

Seafair Airshow



National Transportation Safety Board Briefing
January 10, 2012

Seafair Airshow Overview

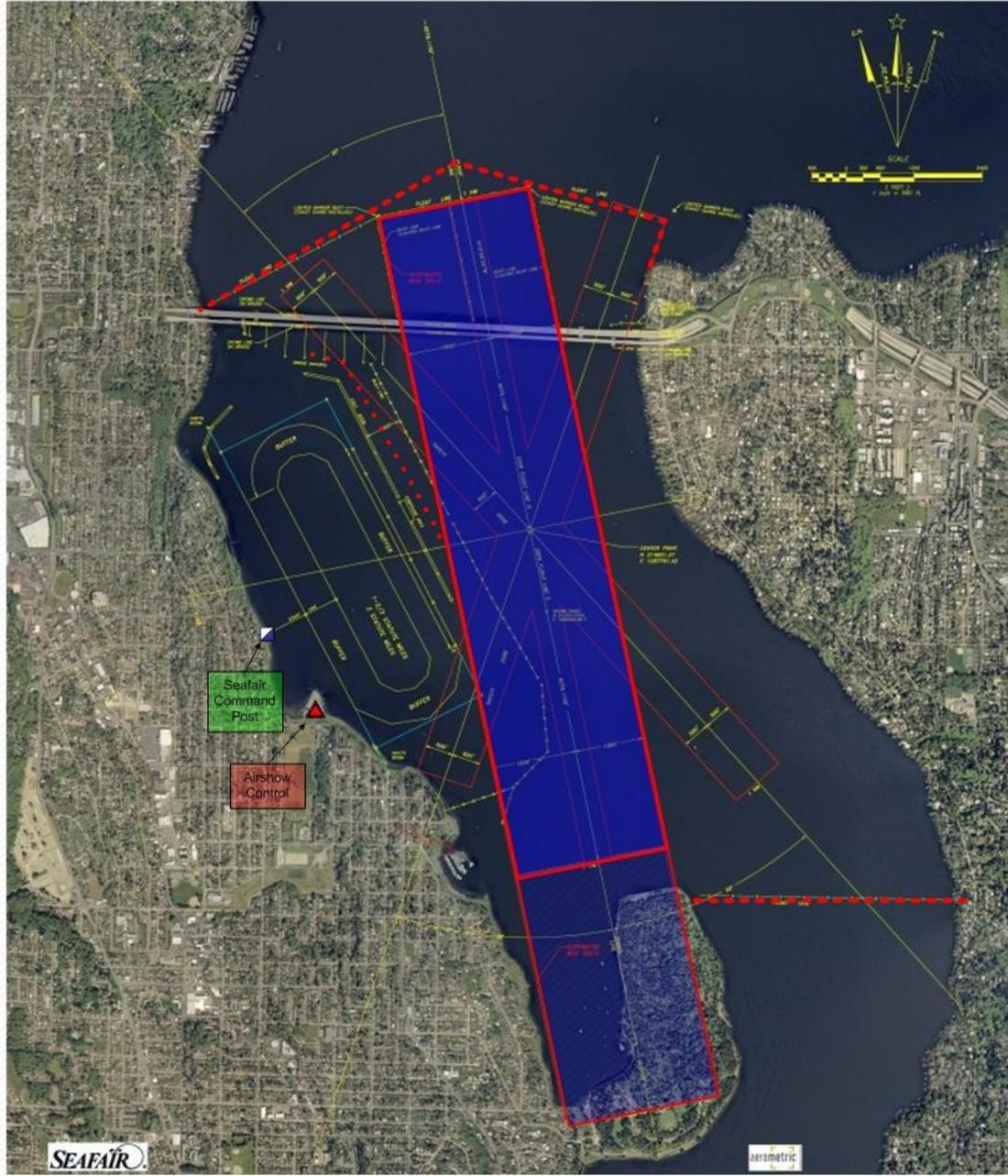
- Occurs annually in August over Lake Washington, Seattle Washington
- In conjunction with and shares same venue as hydroplane boat race
- Airshow is 3.5 miles from downtown Seattle
- Gate attendance on shore – city park is ~70,000
- On water , non-gated shore, and residential attendance ~200,000
- Based at King International County Airport (KBFI) – 3 miles.
- Aerobatic and non-aerobatic flight demonstrations
- High Speed (282 mph or greater) and Low Speed (less than 180 mph, less than 2250 pound aircraft weight) in separate aerobatic demonstration areas.

High Speed Demonstration Area

- Aircraft capable of speed greater than 282 mph
- Military jet teams, single jet aircraft, high performance aircraft (Category 1)
- Aerobatic area is overwater - 12000 feet by 2700 feet surface dimension, surface to 16000 feet in altitude
- Safety zone larger than aerobatic area
- Safety zone clear of all persons (water, land, park, surface streets, and Interstate highway [I-90] bridge)
- Security maintained by federal, state, and local law enforcement agency and airshow personnel
- Airshow suspended if incursion into safety zone
- No disruption of residential occupancies.

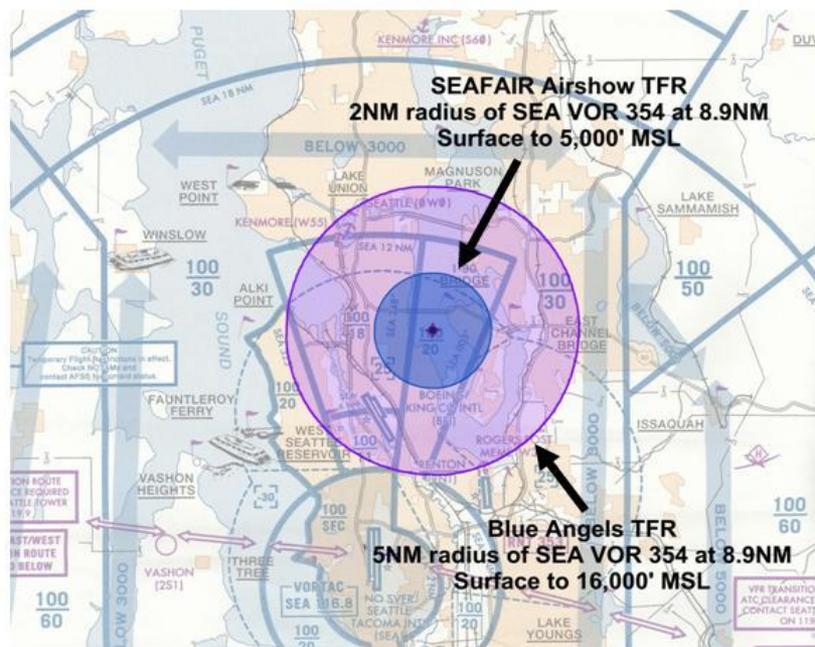
Seafair Airshow

High Speed (Category 1) Aerobatic Maneuvering Area and Safety Exclusionary Zone



Airspace Impacts – High Speed

- Temporary Flight Restriction operational during operations (TFR).
- Airspace restricted to participant aircraft surface to 16000 feet altitude and five nautical miles from aerobatic area.



Airspace Operational Impacts

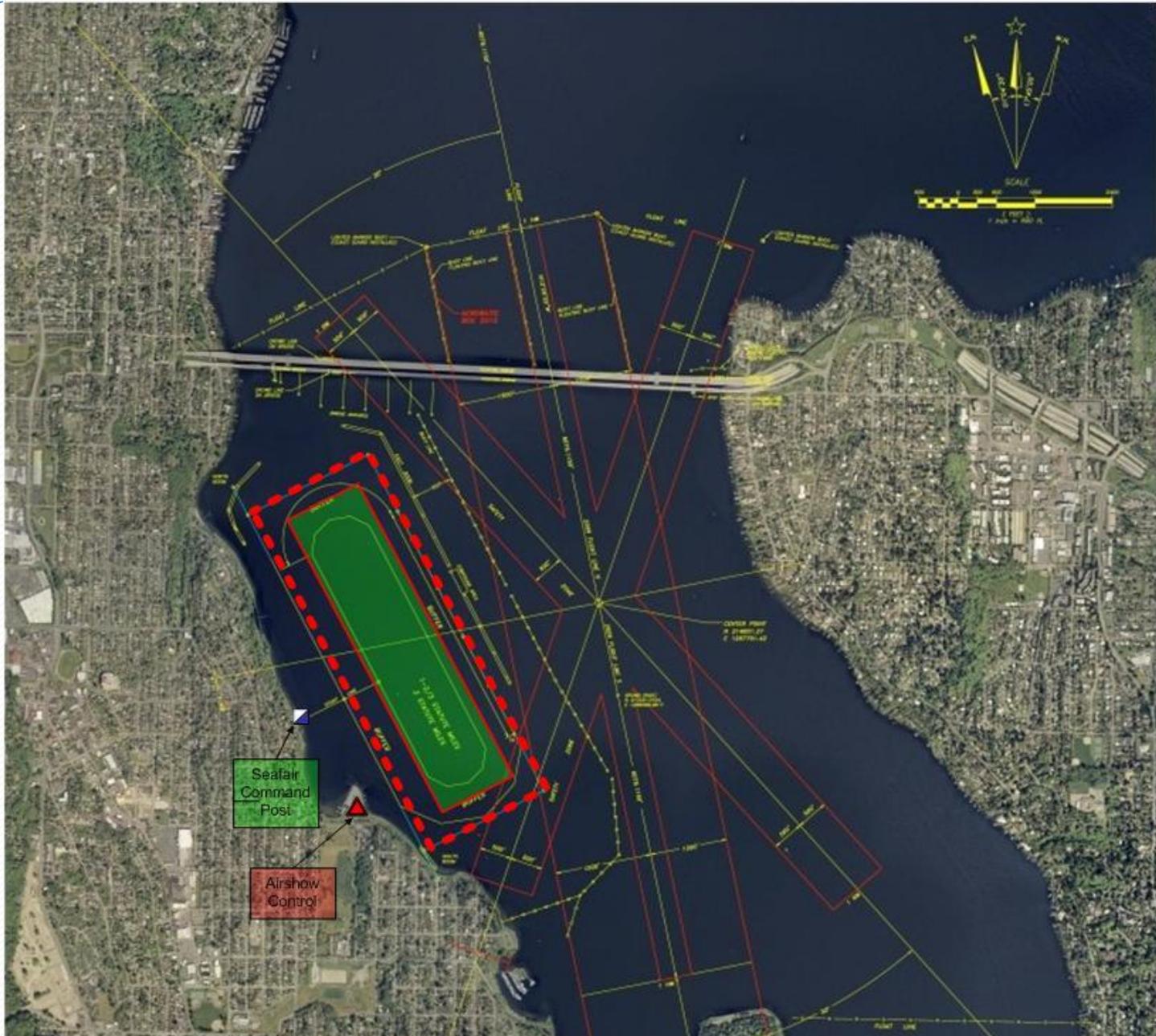
- While 5NM TFR operational:
 - King County International Airport (KBFI)– closed
 - SeaTac International Airport (KSEA)– 8.9 miles from airshow – some air traffic route restrictions to avoid TFR
 - Renton Municipal Airport (KRNT) - closed
 - Numerous heliports in area – closed

Low Speed Demonstration Area

- Aircraft capable of speed not exceeding 180 mph
- Aircraft weight less than 2250 pounds
- Most civilian and sport aerobatic aircraft
- Aerobatic area is overwater - 5000 feet by 1200 feet surface dimension, surface to 5000 feet in altitude
- 500 foot safety zone surrounds aerobatic area
- Safety zone clear of all persons
- Security maintained by federal, state, and local law enforcement agency and airshow personnel
- Airshow suspended if incursion into safety zone
- No disruption of land based infrastructure or occupancies
- Also used for non-aerobatic fly-overs of larger aircraft

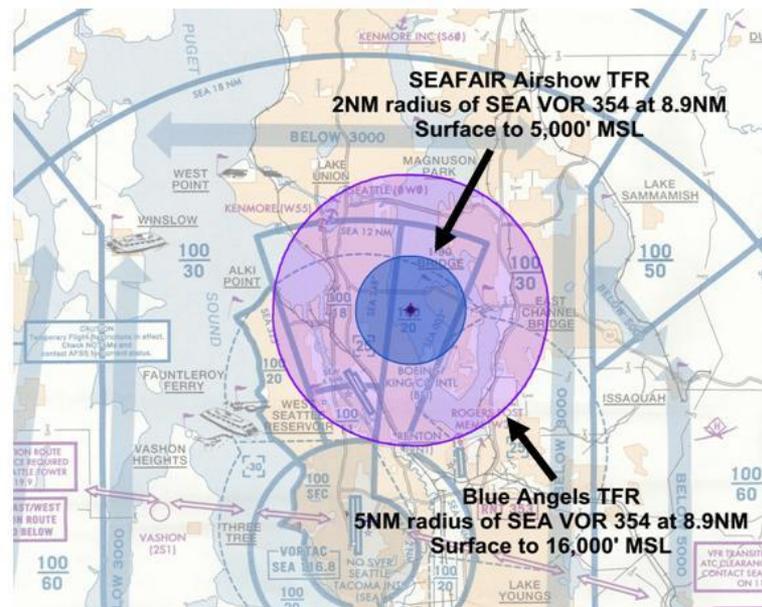
Seafair Airshow

Low Speed (Category 3) Aerobatic Maneuvering Area and Safety Exclusionary Zone



Airspace Impacts – Low Speed

- Temporary Flight Restriction operational during operations (TFR).
- Airspace restricted to participant aircraft surface to 5000 feet altitude and two nautical miles from aerobatic area.



Airspace Operational Impacts

- While 2NM TFR operational:
 - No impacts to local airports or heliports
- 2 NM TFR maintained during non-airshow event operation
 - On site temporary helispot emergency and event support/media helicopters
 - Banner tow operations



■ Downtown

■ Seattle

■ I-90 Bridge

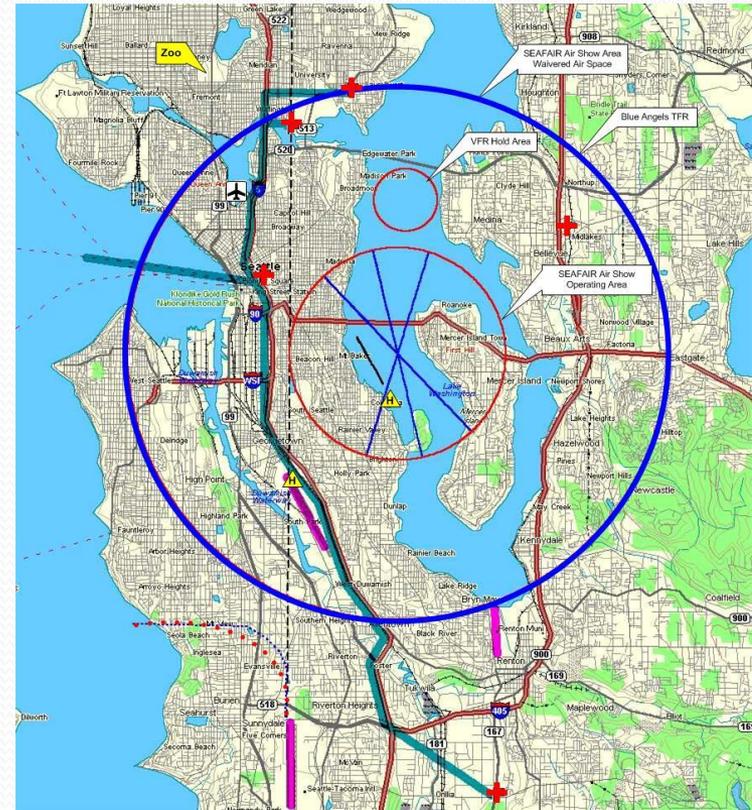
■ Pits

■ Logboom

■ Landing Zone (LZ)

Lifeguard (Aeromedical) Flights

- Priority over airshow operations
- Operate from:
 - King County Airport KBFI
 - Harborview Hospital
 - Various other locations
- Dispatch coordinated with Hospital Control, Seafair Airshow Control, and Air Traffic Control



FAA Coordination and Oversight

- Planning process begins in January
- On-site FAA Flight Standards personnel
- On-site FAA Air Traffic Organization personnel
- Airshow safety program and plans exceed FAA requirements and guidance
- Airshow occurs under authority of issued Certificate of Waiver or Authorization
- Airshow control operational during waived airspace times
- Airshow safety observers co-located with FAA observers
- Dedicated Airshow Safety Officer

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO
SEAFAIR, INC./MS. BETH KNOX

ADDRESS
2200 SIXTH AVENUE, SUITE 400
SEATTLE, WA 98121

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED
Aerobatic demonstrations at Lake Washington, Seattle, Washington, within a five (5) nautical mile radius from the center point (N 47 34 47, W 122 15 43.7) from the surface to 16,000 ft MSL, excluding the airspace above spectators or congested areas, except as provided in the 2011 Blue Angels Maneuvers Manual as approved by AFS-800.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE
91.117 (a) (b) (c), 91.119 (b) (c) (d) (1), 91.121, 91.123, 91.127, 91.129, 91.155,
91.303 (c) (d) (e)

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE---This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 36 inclusive, are set forth on the reverse side hereof. "See Attached"

(See attachment

This certificate is effective from _____ page 5) to _____, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

WAIVERS, AUTHORIZATIONS AND SPECIAL PROVISIONS

August 4-7, 2011

Seafair/Beth Knox

LIST OF WAIVED REGULATIONS

91.117(a)(b)(c)	Aircraft Speed
91.119(b)(c)(d)(1)	Minimum Safe Altitude
91.121	Altimeter Setting
91.123	Compliance with ATC Clearances and Instructions
91.127	Operating on or in the Vicinity of an Airport in Class E Airspace
91.129	Operations in Class D Airspace
91.155	Basic VFR Weather Minimums
91.303(c)(d)(e)	Aerobatic Flight

Special Provisions (1-36)

Failure to comply with any standard or special provision is a violation of the terms of this Certificate of Waiver and justification for cancellation of this Certificate and constitutes a violation of Title 49 of the

Emergency Planning and Response

- Unified Command concept – Seafair, law and fire Incident Commanders
- Developed to National Incident Management System standards and compliance
- Interoperable communications system and plan
- Resources from federal, state, local public safety, and event (Seafair) personnel
- On-site Incident Command location (ICP)
- Remote dedicated Emergency Operations Center (EOC)
- Daily Incident Action Plan developed and socialized with all participating agencies and resources (IAP)
- Pre-event table top or full scale exercise of emergency plan
- Post event lessons learned and corrective action

Thank You!

- Frank Sebastian, Chair
- Seafair Airshow Committee
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- airops@seafair.com