

**FUSETRA Conference at  
Biscarrosse, France  
May 14, 2010  
Seaplane Operations Based in  
the U.S. Pacific Northwest  
Region**

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# Introduction

Seaplane operations play a significant role in the transportation network connecting Seattle and numerous lake shore and salt water island communities in Washington State, namely, the San Juan Island group located north of Puget Sound, as well as Victoria and other communities on Vancouver Island and the British Columbia mainland.

Three FAA Part 135 operators providing such services are located in the Seattle metro area. These include Seattle Seaplanes, an air taxi charter operator; Northwest Seaplanes, also an on-demand air taxi charter operator; and Kenmore Air, commuter operation, which is by far the largest in terms of number of aircraft, air miles flown, and number of passengers carried.

This report briefly discusses the Pacific Northwest Region as well as the role of Kenmore Air in providing commuter and on-demand charter services, and, in addition, presents evaluation criteria for establishing seaplane operations in locations where there is an interest for developing seaplane transportation service.

# Pacific NW Region

- The City of Seattle and nearby communities that host seaplane operations (City of Kenmore and City of Renton) are situated at the mid-point of Puget Sound, which lies south of the eastern terminus of the Strait of Juan de Fuca, the main sea lane to the Pacific Ocean and the western-most international boundary of the US and Canada.
- There is considerable seaplane activity with connections between Seattle and the City of Victoria, provincial capital of British Columbia as well as to other smaller communities and remote locations along the coastal areas of Vancouver Island and the British Columbia mainland. Victoria is situated on the northern side of the Strait of Juan de Fuca, on the south shore of Vancouver Island, a distance of about 65 nm from the City of Seattle. Much of this activity is provided by commuter airlines with scheduled and on-demand operations; there are also air taxi operations on an on-demand basis.
- The western coast of Vancouver Island and the waterways between Vancouver Island and the British Columbia mainland (Haro Strait, Strait of Georgia, Discovery Passage, Johnston Strait, and Queen Charlotte Strait) are reached ideally by seaplanes operating in the area, including the three US-based Part 135 operators. Typical destinations include the cities of Vancouver and Campbell River as well as the recreation area of Desolation Sound. Further north, seaplane service is provided to a number of smaller communities, including Port Neville, Double Bay, Port McNeill and Port Hardy, in addition to numerous lodges, islands, coves, and bays.

# Kenmore Air

- The airline was established and started operations in March 1946. It was founded by Robert Munro and two partners and began operations with a single aircraft and hangar at the airline's current location on north Lake Washington. After a short term partnership Munro continued alone with the company until his death in October 2000. The airline continues to be operated as a private company, owned by the Munro family.
- Recognized worldwide as a leader in seaplane aviation, the airline has over 200 employees, including 50 pilots, that support a seaplane commuter airline consisting of 24 aircraft that together fly more than 2 million air miles, carrying 125,000 passengers, annually and a maintenance and training facility that encompasses every aspect of seaplane operations.
- The current owners and managers are aware of the Fuestra initiatives and are more than willing to discuss issues related to establishing seaplane operations, based on their experience, with Fuestra team members, should this be desired. The company has experience in assisting entities interested in establishing seaplane operations.

# Kenmore Air - Fleet

## Seaplanes

- 2 Cessna 180; 1 pilot; 3 passengers; 3,190 MTOW; 122 kts/hr cruise; 500 mile range
- 8 de Havilland Canada DHC-2 Beaver; 1 pilot; 7 passengers; 5,100 MTOW; 120 kts/hr cruise; 450 mile range
- 2 de Havilland Canada DHC-2 Turbine Beaver (Turbo Beaver) 1 pilot; 7 passengers; 6,100 MTOW; 160 kts/hr cruise; 600 mile range
- 6 de Havilland Canada DHC-3 Otter; 1 pilot; 7 passengers; 8,400 MTOW; 120 kts/hr cruise; 540 mile range
- 2 Piper PA-18 Super Cub (used for training purposes) 2 place - tandem

## Landplanes/Amphibian

- 4 Cessna C-208-B Grand Caravan of which one is an amphibian (Kenmore Air Express service, based at Boeing Field) 1 pilot; 9 passengers; 8750 MTOW; 160 kts/hr cruise; 1,000 mile range



# Kenmore Air - Destinations



- Kenmore Air provides both scheduled passenger service and air taxi charter on-demand services. Daily, year-round seaplane service is provided from Seattle's Lake Union to Lopez Island, Orcas Island and San Juan Island in Washington State, as well as to Victoria, BC. Limited year-round service is also provided from Lake Union to the Canadian Gulf Islands and the Saanich Peninsula. Seasonally (May-September), daily seaplane service is provided from Kenmore Air Harbor to more than 30 destinations in British Columbia, including Big Bay, Campbell River, Cortes Island, Desolation Sound, Nanaimo, Port Hardy, Port McNeill, Quadra Island, the Sechelt Peninsula, Sonora Island, and Refuge Cove. Custom charter services are also available for the ultimate flexibility in determining destinations and schedules.
- Kenmore Air Express (land-based) also provides daily, year-round service to several Washington communities.

# Criteria for Establishing Seaplane Operations

- **Assessment of Operational Feasibility**

Review and assessment of the suitability of the landing and operations area, potential conflicts with boating activity, aircraft noise and environmental impacts, and shoreline facility requirements. This assessment is essential in determining both feasibility and the kind of aircraft best suited to the operating environment.

- **Market and Route Analysis**

Assessment of the market potential for those routes deemed operationally feasible. Determine market potential and length of desired routes which is essential in selecting the best aircraft for start-up and long-term operations. The analysis would consider demand by market segment, e.g., personal and business, recreation-tourism, sightseeing, and cargo operations. The analysis also would involve creating a pro-forma review and business assessment that includes projected revenues, load factors, aircraft operating expenses and start up costs.

- **Facilities Requirements**

Plans for the destination and operational base facilities requirements and oversight of their construction will be necessary. Inter-modal connections would also be established, including inter-ties with bus, rail, ship/ferry, and land-based air carriers.

# Criteria - Continued

- **Civil Aviation Authority Approvals**

Secure all the necessary aviation permits and authorizations, encompassing requirements set by EU, country, and regional governmental authorities.

US Example: Regulations pertaining to certification of air operations, including seaplane, are covered by the following:

- FAR Part 119 (Certification of Air Carriers and Commercial Air Operators); Part 119 specifies two types of air operator certificates: 1. Air Carrier – under which the operator is permitted to conduct interstate, foreign, and overseas transportation; 2. Operation Certificate – under which the operator is permitted to conduct intra-state transportation. Part 119 also references passenger seat configuration and payload capacity to determine applicable operating rules.
- FAR Part 121 (Operating Requirements for Domestic, Flag Common Carriers and Supplemental Operations - with aircraft of more than 30 seats and a payload exceeding 7,500 pounds engaged in common carriage).
- FAR Part 125 (Operating Requirements for US Civil Aircraft with a seating capacity of 20 or more seats and maximum payload capacity of 6,000 pounds or more when not engaged in common carriage).
- FAR Part 129 (Operating Requirements for Foreign Air Carriers and Foreign Operators of US Registered Aircraft).
- FAR Part 135 (Commuter and On-Demand Regulations and Rules – including both scheduled and nonscheduled operations. In general, commuter and on-demand operations, both scheduled and nonscheduled, limited to 30 or fewer seats, excluding each crewmember seat, and a payload capacity of 7,500 pounds or less, are conducted under Part 135.) As such, Kenmore Airline, for example, is authorized to operate under FAR Part 135.
- FAA guidance on establishing or modifying a seaplane base is provided in the following Advisory Circular. FAA Advisory Circular 150/5395-1, dated 6/29/94 (Establishment or Modification of Seaplane Base – indicates procedures required including from other permitting agencies and governments.)

# Criteria - Continued

- **Establishing IFR Operations at Primary Seaplane Airports**
- It would be useful to evaluate the conditions where IFR operations involving an approved low altitude instrument approach procedure (IAP) during daytime are consistent with safety of operations and efficient traffic control.
- The FAA considers seaplane landing and takeoff areas to be airports. Several airports in the US have an approved Low Altitude IAP (see Rangeley Lake Seaplane Base, Maine – M57, and Greenville Seaplane Base, Maine – 52B have both GPS RNAV and a NDB instrument approaches, day only). Neither of the Kenmore Air seaplane bases in Seattle (S60 and S55) have an approved IAP.
- NOAA IFR en route low altitude charts indicate all active airports with approved approach procedures, regardless of runway length or composition. Seaplane bases with approved low altitude IAP published in the FAA Terminal Publication Volumes are shown in “green”.
- It is conceivable that IFR operations could be approved for seaplane bases located in metro areas within the EU under certain conditions exclusively for IFR equipped and certified amphibious aircraft.

# Criteria - Continued

- **Aircraft Selection, Purchase and Parts Support**

Establish the proper selection of aircraft, based on assessment of operating area, market and route analysis, aircraft maintenance, operations cost analysis, and financial start-up considerations. AOG support facilities, equipment, supply inventories, and trained personnel must be made available.

- **Design and Oversight of an Approved Maintenance Program**

Maintenance operations including facility and equipment requirements and specialized training of maintenance personnel must be designed and implemented with the support of outside professional oversight with a focus on seaplane equipment and operation including preventative maintenance and repair.

- **Pilot Support and Training**

Initial pilot support with the eventual goal of training experienced and qualified pilots for flight operations will likely be necessary. The training program should include a comprehensive program of specialized seaplane flight training.

- **Airline Information Management Systems**

Provide the business tools to manage reservations, dispatch, capacity management, flight operations and maintenance. Such a comprehensive system would be developed for start-up and regional airline operations, representing the latest software technology and computer advancements.

# Conclusion

- Pacific Northwest seaplane operations are a significant component of the regional transportation system, serving communities and business operations in the Seattle area, nearby the Puget Sound region and Victoria, British Columbia as well as other locations on Vancouver Island and the mainland coast.
- Kenmore Air is the largest seaplane operator with US-based operations. It has an enduring and growing presence in the air transportation sector of the Pacific Northwest Region. Recognized worldwide as a leader in seaplane aviation, the airline has over 200 employees, including 50 pilots, that support a seaplane commuter airline consisting of 24 aircraft that together fly more than 2 million air miles, carrying 125,000 passengers, annually and a maintenance and training facility that encompasses every aspect of seaplane operations.
- A hallmark of the Kenmore Air operation is to consider the needs of customers. Mention of Kenmore Air and seaplane travel is synonymous; people love the connection with water and air transportation. The customer only needs to be convinced of the reliability, safety, and efficiency of seaplane transportation.
- A number of criteria must be considered in establishing seaplane operations; these should be addressed at both regional (EU or country) and local levels, as indicated in the above discussion.
- Finally, in considering the criteria for establishing seaplane operations, standard SWOT analysis methods should be employed as part of public policy decision making.