
2. Malfunctions will be handled in accordance with aircraft technical orders, Service Directives, and FARs.

i. Coordination summary.

National Guard Bureau/A236YR,
Seattle ARTCC,
Air Force Representative, Lt Col Richard Farnsworth, FAA Western Services Area

j. Area Chart. See attached

k. Environmental Documents. All applicable environmental documents will be provided separately.

l. Graphic Notice Information. N/A

m. Other. N/A

FAAO 7400.2J
Section 3. SUA PROPOSALS

21-3-3. PROPOSAL CONTENT

a. Proponent's Transmittal Letter. See proceeding.

b. Area Description.

Change Juniper North MOA, OR to read:

Juniper A MOA, OR

Times of Use. Intermittent by NOTAM

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

all other information remains the same

Change Juniper South MOA, OR to read:

Juniper B MOA, OR

Times of Use. Intermittent by NOTAM

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

all other information remains the same

Change Juniper Low MOA, OR Using Agency to read:

Times of Use. Intermittent by NOTAM

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

all other information remains the same

Change Hart North MOA, OR to read:

Hart A MOA, OR

Times of Use. Intermittent by NOTAM

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

all other information remains the same

Change Hart South MOA, OR to read:

Hart B MOA, OR

Times of Use. Intermittent by NOTAM

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

all other information remains the same

New Airspace:

Juniper East Low MOA, OR

Boundaries. Beginning at lat. 43°38'00"N, long. 119°34'04"W;
to lat. 43°33'19"N, long. 119°20'17"W;
to lat. 43°26'41"N, long. 119°09'26"W;
to lat. 43°04'20"N, long. 118°55'21"W;
to lat. 42°46'00"N, long. 118°55'21"W;
to lat. 42°46'00"N, long. 119°12'27"W;
to the point of beginning.

Altitudes. 500 feet AGL up to but not including 11,000
feet MSL

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Juniper C MOA, OR

Boundaries. Beginning at lat. 43°38'00"N, long. 119°34'04"W;
to lat. 43°33'19"N, long. 119°20'17"W;
to lat. 43°26'41"N, long. 119°09'26"W;
to lat. 43°10'08"N, long. 118°59'03"W;
to lat. 43°10'08"N, long. 119°22'26"W;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW, Kingsley Field, OR

Juniper D MOA, OR

Boundaries. Beginning at lat. 43°10'08"N, long. 119°22'26"W;
to lat. 43°10'08"N, long. 118°59'03"W;
to lat. 42°46'00"N, long. 118°43'53"W;
to lat. 42°40'00"N, long. 118°43'53"W;
to lat. 42°40'00"N, long. 119°10'04"W;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW, Kingsley Field, OR

Hart C MOA, OR

Boundaries. Beginning at lat. 42°40'00"N, long. 119°10'04"W;
to lat. 42°40'00"N, long. 118°43'53"W;
to lat. 42°26'00"N, long. 118°43'53"W;
to lat. 42°26'00"N, long. 119°13'34"W;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,

Kingsley Field, OR

Hart D MOA, OR

Boundaries. Beginning at lat. 42°26'00"N, long. 119°13'34"W;
to lat. 42°26'00"N, long. 118°43'53"W;
to lat. 42°22'34"N, long. 118°43'53"W;
to lat. 41°52'44"N, long. 118°52'07"W;
to lat. 41°30'00"N, long. 119°18'36"W;
to lat. 41°30'00"N, long. 119°27'04"W;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including
FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Hart E MOA, OR

Boundaries. Beginning at lat. 41°30'00"N, long. 119°55'04"W;
to lat. 41°30'00"N, long. 119°27'04"W;
to lat. 41°30'00"N, long. 119°18'36"W;
to lat. 41°10'00"N, long. 119°41'40"W;
to lat. 41°10'00"N, long. 119°47'30"W;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including
FL180

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Hart F MOA, OR

Boundaries. Beginning at lat. 41°52'44"N, long. 118°52'07"W;
to lat. 41°30'00"N, long. 118°58'19"W;
to lat. 41°10'00"N, long. 119°23'36"W;

to lat. 41°10'00"N, long. 119°41'40"W;
to lat. 41°30'00"N, long. 119°18'36"W;
to the point of beginning.

Altitudes.	11,000 feet MSL up to but not including FL180
Times of use.	Intermittent by NOTAM
Controlling agency.	FAA, Seattle ARTCC
Using agency.	USAF, Air National Guard, 173 FW, Kingsley Field, OR

c. Airspace Statement of Need and Justification.

1. Describe the purpose and need for the proposed airspace.

This Airspace Proposal, in conjunction with the Oregon Military Training Airspace EIS, proposes modification of the Juniper/Hart MOA Complex to increase efficiencies of ANG/USAF realistic mission-oriented training, considering the 173 FW increased aircraft inventory and student production, improved technology within the F-15C, and the advanced longer range employment tactics that are inherent in training for combat against emerging technologies of adversary aircraft.

Historically, the Juniper/Hart MOAs, and their associated ATCAAs, have accommodated high altitude supersonic Beyond Visual Range (BVR) mission set-up ranges. However, due to the increased long range capabilities of the F-15C, and similar emerging threat capabilities of adversary aircraft, existing space within the Juniper/Hart MOAs has been inefficient within recent years to provide realistic mission-oriented training. The Air Education and Training Command (AETC) formal F-15C Syllabus requires approximately 40% of the syllabus training missions to be BVR. Half of these missions require setup ranges in excess of 80NM.

In 2003, the 173 FW flew eight aircraft in the morning go, and six aircraft in the afternoon go (8-turn-6), with approximately 3800 programmed flying hours and 2800 sorties. In 2005, the 173 FW's aircraft inventory increased from 18 Primary Assigned Aircraft (PAA) to 21 PAA. With this increase came an increase in programmed student training and associated flying hours. In 2008, the 173 FW became the sole F-15C Formal Training Unit (FTU) in the US, and has nearly doubled its student production in the past five years. In 2013, it flew a 10-turn-8 flying schedule and executed 4700 hours with culminating in 3800 sorties; a 23% increase in flying hours and a 35% increase in sorties. In 2014, to meet Combat Air Force student production throughput, programmed flying training requires a 12-turn-10 flying operation flexing to an occasional 14-turn-10. The 173 FW is poised to increase student production even more pending approval from

the Air Force, which will add additional aircraft and flying hours. Under current flying hour programming, the 173 FW has been authorized up to 6200 flying hours as required to meet current and potential student throughput.

Whereas in the past the Juniper/Hart MOA accommodated two simultaneous BVR 2 v 2 tactical intercept missions, one in Juniper North/South and one in Hart North/South, each with approximately 50-60NM set-up range, increased F-15C capabilities have caused these missions to be staggered in time to afford safety and training realism. In the past, the 173 FW typically had 4-6 students that could be in the BVR portion of their syllabus, this requirement has grown to 6-8 students. With this number of students in the BVR portions of the syllabus at one time, it is very likely three to four 2 v 2 tactical intercept missions or four to five 1 v 1 tactical missions could be required during a single flying period. This is not possible within the current airspace configuration without staggering takeoff times; significantly increasing the total amount of time the airspace is activated.

In addition to the 173 FW mission, the 142 FW uses the Juniper/Hart Complex, including Juniper Low MOA, as a primary airspace when accomplishing over land Low Altitude Step-down Training (LASDT). It also uses the Juniper/Hart Complex as back-up airspace during winter months when there's significant weather or sea states are out of limits under its primary airspace, W-570. For these periods, the 142 FW is routinely scheduled/NOTAM'd to use the Juniper/Hart Complex 45 min prior to 173 FW mission start time and historically activates the airspace 30% of the time for this purpose.

Since 2010, as a measure for better airspace stewardship, the 173FW moved to a NOTAM and airspace activation process that has reduced the total NOTAM'd airspace time and more accurately aligns airspace NOTAM time with airspace activation time. In addition, 173 FW tracks utilization (actual time in the MOA) as a percentage of activation time. On average, the airspace is utilized 80% of the time it is activated. Currently, the 173 FW makes schedule requests to NOTAM Juniper/Hart Complex (0900-1200 PST) and (1300-1600 PST). The first 45 min of each block are to accommodate the 142 FW if they need to activate the airspace as a back-up option. On a normal day, without slips in takeoff times, the 173 FW is done with missions in Juniper/Hart Complex at 1130 and 1530 PST and returns the airspace back to Seattle Air Route Traffic Control Center (ZSE). Without an increase in the airspace requested in this proposal, there will be continued increases in activation time, and larger blocks of requested NOTAM times during times when long range BVR training peaks.

The proposed Juniper/Hart Complex airspace expansion would add significant flexibility to both Oregon ANG's flying wings and other NAS users. The 173 FW could expand into the new MOA segments when needed during increased BVR syllabus mission requirements, allowing two simultaneous 4 v 4 scenarios, three 2 v 2 scenarios, or four to five 1 v 1 scenarios, mitigating the increase in airspace activation time by minimizing staggered launches. It would also allow concurrent missions of the 173 FW operating in the south and the 142 FW operating in the north with minimal impact on each other, reducing what currently can be an additional 45 minutes of activation time.

Although Dolphin MOA is the 173FW's primary back-up airspace, the ATCAA above it is capped approximately 20 percent of the time at FL230 due to Air-to-Air Refueling operations conducted in AR-8A/B. While Dolphin can adequately accommodate some types of BVR training, its supersonic restrictions preclude realistic long range high altitude training. Its lateral dimensions also preclude the full realm of maneuvering often required during long range tactics.

PROPOSED ACTION

Under the Proposed Action, the eastern boundary of the existing Juniper/Hart airspace complex would be extended approximately 20 miles to the east and the southern boundary would be extended approximately 20 miles to the south. Once established, the existing and proposed airspace segments would be renamed alphabetically to include: Juniper A through D MOAs and Hart A through E MOAs. Expansion of the existing Juniper Low MOA would include the proposed Juniper East Low MOA which would be located directly underneath the proposed Juniper C MOA and a majority of the proposed Juniper D MOA. The proposed Juniper East Low MOA would be established from 500 feet above ground level (AGL) to 10,999 feet MSL. In addition, the Proposed Action would include raising the floor of the existing Juniper Low MOA from 300 feet AGL to 500 feet AGL. New ATCAAs would be established directly above the proposed Juniper/Hart MOAs. The proposed new airspace segments would be activated on an as-needed basis as a whole or individually. 173 FW training activity within the existing portions of the Juniper/Hart MOA Complex would decrease given that the distribution of total airspace usage would now be spread out to include operations within the expanded Juniper/Hart MOA Complex, distributing flight activities across a broader geography. Training missions would spend the majority of the time within the overall Juniper/Hart MOA Complex above 11,000 feet MSL. By segmenting the proposed MOAs and ATCAAs, the 173 FW would be able to activate the required airspace to meet the mission objectives during any specific training exercise. In previous years, the Juniper/Hart MOA Complex has been expanded to similar lateral dimensions on a temporary basis to support the ANG's largest air-to-air combat exercise, Exercise Sentry Eagle, which typically includes multiple units from across the country.

Aeronautical impact: The proposed action will have minimal impact on Victor Routes 122 and 357 as they currently run through the existing Juniper/Hat MOAs. Through a current Letter of Agreement with ZSE, when the Victor Routes are needed, controllers can curtail military operations in order to allow joint use of the airspace. The proposed expansion will have minimal impact on the Burns (BNO) and Roaring Springs (Pvt) airports. Burns airport sits approximately 15NM outside of the proposed northeast boundary of Juniper C and Juniper East Low MOAs. The floor of the proposed Hart C MOA is 11,000' MSL (6,400' AGL) above the Roaring Springs airport. Military training routes VR1301, VR319/VR316 currently fall within the Juniper Low MOA and scheduling conflicts have been mitigated through internal military scheduling. The proposed Juniper Low East would expand into a segment of VR1352. Similar military scheduling coordination would mitigate conflicts. High altitude Q-35 route will pass

approximately 10NM from the eastern boundary of the Juniper C ATCAA if established. Similar control measures used by controllers and pilots for other boundaries would be used to mitigate spill outs. Hart E MOA/ATCAA could pose a challenge to efficient routing for commercial traffic when Reno MOA/ATCAA is also activated. This could be mitigated through military scheduling coordination with Reno MOA Scheduling Agency and real time activation restrictions set by Seattle ARTCC.

2. Joint use. The Airspace will be available for joint use. The FAA joint-use policy per FAAO 7400.2J para 21-1-8 will be recognized. A Letter of Agreement with Seattle ARTCC will outline procedures for scheduling, activating, and de-activating the airspace.

d. Air Traffic Control Assigned Airspace (ATCAA). Yes, ATCAAs will be created to support the proposed airspace.

Juniper A ATCAA, OR

Boundaries. Beginning at lat. 43°55'59"N, long. 120°44'04"W;
to lat. 43°57'05"N, long. 120°26'24"W;
to lat. 43°50'30"N, long. 120°07'48"W;
to lat. 43°21'00"N., long. 120°31'48"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Juniper B ATCAA, OR

Boundaries. Beginning at lat. 43°21'00"N, long. 120°31'48"W;
to lat. 43°50'30"N, long. 120°07'48"W;
to lat. 43°38'00"N, long. 119°34'04"W;
to lat. 42°40'00"N, long. 119°10'04"W;
to lat. 42°40'00"N, long. 120°18'04"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Juniper C ATCAA, OR

Boundaries. Beginning at lat. 43°38'00"N, long. 119°34'04"W;
to lat. 43°33'19"N, long. 119°20'17"W;
to lat. 43°26'41"N, long. 119°09'26"W;
to lat. 43°10'08"N, long. 118°59'03"W;
to lat. 43°10'08"N, long. 119°22'26"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Juniper D ATCAA, OR

Boundaries. Beginning at lat. 43°10'08"N, long. 119°22'26"W;
to lat. 43°10'08"N, long. 118°59'03"W;
to lat. 42°46'00"N, long. 118°43'53"W;
to lat. 42°40'00"N, long. 118°43'53"W;
to lat. 42°40'00"N, long. 119°10'04"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Hart A ATCAA, OR

Boundaries. Beginning at lat. 42°40'00"N, long. 120°18'04"W.;
to lat. 42°40'00"N, long. 119°10'04"W;
to lat. 42°26'00"N, long. 119°13'34"W;
to lat. 42°26'00"N, long. 120°13'06"W;

to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW, Kingsley Field, OR

Hart B ATCAA, OR

Boundaries. Beginning at lat. 42°26'00"N, long. 120°13'06"W;
to lat. 42°26'00"N, long. 119°13'34"W;
to lat. 41°30'00"N, long. 119°27'04"W;
to lat. 41°30'00"N, long. 119°55'04"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW, Kingsley Field, OR

Hart C ATCAA, OR

Boundaries. Beginning at lat. 42°40'00"N, long. 119°10'04"W;
to lat. 42°40'00"N, long. 118°43'53"W;
to lat. 42°26'00"N, long. 118°43'53"W;
to lat. 42°26'00"N, long. 119°13'34"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW, Kingsley Field, OR

Hart D ATCAA, OR

Boundaries. Beginning at lat. 42°26'00"N, long. 119°13'34"W;
to lat. 42°26'00"N, long. 118°43'53"W;
to lat. 42°22'34"N, long. 118°43'53"W;
to lat. 41°52'44"N, long. 118°52'07"W;
to lat. 41°30'00"N, long. 119°18'36"W;
to lat. 41°30'00"N, long. 119°27'04"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Hart E ATCAA, OR

Boundaries. Beginning at lat. 41°30'00"N, long. 119°55'04"W;
to lat. 41°30'00"N, long. 119°27'04"W;
to lat. 41°30'00"N, long. 119°18'36"W;
to lat. 41°10'00"N, long. 119°41'40"W;
to lat. 41°10'00"N, long. 119°47'30"W;
to the point of beginning..

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 173 FW,
Kingsley Field, OR

Hart F ATCAA, OR

Boundaries. Beginning at lat. 41°52'44"N, long. 118°52'01"W;
to lat. 41°30'00"N, long. 118°58'19"W;
to lat. 41°10'00"N, long. 119°23'36"W;
to lat. 41°10'00"N, long. 119°41'40"W;
to lat. 41°30'00"N, long. 119°18'36"W;
to the point of beginning.

Altitudes.	FL180 up to but not including FL280
Times of use.	Intermittent by NOTAM
Controlling agency.	FAA, Seattle ARTCC
Using agency.	USAF, Air National Guard, 173 FW, Kingsley Field, OR

e. Activities.

1. For areas that will contain aircraft operations.

(a) The number and types of aircraft that will normally use the area.

F-15C:	Juniper Low MOAs – 1,149 sorties per year
	Juniper MOAs – 4,133 sorties per year
	Hart MOAs – 1,504 sorties per year

(b) Specific Activities and the maximum altitudes required for each type of activity planned.

Tactical combat training maneuvering by fighter fixed wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Maximum altitude for training missions can be up to FL510.

(c) Supersonic Flight. Supersonic flight operations will only be conducted above FL300.

2. Surface-to-surface or surface-to-air weapons firing. N/A.

f. Environmental and land use information.

1. Comments regarding environmental and land use aspects of this proposal may be sent to:

Mr. Kevin Marek
NGB/A4AM, Bldg 3501
JB Andrews, MD 20762-5157
kevin.p.marek.civ@mail.mil

2. Areas underneath the proposed Juniper/Hart MOAs where there are underlying private or public use airfields will be provided reasonable and timely aerial access to such land. Deconfliction and avoidance will be accomplished by a combination of Seattle ARTCC advisories to VFR aircraft in the confines of the MOA, F-15 own-ship radars and visual separation at a minimum of 1000 feet.

3. N/A

g. Communications and Radar.

1. Ground based radar and radio communications will be provided by Seattle ARTCC to monitor the airspace.
2. Shadow MRU may provide occasional military radar coverage.

h. Safety considerations.

1. Activity will be contained within the MOA using geographic references, inertial navigation, global positioning systems and TACAN radial/DME references. In addition, the 173FW uses a Fighter Data Link (Link-16) displays in which flight and own-ship positions and area boundaries are depicted.
2. The employment of flares above 5,000 feet AGL will be authorized. The employment of chaff will be authorized. No other types of ordnance will be released.
3. Malfunctions will be handled in accordance with aircraft technical orders, Service Directives, and FARs.

i. Coordination summary.

National Guard Bureau
NGB/A3AA, Mr. Jamie Flanders
NGB/A7AM, Mr. Devin Scherer
Federal Aviation Administration
Seattle ARTCC, Ms. Lisa Faulk
Western Service Area Air Traffic Representative, Michele Cruz
Western Service Area Environmental Specialist, Dr. Caroline Poyurs
Air Force Representative, Lt Col Richard Farnsworth, FAA Western Services Area

j. Area Chart. Falcon View depictions

k. Environmental Documents. All applicable environmental documents will be provided separately.

l. Graphic Notice Information. N/A

m. Other.

FAAO 7400.2J
Section 3. SUA PROPOSALS

21-3-3. PROPOSAL CONTENT

a. Proponent's Transmittal Letter. See proceeding.

b. Area Description.

Redhawk A MOA, OR

Boundaries.	Beginning	at lat. 45°33'00"N, long. 120°52'00"W; to lat. 45°30'00"N, long. 120°15'30"W; to lat. 45°00'00"N, long. 120°24'00"W; to lat. 45°06'00"N, long. 121°01'00"W; to the point of beginning.
Altitudes.		11,000 feet MSL up to but not including FL180
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

Redhawk B MOA, OR

Boundaries.	Beginning	at lat. 45°30'00"N, long. 120°15'30"W; to lat. 45°23'00"N, long. 119°08'00"W; to lat. 44°35'00"N, long. 119°09'00"W; to lat. 45°00'00"N, long. 120°24'00"W; to the point of beginning.
Altitudes.		11,000 feet MSL up to but not including FL180
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

Redhawk C MOA, OR

Boundaries.	Beginning	at lat. 45°06'00"N, long. 121°01'00"W; to lat. 45°00'00"N, long. 120°24'00"W; to lat. 44°35'00"N, long. 119°09'00"W; to lat. 44°25'00"N, long. 119°09'00"W; to lat. 44°27'00"N, long. 121°01'00"W; to the point of beginning.
Altitudes.		11,000 feet MSL up to but not including FL180
Times of use.		Intermittent by NOTAM
Controlling agency.		FAA, Seattle ARTCC
Using agency.		USAF, Air National Guard, 142 FW, Portland ANGB, OR

c. Airspace Statement of Need and Justification.

1. Describe the purpose and need for the proposed airspace.

This Airspace Proposal, in conjunction with the Oregon Military Training Airspace EIS, proposes the establishment of a new over-land Redhawk MOA Complex which is needed by the 142d Fighter Wing as a "weather contingency" airspace to enable air-to-air training when weather or sea states restrict overflight of the coastal airspace areas. The location, size and proximity of this airspace will ensure that the 142 FW will be able to maintain proficiency and training requirements in preparation for combat against emerging technologies of adversary aircraft.

The 142 FW employs fourth generation F-15C Single Seat Fighter Jets which can rapidly transit altitudes from the surface to 50,000 feet and fly at speeds exceeding 12 NM per minute. The primary training area for the 142 FW is W-570, an over-water airspace off the coast of Oregon. Frequent weather conditions over the Pacific Ocean that extend into the coastal airspace ranges often produce sea states and weather conditions that prohibit over-water training. Airspace further inland and east of the Cascade Mountain range is generally unaffected by these weather systems. Further, although the proposed modification to the Eel ATCAA would provide valuable over-land training airspace that the 142 FW needs, it would not support all mission types in which the pilots are required to train. The modified Eel airspace would only provide space for Advanced Handling Characteristics (AHC), Basic Fighter Maneuvers (BFM), Air Combat Maneuvering (ACM), and Aerospace Control Authority (ACA)missions. Therefore, the 142 FW has a need for suitable over-land airspace that will allow its pilots to more efficiently conduct the full suite of realistic training operations of Tactical Intercepts (TI),

Defensive Counter Air (DCA) and Offensive Counter Air (OCA) to be prepared to fulfill their mission requirements.

Weather conditions over the Pacific Ocean cause out of limit sea-states which prohibit training when wind velocities are greater than 25 knots and/or wind-wave heights exceed 5 feet. Due to operational safety guidelines contained in Air Force Instructions (AFI), these conditions prohibit over-water training operations in W-570 and the Bass/Bass South ATCAAs. Historically, sea-states were out of limits approximately 23 percent of the scheduled time (2008-2011); reaching as high as 75 percent in a given month. In addition to inclement weather, factors such as adversary support, naval operations, and over-land training requirements further restrict airspace availability, requiring the 142 FW to utilize compatible airspace elsewhere, primarily the Juniper/Hart MOA Complex. This annual average of unavailability represents a significant impact to training.

Options for other suitable airspace areas are limited by their distance from Portland, size, or by scheduling needs of other military units in the region. In most cases, for distance, scheduling and availability, the only suitable over-land airspace is the proposed Eel ATCAA/ MOA complex, located adjacent to W-570 along the Oregon coast. Unfortunately, this airspace isn't a functional alternative to accommodate larger TI, OCA) or DCA training missions.

The 142 FW currently utilizes the Juniper South and Hart North MOAs for BFM, ACM, TI, ACA, OCA, and DCA training missions when poor weather conditions require over-land training. The nearest border of Juniper South and Hart North MOAs is located approximately 170 NM from Portland. The distance and time required to reach this area for over-land training causes mission degradation. Between 22 and 36 percent of fuel that could be used for training is expended during transit to and from the available backup areas; Juniper/Hart, Boardman, and Olympic MOA. This results in reduced time for training in the MOA and less flexibility to repeat a difficult mission task, which could be the difference between a successful training flight and a failed mission. With the over-water weather conditions unique to the Northwest, and the lack of a suitable alternative airspace, approximately 320 additional transit hours are flown by the 142d FW transit to and from the Juniper/Hart MOA Complex per year. This is nearly 10 percent of the 142 FW's annual flying hour allocation and is enough hours to maintain three pilot's combat mission ready requirements throughout the year. These hours – if reallocated – would be used to better provide 142 FW pilots with sufficient flying training to achieve higher mission readiness. Finally, increased transit time results in additional fuel and maintenance costs for the F-15. This issue is further exacerbated by the implementation of the Domestic Reduced Vertical Separation Minimum (DRVSM) airspace. The long distances flown to other over-land airspaces that would normally be flown at higher altitudes to conserve fuel are now more difficult to schedule due to the FAA-mandated procedures for non- DRVSM approved aircraft such as the F-15. Potential suitable airspace for the 142 FW includes the Juniper/Hart MOA Complex and the Boardman and Olympic MOAs, which all exceed the researched maximum desired distances to training airspace (RAND Corporation 2001). Establishment of a new

Redhawk MOA Complex would provide excellent over-land backup training airspace, within the maximum desired distance, for small Offensive Counter-Air (OCA) or Defensive Counter-Air (DCA) training missions.

142 FW is the primary Aerospace Control Authority (ACA) squadron for the Pacific Northwest Western Area Defense Sector (WADS). To maintain proficiency in operating air defense combat air patrols, protecting Temporary Flight Restrictions (TFR) for President of the United States (POTUS) support missions, and intercepts escorting distressed civilian aircraft, the 142 FW conducts weekly practice scrambles out of its alert facility. This end-to-end system training provides WADS controllers, PDX Tower, FAA TRACON, Seattle Center controllers, and pilots proficiency for this critical no fail mission in defense of the United States. Often, due to poor over-water weather conditions, this training is cancelled for lack of adequate airspace or the ability to move a supporting Target of Interest (TOI) to over-land airspace. These cancelations could be avoided through the establishment of a new over-land Redhawk MOA Complex therefor allowing increased training opportunity of the ACA mission.

Moreover, the majority of mission ready pilots in the 142 FW are what is known as, "traditional guardsmen." Traditional guardsmen have full time employment outside the Air National Guard. This limits the number of days they are available to participate in training. Regardless, these pilots are required to perform the same RAP requirements as full time pilots but accomplish them with approximately only 20 percent of the flying opportunities. Consequently, when weather prohibits use of W-570 and Juniper/Hart MOAs are not available, the time constraints for these pilots increase the difficulty of maintaining their CMR status.

This year the 142 FW requested 3700 flying hours to maintain proficiency and conduct training requirements. The NGB has only authorized the 142 FW to fly 3319 hours for the year. Budgetary requirements are beginning to reduce the much needed flying hours and the trend is anticipated to only continue. As flight hours are reduced, the cumulative effect of 320 plus hours of transit time is magnified through the lack of on station training time available to each pilot. The ability to fly for a reduced time while maintaining, or increasing training time is profound in its ability to generate more sorties, increase training, and improve the overall fighting ability of the unit.

In the current economic climate, Air National Guard units must find ways to maintain mission readiness and avoid losing critical capabilities by increasing training efficiency in difficult budgetary times. By creating alternative airspace closer to the home station, units could balance their needs against fiscal challenges and increase training efficiency by as much as 36 percent per flying hour. As good stewards of our tax-payers dollars it is only right to create a new over-land Redhawk MOA Complex and provide the 142 FW the ability to bolster the nation's combat effectiveness through reduce transit, increased on station time, and improved tactics.

PROPOSED ACTION

Under the Proposed Action, a new over-land MOA Complex would be established approximately 100 miles east-southeast of Portland in central/northern Oregon, roughly bound by Highway 97/197 on the West, the towns of Wasco and Lexington on the North, U.S. Highway 395 on the East, and U.S. Highway 26 on the South. This location was determined through coordination with the FAA Seattle ARTCC, which controls the airspace in this area. The proposed Redhawk MOAs (A, B, and C) would be established from 11,000 feet MSL to, but not including FL 180 (18,000 feet MSL). Given that the majority of residents in this region of Oregon generally reside at elevations of 5,000 feet MSL or below, the proposed MOAs would be established at an elevation equivalent to approximately 6,000 feet above ground level (AGL). In addition, associated ATCAAs would be established directly above the proposed Redhawk MOA from FL 180 to FL 500 (50,000 feet MSL). The proposed Redhawk MOA Complex would have the sufficient lateral and vertical space to efficiently provide enough maneuvering airspace to support the majority of Ready Aircrew Program (RAP) training requirements for the 142 FW.

Establishment of the proposed Redhawk MOA Complex would help to alleviate concerns related to scheduling conflicts, or prohibitive weather conditions, with other regional airspaces. Dividing the complex into three segments would allow for the greatest scheduling flexibility and efficient use and responsible stewardship of the airspace. The proposed airspace segments would be activated on an as-needed basis as a whole, or individually.

Aeronautical impact:

The proposed action will have minimal impact on the multiple Victor Routes which run below the proposed Redhawk MOA. When the MOA is in use, it would be active down to 11,000' which would impact VFR traffic on these routes however this airspace would remain only a backup option in poor weather conditions and further be limited through the activation of only those segments that are needed. Through a Letter of Agreement with Seattle ARTCC that will be created, when the Victor Routes are needed, controllers can curtail military operations in order to allow joint use of the airspace and ensure deconfliction. Additionally, the location for this airspace will have the least impact on civilian traffic through the prior coordination with Seattle Center providing the historical flight path data around that area. One feeder point on the published HHOOD TWO arrival is located inside the western boarder of Redhawk A MOA. After discussions with Seattle Center, Redhawk A MOA would only be released so to not interfere with inbound airline traffic into Portland and therefore be restricted in altitude. This will have no effect on civilian traffic, only to military operations.

2. Joint use. The Airspace will be available for joint use. The FAA joint-use policy per FAAO 7400.2J para 21-1-8 will be recognized. A Letter of Agreement with Seattle ARTCC will outline procedures for scheduling, activating, and de-activating the airspace.

d. Air Traffic Control Assigned Airspace (ATCAA). Yes, ATCAAs will be required to support the proposed airspace.

Redhawk A ATCAA, OR

Boundaries. Beginning at lat. 45°33'00"N, long. 120°52'00"W;
to lat. 45°30'00"N, long. 120°15'30"W;
to lat. 45°00'00"N, long. 120°24'00"W;
to lat. 45°06'00"N, long. 121°01'00"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Redhawk B ATCAA, OR

Boundaries. Beginning at lat. 45°30'00"N, long. 120°15'30"W;
to lat. 45°23'00"N, long. 119°08'00"W;
to lat. 44°35'00"N, long. 119°09'00"W;
to lat. 45°00'00"N, long. 120°24'00"W;
to the point of beginning.

Altitudes. FL180 up to but not including FL510

Times of use. Intermittent by NOTAM

Controlling agency. FAA, Seattle ARTCC

Using agency. USAF, Air National Guard, 142 FW,
Portland ANGB, OR

Redhawk C ATCAA, OR

Boundaries. Beginning at lat. 45°06'00"N, long. 121°01'00"W;
to lat. 45°00'00"N, long. 120°24'00"W;
to lat. 44°35'00"N, long. 119°09'00"W;
to lat. 44°25'00"N, long. 119°09'00"W;
to lat. 44°27'00"N, long. 121°01'00"W;
to the point of beginning.

Altitudes.	FL180 up to but not including FL510
Times of use.	Intermittent by NOTAM
Controlling agency.	FAA, Seattle ARTCC
Using agency.	USAF, Air National Guard, 142 FW, Portland ANGB, OR

e. Activities.

1. For areas that will contain aircraft operations.

(a) The number and types of aircraft that will normally use the area.

F-15C:

Redhawk MOAs – 800 sorties per year
Redhawk ATCAAs – 1,100 sorties per year

(b) Specific Activities and the maximum altitudes required for each type of activity planned.

Tactical combat training maneuvering by fighter fixed wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Maximum altitude for training missions can be up to FL510.

(c) Supersonic Flight. Supersonic flight operations will only be conducted above FL300.

2. Surface-to-surface or surface-to-air weapons firing. N/A.

f. Environmental and land use information.

1. Mr. Kevin Marek
NGB/A4AM, Bldg 3501
JB Andrews, MD 20762-5157
kevin.p.marek.civ@mail.mil

2. 142 FW agrees to provide reasonable and timely aerial access to the underlying public and private land. This access will be coordinated via a proposed direct communication line with the 142 FW Airspace Office.

3. Not applicable.

g. Communications and Radar.

1. Ground based radar and radio communications will be used by Seattle ARTCC to monitor the airspace.

2. N/A.

h. Safety considerations.

1. Activity will be contained within the MOA using geographic references, inertial navigation, global positioning systems and TACAN radial/DME references. In addition, the 142 FW uses a Situational Awareness DATA Link (SADL) display in which airspace boundaries are depicted and area borders easily defined.

2. The employment of flares above 5,000 feet AGL will be authorized. The employment of chaff is authorized. No other types of ordnance will be released.

3. Malfunctions will be handled in accordance with aircraft technical orders, Service Directives, and FARs.

i. Coordination summary.

National Guard Bureau/A3AA,
Seattle ARTCC,
Air Force Representative, Lt Col Richard Farnsworth, FAA Western Services Area

j. Area Chart. Please see attached.

k. Environmental Documents. All applicable environmental documents will be provided separately.

l. Graphic Notice Information. N/A

m. Other. N/A