Seaplane Preflight, Postflight and Base Operations

Saturday, June 18, 10am-12pm

Rainier Flight Service, Renton, WA

Austin G. Watson, P.E. CFI

Contents

About the Presenter: Austin G. Watson, P.E. CFI

- Certified Flight Instructor and Registered Professional Engineer living in Seattle, Washington
- Retired from and consulting to The Boeing Company as Training Systems Architect for Airborne Surveillance Platforms.
- Fly's for fun and teaches in his Cessna 172XP on straight floats in the Pacific Northwest.
- Board of Directors of Washington Seaplane Pilots Association (WSPA)
- Washington Field Director for the Seaplane Pilots Association (SPA).
- Published several seaplane flying articles in SPA Water Flying and other regional magazines.
- Has trained and flown in seaplanes in, Washington, Alaska, BC, Florida, Louisiana, North Carolina and Como Italy.
- Says, “Seaplane flying is the best because you get to land in nature and the intellectual decision making challenges don’t get any better.”

Seminar Description

A Seaplane has no brakes and once you cast off you are committed and going somewhere, hopefully under your own control. How do you prepare for this moment and manage the unique risks inherent in seaplane operations so that you get to fly another day?

This seminar will share best practices learned from years of seaplane flying and training in the Pacific Northwest. He will discuss effective seaplane preflight, postflight and base operations. He will talk about preflighting for water operations, launch, dock, ramp and retrieval procedures. Using a scenario based approach, particular focus will be on Renton W36 and local Pacific Northwest operations, including noise abatement strategies, operations around wildlife, and seasonal wind and water conditions.

WSPA Training

http://washingtonseaplanepilots.org/training

Government Documents

FAA-H-8083-23 Seaplane, Skiplane and Float/Ski Equipped Helicopter Operations Handbook

1. faa-h-8083-23-1.pdf
2. faa-h-8083-23-2.pdf
3. faa-h-8083-23-3.pdf
4. faa-h-8083-23-4.pdf

FAA Advisory Circulars

1. AC5210-13A Water Rescue Plans Facilities Equipment.pdf
2. AC91-69ASeaplane Safety for 14 CFR Part 91 Operators.pdf
3. AC120-47 Overwater Survival Equipment.pdf
4. AC150 5395-1 Seaplane Bases-AS150-5395-1.pdf

US Dept Of Commerce SeaplaneFacilities.pdf

U.S. Department of Transportation United States Coastguard NAVIGATION RULES

COMDTINST-M16672.2B.pdf

POH - Pilot Operating Handbooks for Seaplanes

WSPA collects POH's for your use here. If you have a PDF of POH we don't have please send it to us to pos here.

- Cessna 150
- Cessna 172
- Cessna 180
- Piper PA-18 Super Cub
- DHC2 Beaver

WASHINGTON SEAPLANE PILOTS ASSOCIATION

Resources

Govt Documents

FAA Seaplane Operations Handbook, Advisory Circulars, Coastguard Rules are located here:

- **Gov't Documents**

Seaplane Pilot Operating Handbooks, POH

Pilot Operating Handbooks for common seaplanes including Cessna, Piper, and Dehaviland are located here:

- **POH's**

Courseware

- SES Training Checklist
- CFI Checkride Checklist
- Wind Shear Avoidance
- Floatplane Safety and Risk Management
- PNW Radio Calls
- Flying to Canada

WA Training Providers

WA Training Providers

- **Kenmore Air, Kenmore** http://www.kenmoreairharbor.com/flig instruction.html
- **Rainier Flight Service, Renton** http://www.rainierflightservice.com/seap instruction.php
- **Seaplane Scenics, Seattle** http://www.seaplanescenics.com
- **Seattle Seaplanes, Seattle** http://www.seattleseaplanes.com/trainir
- **Boeing Employees Flying Association (BEFA), Renton** http://www.befa.org
- **Austin's Seaplane Training, Renton** (206) 979-4654

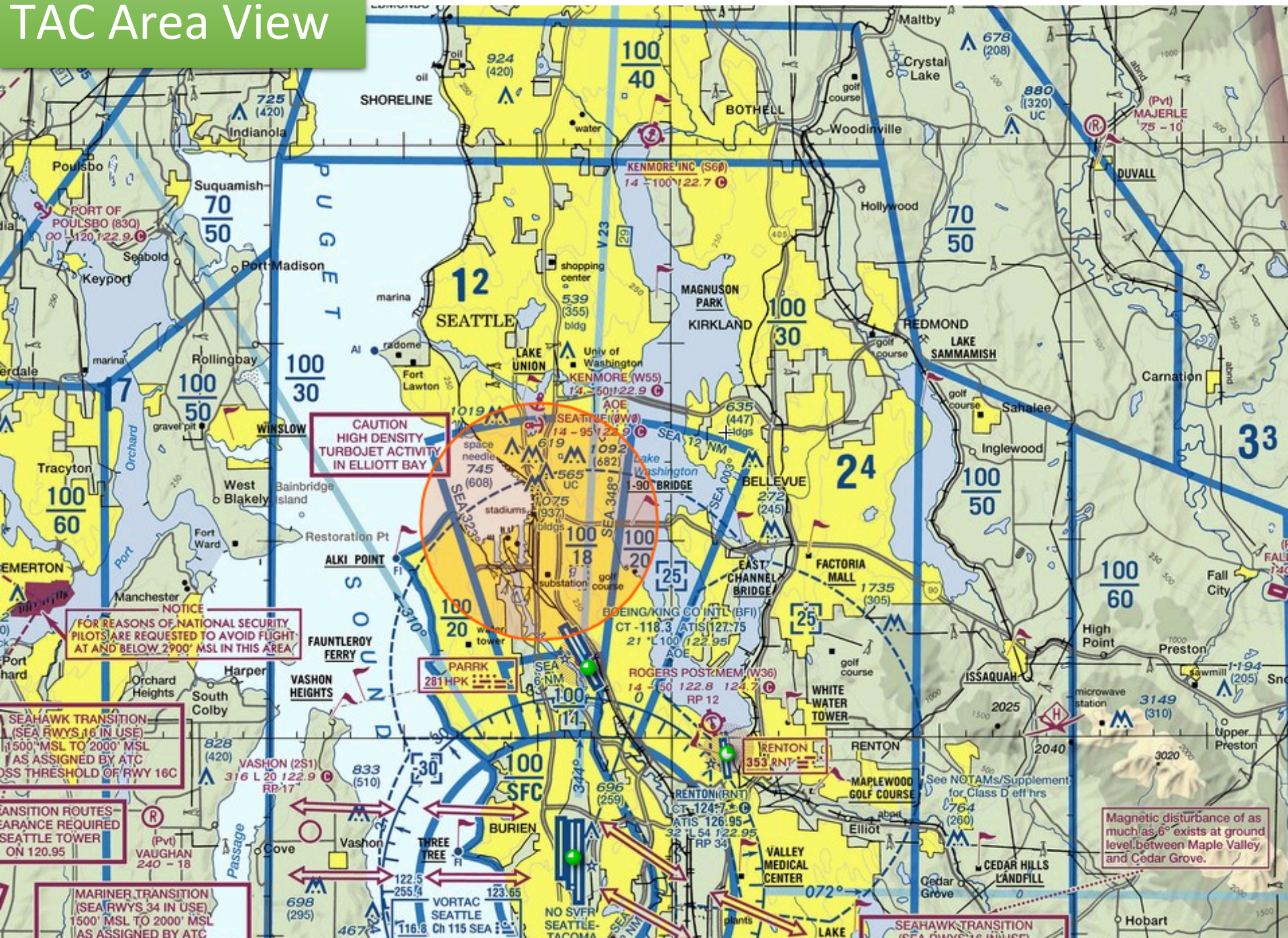
Designated Examiners

BRINK, G. FREDERICK	(425) 478-8391
KARMAN, WILLIAM NEAL	(425) 334-3983
TUTTLE, PATRICK A	(360) 201-3659
WOLVINGTON, HOWARD	(425) 761-4729

Training Scholarship Application

SPA Scholarship

TAC Area View



Commercial Pilot Practical Test Standards for Airplane (FAA-S-8081-12C), November 2011

Areas of Operation:

I. Preflight Preparation

- ✓ Task A: Certificates and Documents
- ✓ Task B: Airworthiness
- ✓ Task C: Weather Information
- ✓ Task D: Cross-Country Flight Planning
- ✓ Task E: National Airspace System
- ✓ Task F: Performance and Limitations
- ✓ Task G: Operation of Systems
- ✓ Task H: Water and Seaplane Characteristics
- ✓ Task I: Seaplane Bases, Maritime Rules, and Aids to Marine Navigation
- ✓ Task J: Aeromedical Factors

Areas of Operation:

II. Preflight Procedures

- ✓ Task A: Preflight Inspection
- ✓ Task B: Cockpit Management
- ✓ Task C: Engine Starting
- ✓ Task D: Taxiing
- ✓ Task E: Taxiing and Sailing
- ✓ Task F: Runway Incursion Avoidance
- ✓ Task G: Before Takeoff Check

OK, I know it's all going to ACS now, but you get the idea. We are going to hit some of the important topics here.

Commercial Pilot Practical Test Standards (PTS) for Airplane (FAA-S-8081-12C), November 2011

Areas of Operation:

III. Airport and Seaplane Base Operations

- ✓ Task A: Radio Communications and ATC Light Signals
- ✓ Task B: Traffic Patterns
- ✓ Task C: Airport/Seaplane Base, Runway, and Taxiway Signs, Markings, and Lighting

Areas of Operation:

IV. Takeoffs, Landings, and Go-Arounds

- ✓ Task A: Normal and Crosswind Takeoff and Climb
- ✓ Task B: Normal and Crosswind Approach and Landing
- ✓ Task E: Short-Field Takeoff (Confined Area) and Maximum Performance Climb
- ✓ Task F: Short-Field Approach (Confined Area) and Landing
- ✓ Task G: Glassy Water Takeoff and Climb
- ✓ Task H: Glassy Water Approach and Landing
- ✓ Task I: Rough Water Takeoff and Climb
- ✓ Task J: Rough Water Approach and Landing
- ✓ Task L: Go-Around/Rejected Landing

PTS Special Emphasis Areas

Examiners ***shall place special emphasis*** upon areas of aircraft operations considered critical to flight safety. Among these are:

1) **Positive aircraft control**
2) Positive exchange of the flight controls procedure
3) Stall/spin awareness
4) **Collision avoidance**
5) **Wake turbulence avoidance**
6) LAHSO
7) **Runway incursion avoidance**
8) **CFIT**
9) **ADM and risk management**
10) Wire strike avoidance
11) **Checklist usage**
12) Temporary flight restrictions (TFRs)
13) Special use airspace (SUA)
14) Aviation security
15) **Single-Pilot Resource Management (SRM)**
16) ***Other areas deemed appropriate to any phase of the practical test***

Objectives

1. Learn to operate safely and efficiently at the W36 seaplane base

2. Learn best practices for managing risk before and after a seaplane flight

3. Socialize common practices for W36 seaplane base users

Float Flying is Different from Wheel Flying

- It's nature, not concrete and runway lighting. It's a whole different gig
- Procedures are not prescribed. You have to think through everything
- Generally three is no ASOS/AWOS, just eyes and skies
- Terrain is always close in
- Landing & Takeoff surface are move both vertically and horizontally
- There is always FOD, both living and non-living and difficult to see
- You have no brakes. Mother Nature has a plan for your plane
- Night is forbidden
- Once you commit, you are committed. Plan your options well ahead
- It's the most fun flying ever

PREFLIGHT

Getting ready to go

- What's the worst thing that can happen to a float pilot?
  - You drop cellphone in the water
  - Wear Zippered Pockets!

- Do you want to start engine first time today on the water?
  - Be certain it is going to start, or
  - Float to mercer island.

- **What we want to do is get rid of all the reasons not to fly and do it in some logical order. We want to put risk behind us and stack the deck in our favor.**

At Home Checklist

1. Wallet, Credit Cards, Cash, and Drivers License
2. Pilots License(s) and Medical Certificate
3. Charts (VFR, IFR, Approach, Departure, Runway)
4. Airport Facility Directory
5. Navigation Log, Flight Plan, and Weather Briefing
6. Headsets, batteries charged, spares
7. Kneeboard, Logbook, pens, pencils, and highlighters
8. Keys (Car, Airport, Airplane)
9. Portable GPS/iPad, batteries charged, spares
10. Handheld Radio, batteries charged, spares
11. Flashlights, Batteries charged, spares
12. Seat Cushion
13. Glasses, Sunglasses, Cleaner
14. Hat, Jacket, Gloves, Umbrella
15. Meds and first aid kit
16. Cell Phone, charged
17. Watch
18. IMSAFE

Before you launch

- You've decided you are OK, the Weather, both current and forecast is Floats-OK
- You have a plan for where to go, and you told somebody when to expect you and where
- Now you can go to the Seaplane base
  - Check the wind and water (Go look at it)
  - Clean up the launch area
  - Then …
    - Go do your airplane preflight
      - What do you not want to discover after you start floating away from the shore?
      - How far into checklists can you get prior to launch?

Passenger Brief Checklist 91.519

1. Smoking, Food, Alcohol & Drugs 91.17,535
2. Electronic Devices - Off 91.21
3. Pilot / Crew Interference 91.11
4. Seat, Seatbelt & Shoulder Harness 91.107
5. Exits, Egress & Ditching Procedures
6. Oxygen use 91.211
7. Baggage & Equipment Location & Stowage
8. Floatation Devices - Location & Operation
9. Fire Extinguisher - Location & Operation
10. ELT - Location & Operation
11. Signaling Devices - Location & Operation
12. Brace Position – Demonstrate
13. Heat Lessening Position – Demonstrate
14. Propeller Flaps and Elevator Caution
15. Passengers Needing Assistance
16. Positive Exchange of Controls

Show them how to exit plane if under water upside down.

Have them demonstrate it with eyes closed

Try to do it without scaring them. (good luck with that)

Life Jacket or PFD?
Who wears them and when

Preflight for Water Operations

- *Work through all the reasons not to fly in a logical sequence*

- IMSAFE

- "All Available Information"
  - Weather Now, Weather Future
  - Base Conditions, Wind and Water

- Gather all your Equipment
  - Seaplane Stuff – Rope, Anchor, Bumpers, Waders, . . .
  - Emergency Stuff – The 10 Essentials, . . .

- Verify Airworthiness
  - Verify Seaworthiness

C172-XP Float Checklists

Pre-Flight

- POH - Chapter Four
- Window Cover - Stow
- Engine Plugs - Stow
- Water Rudders - Test
- Floats – Inspect & Pump
- Vortex Gens – Inspect
- Passengers - Briefed

Engine Start

- Tach/Hobbs – Record
- Circuit Breakers – Check
- Instruments – As req'd
- Fuel – Both
- Cowl Flaps – Open
- Trim – Takeoff
- Mixture – Rich / as req'd
- Prop/RPM – Full
- Primer
  - Cold - as req'd
  - Hot - None
- Master Switch- On
- Fuel Pump
  - Cold - On till flow
  - Hot – Off
- Key – On
- Throttle – Advance slowly
- RPM – Set 800
- Oil Pressure – Green

Power Settings PA =2000' /8LM

- RPM/MP BHP KTAS GPH
- 25/25 – 81%, 114/100, 11.5
- 24/24 – 72%, 107/95, 10.2
- 23/23 – 63%, 100/90, 8.9

V Speeds

- Vx - 56 kia
- Vy - 72 kia
- Va - 105 kia

Runup

- Seatbelts – fastened
- Doors – close and lock
- Radios - Set
- Transponder - On
- ATIS - Set DG, Altimeter
- Flight Controls - Free and Correct
- Oil temp - > 75 deg
- Lights As Required
- Throttle - 1800 RPM
- Magnetos - 175/50
- Propeller - Cycle
- Engine Insts. - Check
- Ammeter - Check
- Suction - Green
- Throttle - Idle

Takeoff

- Area - Clear
- Water Rudders - Up
- Fuel – Both
- Trim - Takeoff
- Cowl Flaps - Open
- Flaps - 20 deg
- Mixture – Rich
- Prop/RPM – Full
- Throttle/MP – Full
- All Inst – Green

Takeoff - 1135' water / 1850' 50'

Departure / Climb

- Positive Rate
- Throttle/MP - 25"
- Prop/RPM – 2500
- Flaps – in
- Mixture – as required

Cruise

- Cowl Flaps – as req
- Mixture
- Prop/RPM – Cruise

Descent

- ATIS - Set DG, Altimeter
- Power / Mixture/Trim
- Cowl Flaps – Closed

Before Landing

- Seatbelt – check
- Wind Direction
- Water Conditions
- Water Rudders – Up
- Fuel – Both
- Cowl Flaps – Closed
- Flaps – Set
- Throttle/MP - 15", as req'd
- Prop/RPM – Full

Landing - 660' water / 1325' 50'

After Landing

- Water Rudders - Down
- Cowl Flaps - Open
- Flaps – In
- Seatbelts – Off and Stow
- Headset – Off and Stow
- Avionics - Off
- Master Switch - Off
- Seat Back and Door Ajar

Docking / Engine Off

- Prop/RPM – Full
- Throttle/MP – Out
- Mixture – Out
- Key - Off & Out
- Water Rudders - Up
- Fuel – Right

Tie Down

- Yoke Lock - In
- Pitot Cover - On
- Cowl Flaps - Closed
- Cabin - Air Closed
- Floats – Pumped
- Window Cover - On
- Engine Plugs - In
- Tie down - Complete
- Doors - Locked

Check everything you can all the way thru takeoff list before you even go to the ramp

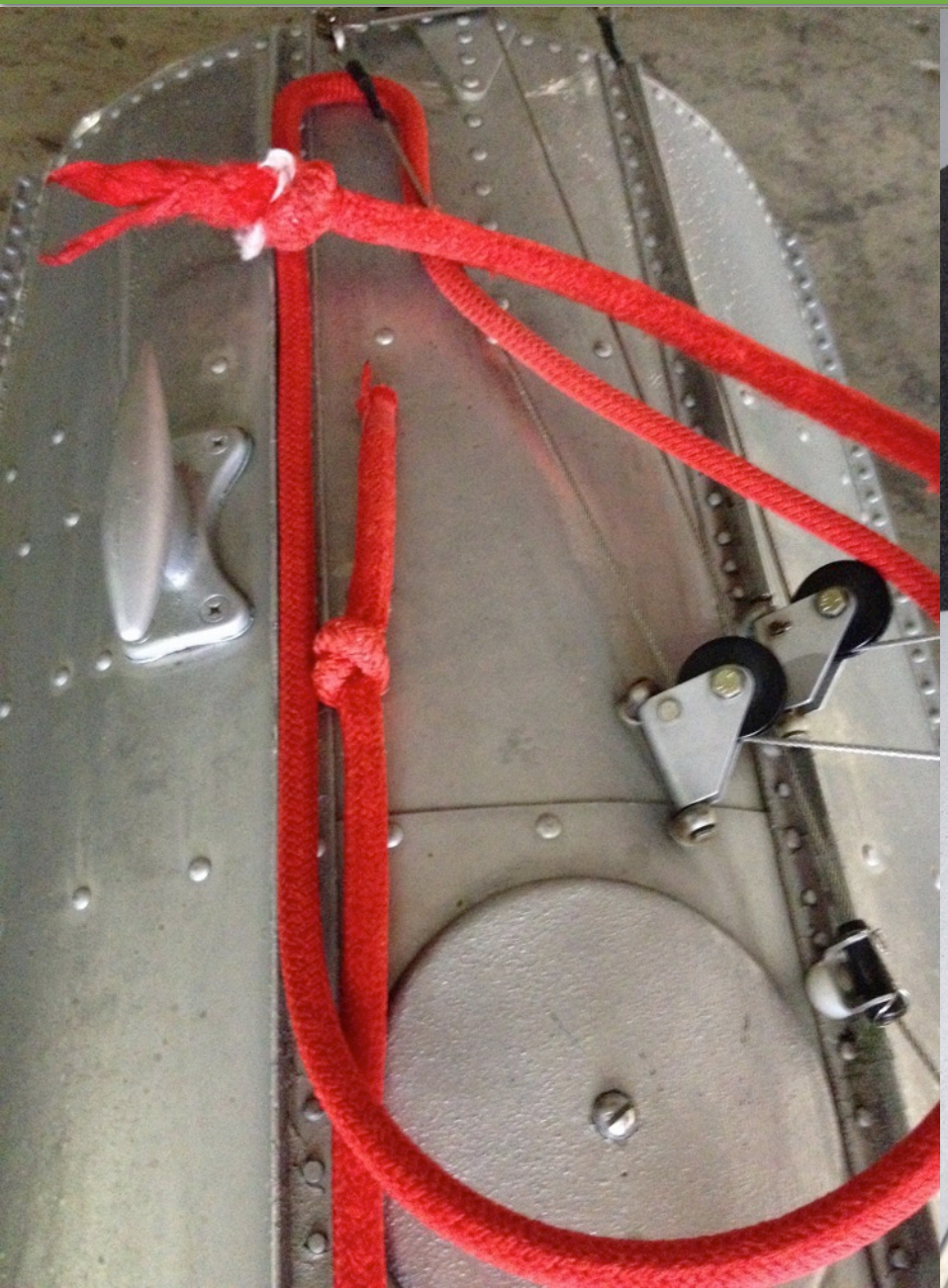
When do you want to find a checklist item failure?

Preflight for Water Operations

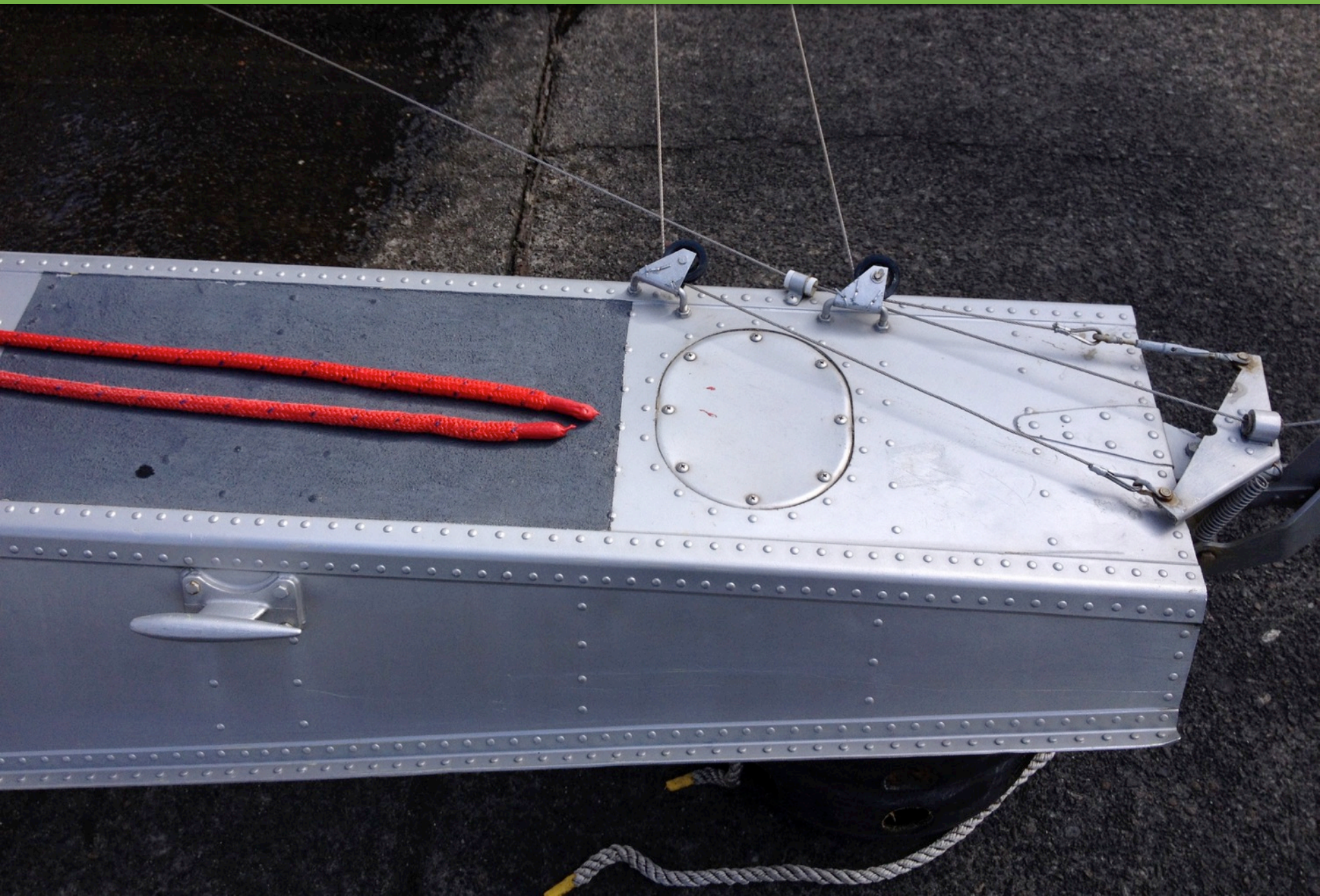
- *Altimeter Tricks & Tips*
  - *Set altimeter to 29.92 and see where it says you are. Check Air Density*
  - *Set Altimeter to Airport Elevation. Get ATIS if any. See how much you had to reset Altimeter*
  - *Check altimeter against manifold pressure reading before engine start. (If you have a constant speed prop engine with RPM and MP controls)*
- *What does my homemade checklist have on it?*
  - *Everything in the POH!*
    - *I do not want to explain to FAA/NTSB why I left something in the POH off my "improved" checklist.*
  - *Everything on your STC's*
  - *Just what will save my life.*
    - *Don't make it a space shuttle checklist.*
  - *Stuff you tend to forget*

Preflight for Water Operations

Preflight your ropes – Rope interfere with controls



Preflight your ropes – Ropes Just Right



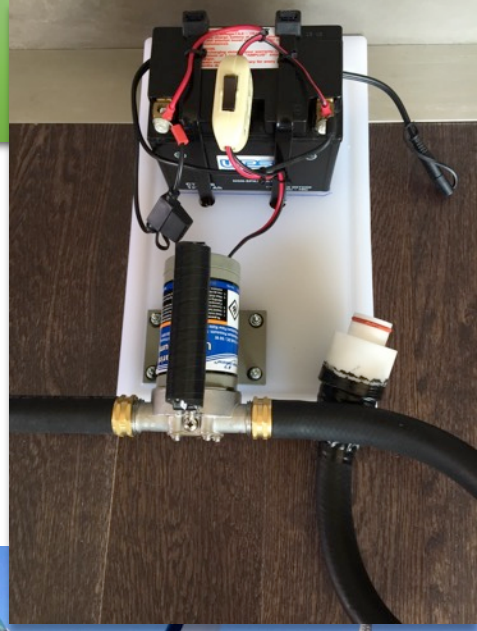
Preflight Your Ropes
Wing Eats Rope

Fuel Planning – know your fuel radius

Preflight for Water Operations

FLOATS:

- *Pump before*
  - *Especially if somebody else might have flown the plane*
  - *I get more rain infiltration through the top than leakage through the hull*



- *Pump after*
  - *Calibrate and know your typical leakage rate*
  - *Find out if you punctured something*

- *Pumping is a good job to give somebody*
  - *But watch them like a hawk*

- *This is a Good Time to Inspect Floats*
  - *Also inspect bottoms when lifted on float truck*

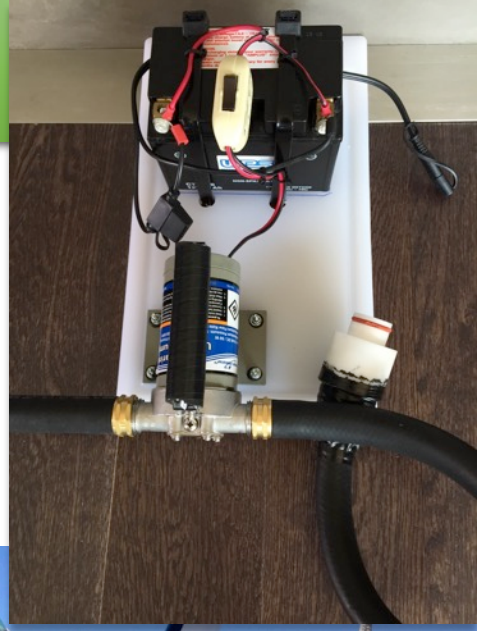
Preflight for Water Operations

- *About Pumping Floats*

- *Pump before*
  - *Especially if somebody else might have flown the plane*
  - *I get more rain infiltration through the top than leakage through the hull*

- *Pump after*
  - *Calibrate and know your typical leakage rate*
  - *Find out if you punctured something*

- *Pumping is a good job to give somebody*
  - *But watch them like a hawk*



Preflight for Water Operations

Winter Ops in the PNW

- Heater / Dehumidifier
- Battery Minder

BASE OPS

Seasonal Wind and Water – It was nice at My House

Preflight The Ramp

Preflight – Know your loaded waterline

Departing the Dock and Ramp

- If you are using raw muscle power to position your plane on the dock, then you are doing something wrong. THINK

- Minimize time on the dock. Sitting in your plane on the dock is not the place for a ground school lesson.
  1. Get in
  2. Turn the key
  3. Go

  Your Headset and Seatbelt can wait.

Seasonal Wind and Water – Pretty Day / Pretty Windy

Seasonal Wind and Water – *After The Storm*

Dock and Ramp Safety

Operating Around Wildlife

Operating Around Wildlife

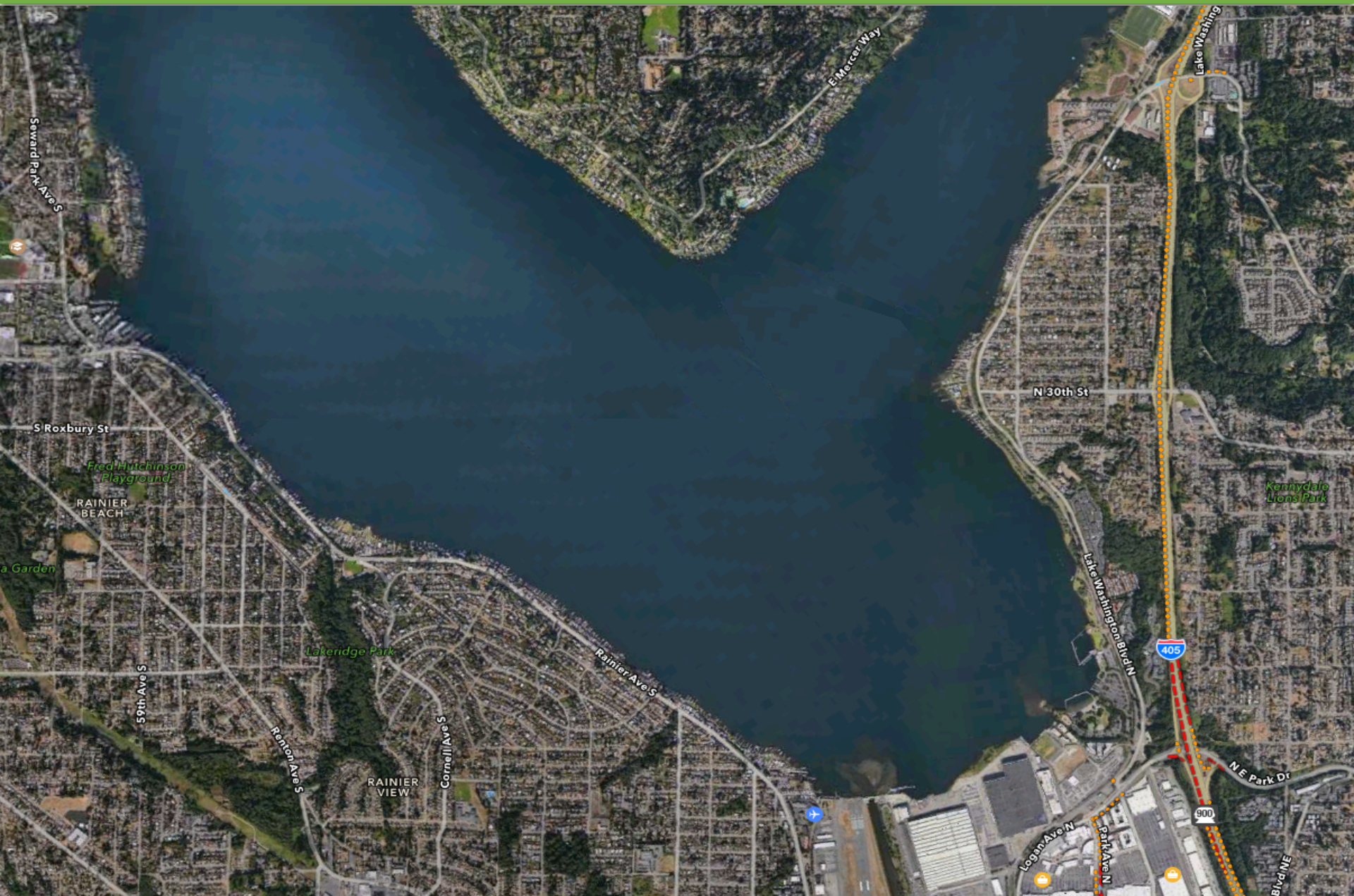
- Birds
- Turtles
- Mink, Otters
- Salmon
- Boaters

Dock and Ramp Safety

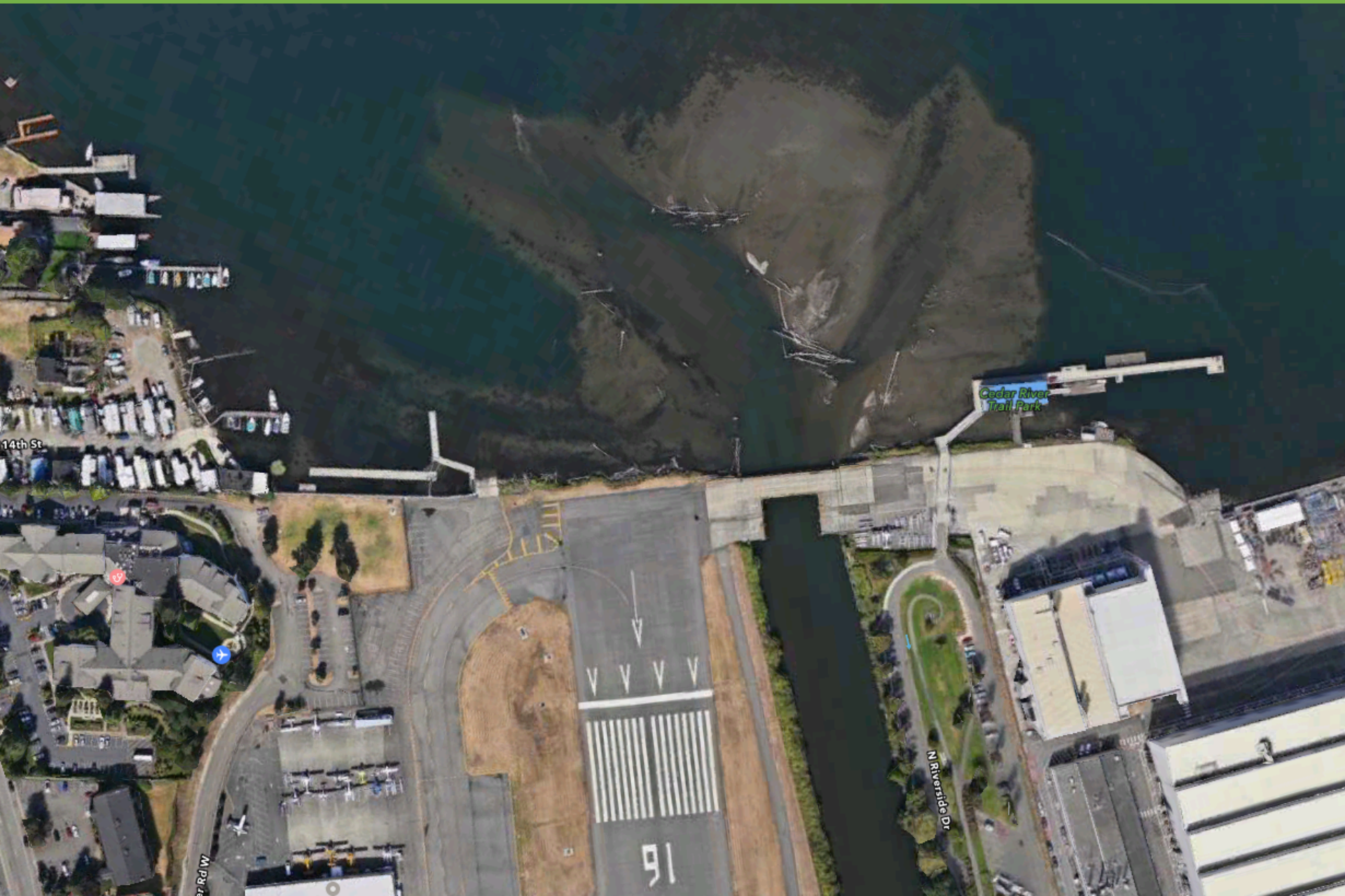
- Scott has a slippery ramp Injury – August 2014

DOCK AND RAMP

W36 Views – Operating Area



W36 Views – Dock / Ramp Area

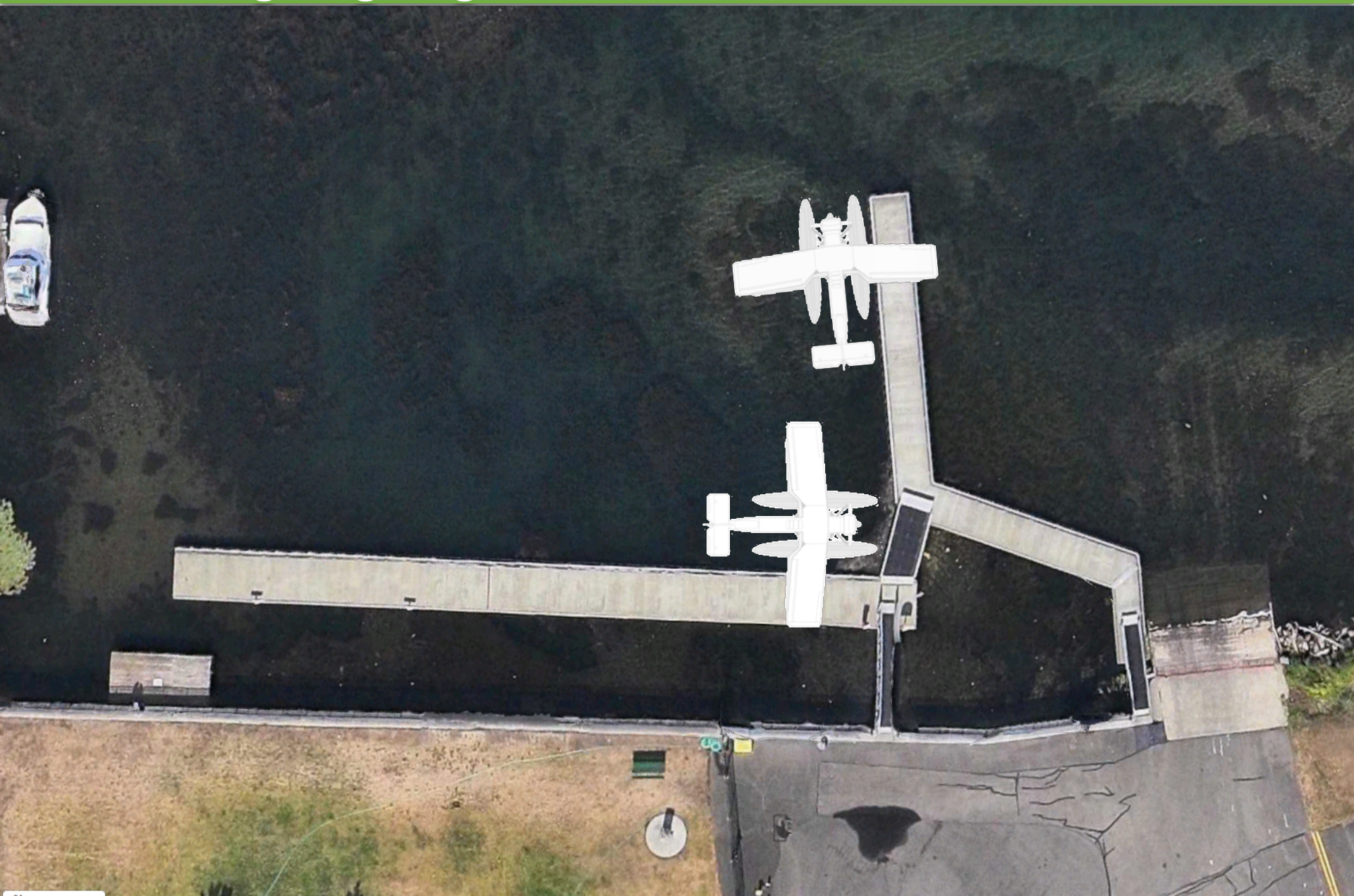


W36 Views – Dock / Ramp Close Up

How to turn a plane

What is the dumbest place to leave your plane?

Where would you want a plane to be if you were the next one coming or going?



WASHINGTON ONE

What does “Washington One” mean?

1. I am a cool seaplane bush pilot because I say Washington One when I fly at Renton

2. Ummmmmmmm….

TRUTH: TYPICAL SEATTLE ENGINEER WHO BUILDS SOFTWARE SYSTEMS

W36 Departures & Arrivals

Exercise:

1. Pick a wind direction and speed
2. Pick your location
3. Pick Arriving or Departing
4. What's your plan?

Priorities:

1) Safety
2) Make it easy for others

Have you read the AFD lately?

WILL ROGERS WILEY POST MEM SPB (W36) 1 N UTC–8(–7DT) N47°29.99′ W122°13.16′ **SEATTLE**

14 LRA NOTAM FILE RNT

WATERWAY 12–30: 5000X200 (WATER)

WATERWAY 12: Rgt tfc.

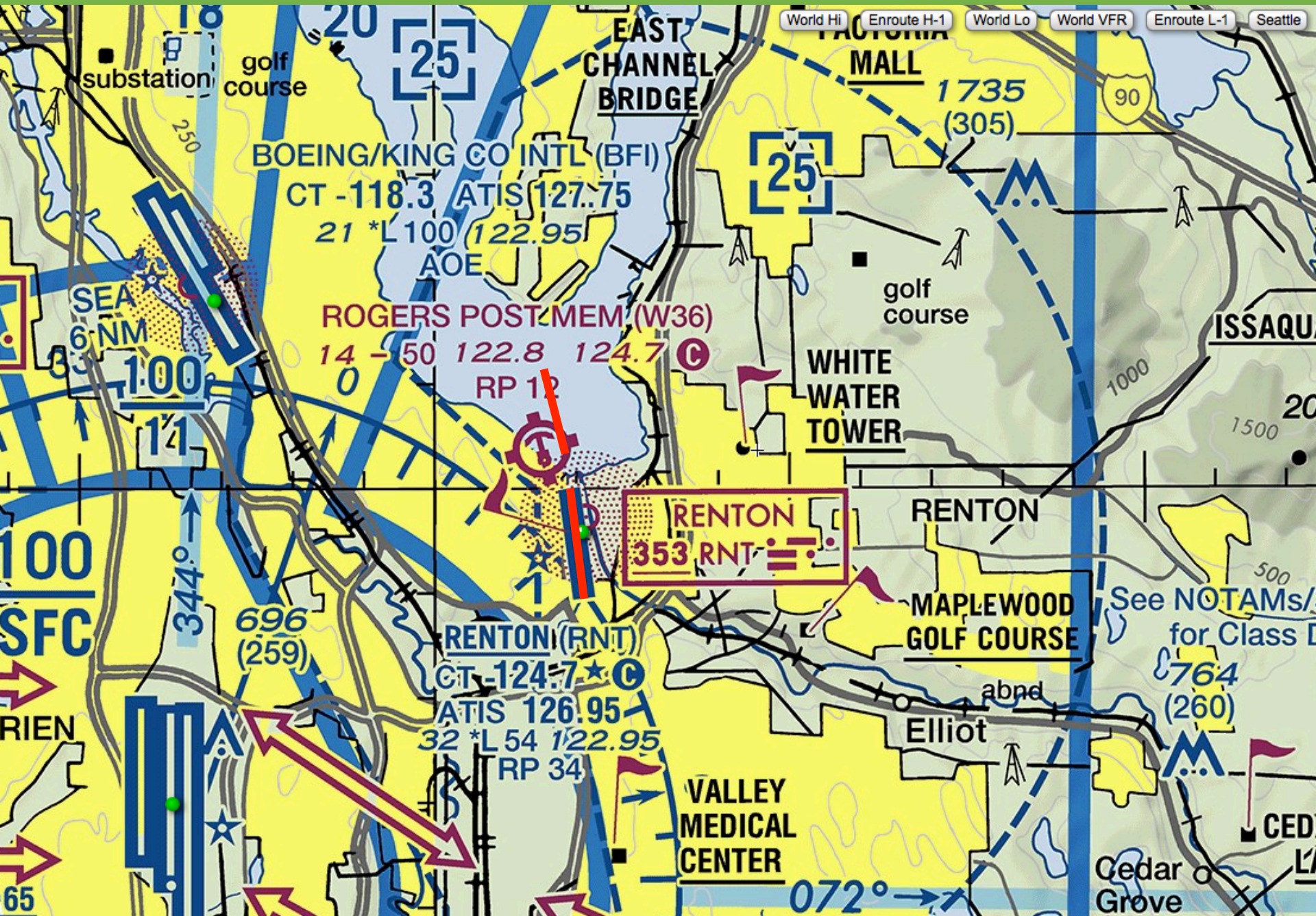
SERVICE: S4 **FUEL** 100LL, JET A, A1+ **OX** 1, 2, 3, 4

SEAPLANE REMARKS: Attended 1500Z‡–Dusk. Ctc Renton twr when opr, for tfc data. When twr not opr announce intentions on 124.7. When flying inbd or outbd in the west channel waterway above 800′ AGL ctc Boeing twr freq 118.3 for tfc advisories. Flocks of waterfowl in vcnty, be alert ldgs and tkfs. Water depths vary at docks and seaplane launch ramp. Use caution for localized shoaling. Extv boating and personal watercraft in vcnty. Flight Notification Service (ADCUS) avbl.

AIRPORT MANAGER: (425) 430-7477

COMMUNICATIONS: CTAF 124.7 **UNICOM** 122.8

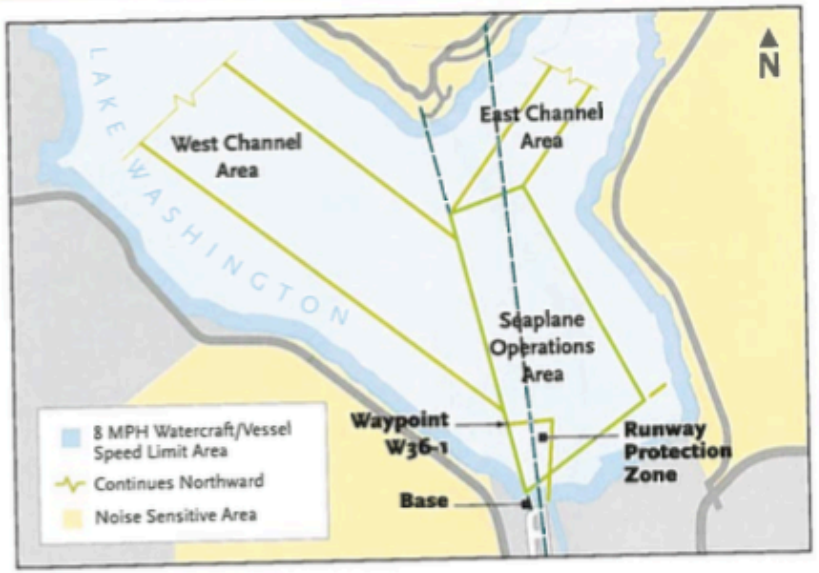
W36, 12-30: 5000X200



What does “Washington One” mean?

WILL ROGERS-WILEY POST SEAPLANE BASE

All takeoffs, landings, and idle taxiing should be carried out within the area identified as the Seaplane Operations Area with regard for wind, weather, and boat traffic. The Seaplane Operations Area is east of an imaginary line extending from the seaplane dock on a heading of 320 degrees. **NO STEP TAXIING.** Operations are at your own risk. **Use caution for localized shoaling and shallow water as you approach the seaplane base and around the seaplane docks and launch ramp.**



WASHINGTON ONE DEPARTURE: On initial contact with Renton Tower, advise your specific location on the lake (e.g. east or west of the extended runway centerline and whether you are out of our line of sight behind buildings). Request the “Washington One Departure” and tell the controller whether you will use the east or west channel. State the appropriate ATIS code. You must establish two-way radio contact prior to entering Delta airspace (i.e. prior to becoming airborne). Departure from the lake is at pilot’s own risk–report airborne. Fly mid-channel to avoid noise sensitive areas. West Channel departures remain at or below 800' MSL while in the west channel, over the water, and until you’re outside of Boeing airspace.

WASHINGTON ONE ARRIVAL: On initial contact with Renton Tower, advise your location. Request the “Washington One Arrival” and tell the controller whether you will use the east or west channel. State the appropriate ATIS code. You must establish two-way radio contact prior to entering Delta airspace. Fly mid-channel to avoid noise sensitive areas. Remain at or below 800' MSL while in the west channel, over the water, and in Boeing airspace. Landing on the lake is at the pilot’s own risk–report on the lake.

What does "Washington One" mean?

WASHINGTON ONE DEPARTURE: On initial contact with Renton Tower, advise your specific location on the lake (e.g. east or west of the extended runway centerline and whether you are out of our line of sight behind buildings). Request the "Washington One Departure" and tell the controller whether you will use the east or west channel. State the appropriate ATIS code. You must establish two-way radio contact prior to entering Delta airspace (i.e. prior to becoming airborne). Departure from the lake is at pilot's own risk–report airborne. Fly mid-channel to avoid noise sensitive areas. West Channel departures remain at or below 800' MSL while in the west channel, over the water, and until you're outside of Boeing airspace.

WASHINGTON ONE ARRIVAL: On initial contact with Renton Tower, advise your location. Request the "Washington One Arrival" and tell the controller whether you will use the east or west channel. State the appropriate ATIS code. You must establish two-way radio contact prior to entering Delta airspace. Fly mid-channel to avoid noise sensitive areas. Remain at or below 800' MSL while in the west channel, over the water, and in Boeing airspace. Landing on the lake is at the pilot's own risk–report on the lake.

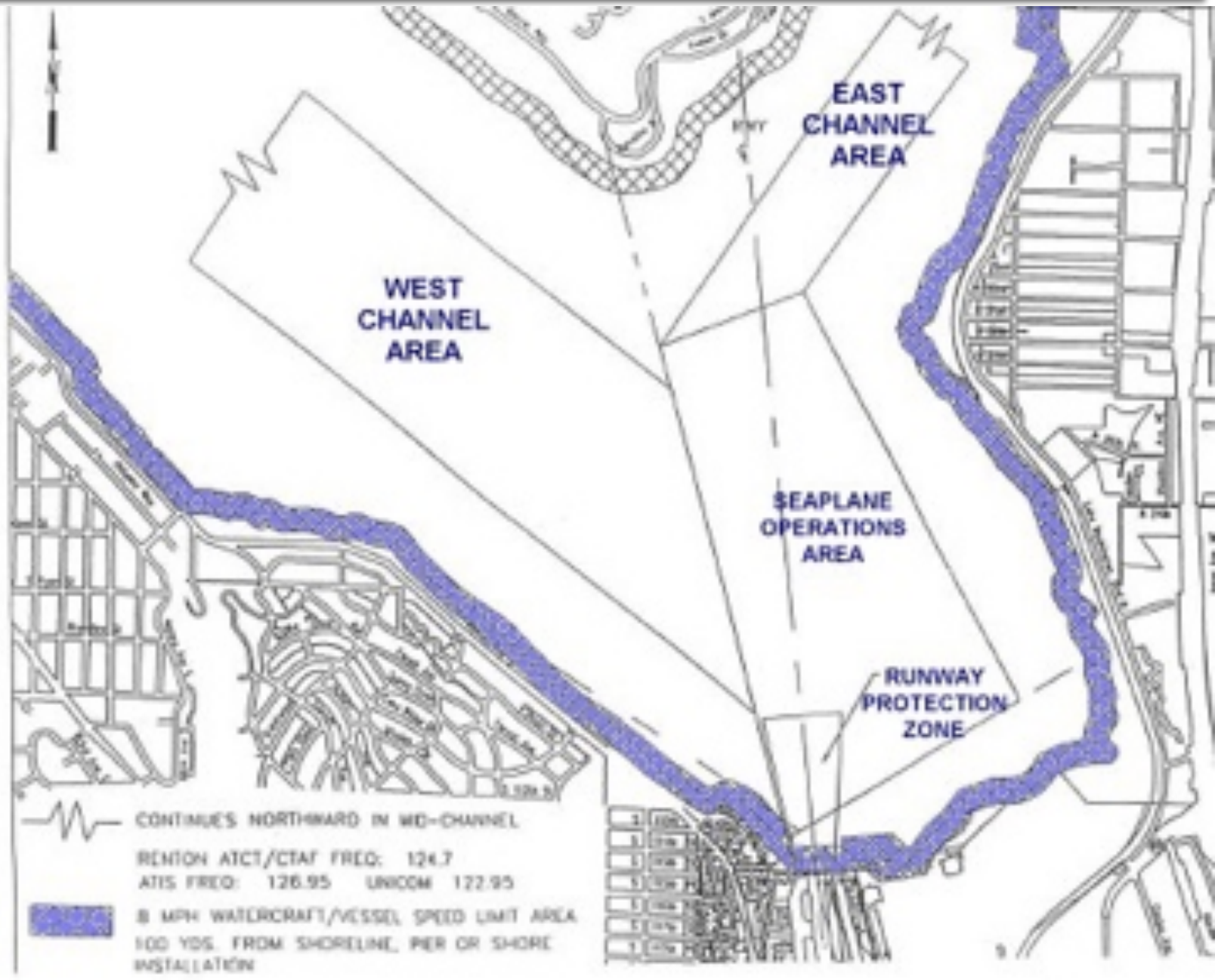
You are getting a clearance to enter Renton's Delta Airspace.

Renton Tower, Floatplane N758LM on the water with Whiskey.
Request **Washington One** West channel north departure.

Renton Tower, Floatplane N758LM at Bellevue with Juliet.
Request **Washington One** East channel landing.

Seaplane Operations Area

http://rentonwa.gov/living/default.aspx?id=228



Seaplane Operations Procedures

Seaplane Operations Procedures

1. All take-offs, landings and idle taxiing should be carried out within an area located east of an imaginary line connecting the seaplane dock and the south end of Mercer Island. The azimuth of this line is 320 degrees, magnetic, from the dock.

2. Pilots should enter and exit the seaplane operations area via east or west channel routes

3. Remain at or below 800 feet MSL while in the west channel to avoid King County International Airport airspace

4. No step taxiing

5. Floatplane speed limit within 100 yards of docks and/or shore is 8 kph (5 mph)

Ramp and Floating Dock Procedures

1. The following procedures have been adopted to prevent congestion on the amphibious ramp.

2. Arriving aircraft may be positioned on the amphibious ramp for refueling or removal **only** when the fuel or tow vehicle is present. The aircraft must immediately be removed from the water, depart or be relocated to a position on the floating dock after fueling.

3. After being placed in the water for departure, aircraft must immediately depart or be relocated to a position on the floating dock.

4. Aircraft positioned on the amphibious ramp must, at all times, be attended by a person responsible for and authorized to relocate the aircraft.

5. To decrease the possibility of fuel spills into Lake Washington, aircraft utilizing the seaplane base facilities should be refueled on land prior to being placed in the water or after being removed from the water.

Radio Work on the Water

- Arrival and Departure is not an IFR clearance. You don't have to read it all back. Keep it short. This works:
  - Tower Controller, "blah blah blah 8LM"
  - 8LM Pilot, "8LM"

- "Washington One" is not just something you say to show you are a cool seaplane pilot. It means something. It's a contract between you and the Tower.

- Float Truck Radio Calls
  - It's just another taxi clearance
  - Who you are, Where you are, what you want.
  - Typical Example:
    - Driver,"Renton ground, NW Tow, Request 860 Building to float ramp"
    - Renton ground, "NW Tow, blah blah blah via Alpha"
    - Driver, "NW Tow"

Tell the tower where you are. They probably can't see you.

Radio Work

Pacific Northwest Floatplane Radio Calls

June 11, 2016 Austin G. Watson, CFI N758LM

LOCATION	INTENTION	RADIO CALL
W36	General	Inform tower of specific location if it is *unusual* due to prevailing [E, W] wind conditions, i.e. North of Boeing factory, NW of float base. If slide and take off will be to East or West due to prevailing winds, inform tower of intentions, i.e. taking off to the [east, west] across the runway centerline with turnout to the north
Departing W36	NE Departure To N, NE	Renton Tower, Floatplane N123FP on the water with LIMA, Request Washington One east channel departure to the [North, NE]
Departing W36	NW Departure To N	Renton Tower, Floatplane N123FP on the water with LIMA, Request Washington One west channel departure to the North
Departing W36	NW Departure To W	Renton Tower, Floatplane N123FP on the water with LIMA, Request Washington One west channel departure, early transition to Boeing westbound … Boeing Tower, Floatplane Cessna N123FP, off Renton at 700 ft request west transition over runway westbound OR Boeing Tower, Floatplane Cessna N123FP, at I90, 700 ft, request Safeco transition westbound at 1500ft

We made it easier for you.

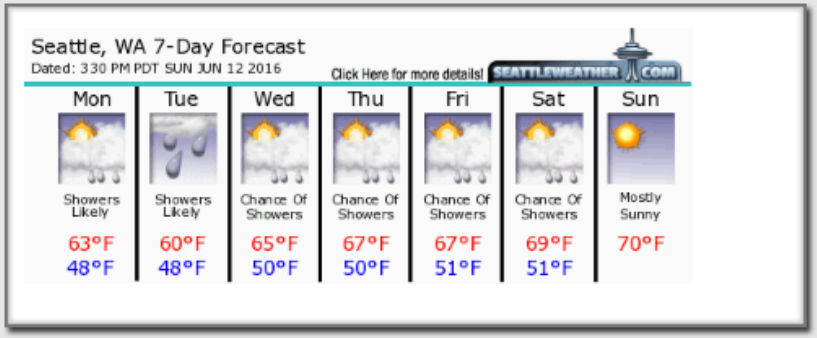
PNW Radio Calls Doc is Available at:

washingtonseaplanepilots.org/training

Look under Courseware

WIND AND WATER

WSPA Weather http://washingtonseaplanepilots.org/weather



WA Weather

Weather Briefing

- Seattle Local Aviation Flight Conditions
- Seattle NWS Forecast Office
- Seattle Area Forecast Discussion
- Prog Charts - Surface Analysis
- METARS & TAFS
- Winds Aloft NWS
- Winds Aloft Air Sports Net
- Convective Forecast
- PIREPS
- TFRS & NOTAMS
- PNW Ferry Weather
- Mt Rainier Forecast
- Hwy 520 Bridge Weather
- Ferry Weather Surface Winds for Puget Sound
- Tides NOAA
- UW Weather

Charts and Cameras

Aeronautical Charts

- SkyVector
- AIRNAV Airport Info
- FLTPLAN Airport Info

Nautical Charts

- NOAA Chart Viewer
- Pacific Coast Charts

Web Cams

- UW Atmos Sci PNW Weather Cams
- Space Needle Pano Cam
- Skunk Bay Weather Cam
- Edmonds Marina Cam
- Port Townsend Cam
- San Juan Island Cams
- BC Cams
- Vancouver Island Air Web Cams

BC Weather

- BigWaveDave - Wind info from BC Windsurfers

Please Contact us if you can help with this section.

Weather Imagery

- Seattle Wundermap
- PNW Accuweather
- East Pacific & PNW Accuweather
- Pacific Intellicast
- Jet Stream Intellicast
- World Map Intellicast Polar
- WindyTY - Great Wind Visualization

Preflight – Seasonal Weather at Renton

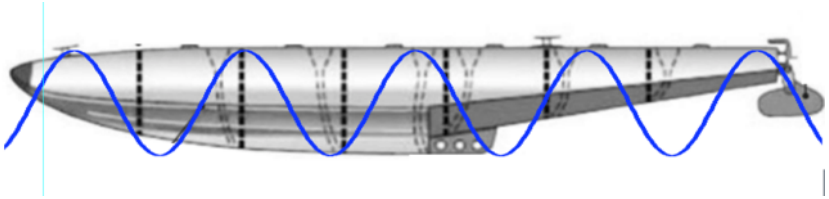
- *Summer*
  - *North wind – Think about Staying Put if wind is > max crosswind*
  - *Big water in afternoon*
  - *Boat Wakes*
  - *Fog in morning, Clear at 6AM, Fog at 9AM, Clear at 1PM*
  - *Smoke*
  - *Hot thin air – Beware DA and Cyl Head Temps*

- *Winter*
  - *South Wind - Gusty*
  - *Cold Temps – Stay put if Temp <35 degrees and dropping*
  - *Flooded Rivers → Debris, Currents*
  - *Low Sun Angles*
  - *Look for that perfect blue sky week that comes every year*
  - *Wonderful thick air*

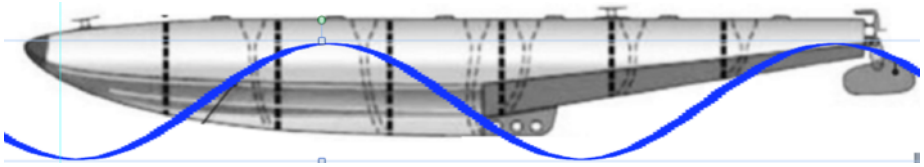
- *Fall / Spring*
  - *Changing conditions – Can just be crazy*
  - *Calm Grey Days – smooth water, good air*

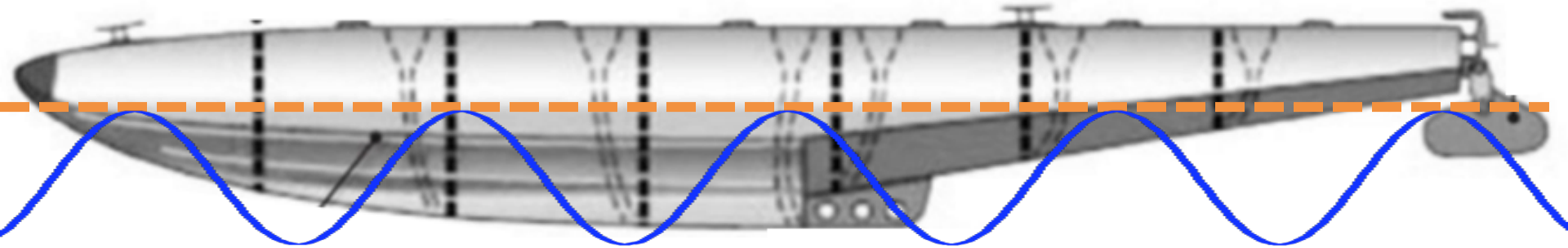
Preflight – How Rough Is too rough?

- If **waves/swells greater than one half of float height**, think about staying put



- If less than **three waves/swells per float length**, think about staying put

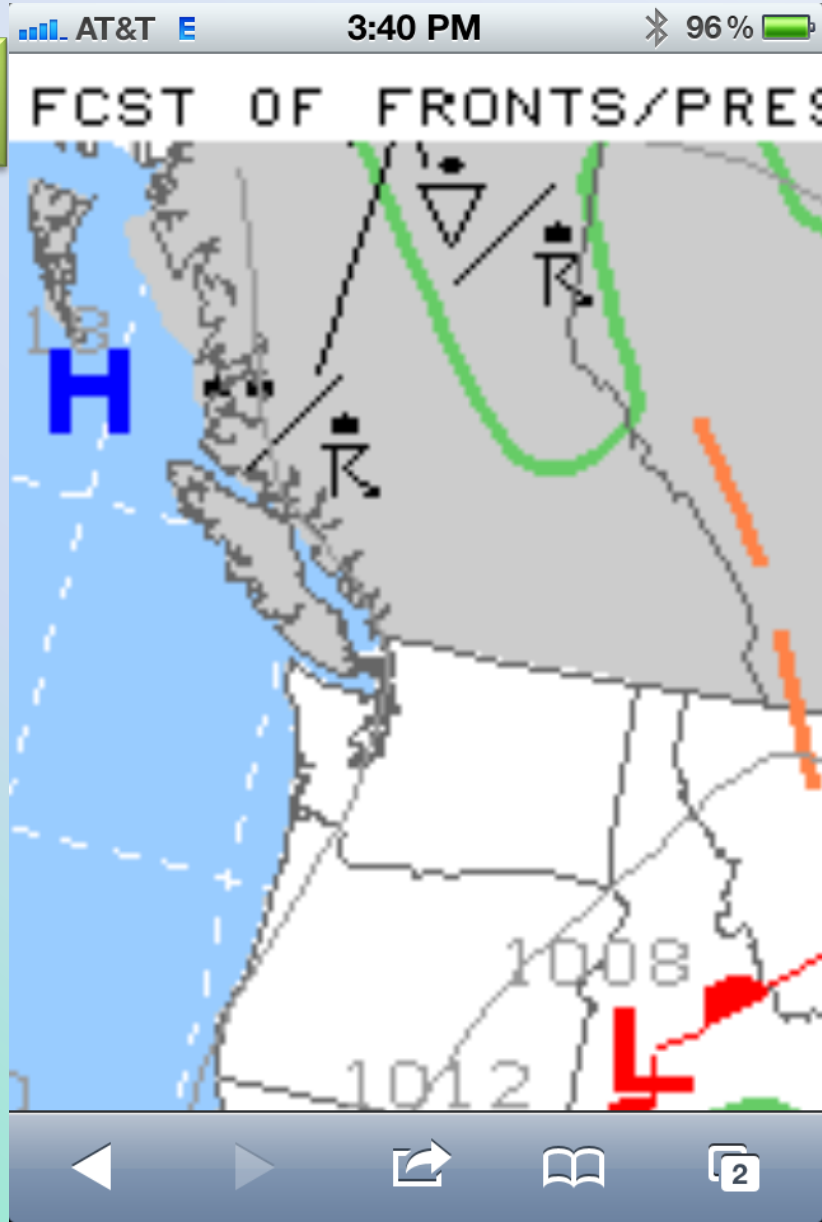




Good WX / Bad WX

Nice day to go fly →

Never Fly into the Red Blob



Seasonal Wind and Water – Pretty Day / Pretty Windy

SURF'S UP AT RENTON

SWELLS AT RENTON

SWELLS BIGGER THAN FLOATS

Seasonal Wind and Water – A Perfect Day

POSTFLIGHT

Arriving at the Dock and Ramp

- Is the wind and water what you expected it would be when you got back?
  - If you don't like it go some where else and land.
- Site boats, animals, debris, swells, wind direction, gusts.
- Announce at Renton "8LM on the water".
- Know the four ways to turn around
  1) Idle Turn
  2) Plow Turn
  3) Momentum Turn
  4) Don't Turn… Just sail

- Clean up and get disencumbered
  - Headset off
  - Seatbelt off and stowed
  - Charts, electronics, food, pets, stowed
  - Doors Clear
  - Avionics Off
- Test your turns before you need them
- If you were the next plane after you where would you like to park? Where do you wish the plane before you parked?
- Is the truck ready and available? Do you ramp or need to dock and go get the truck?

Postflight Your Floats

Arrival

- Area Inspection
- Wind
- Water
- Current
- Obstructions
- Sea life
- Birds
- People
- Boats

FLOAT TRUCKS

Float Trucks – The fastest way to break a floatplane

Float Trucks – The fastest way to break a floatplane

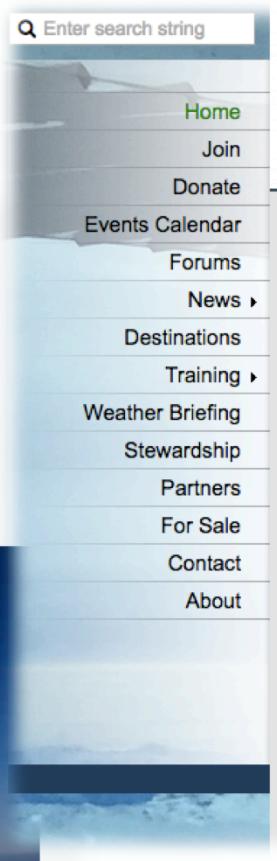
Float Trucks – The fastest way to break a floatplane

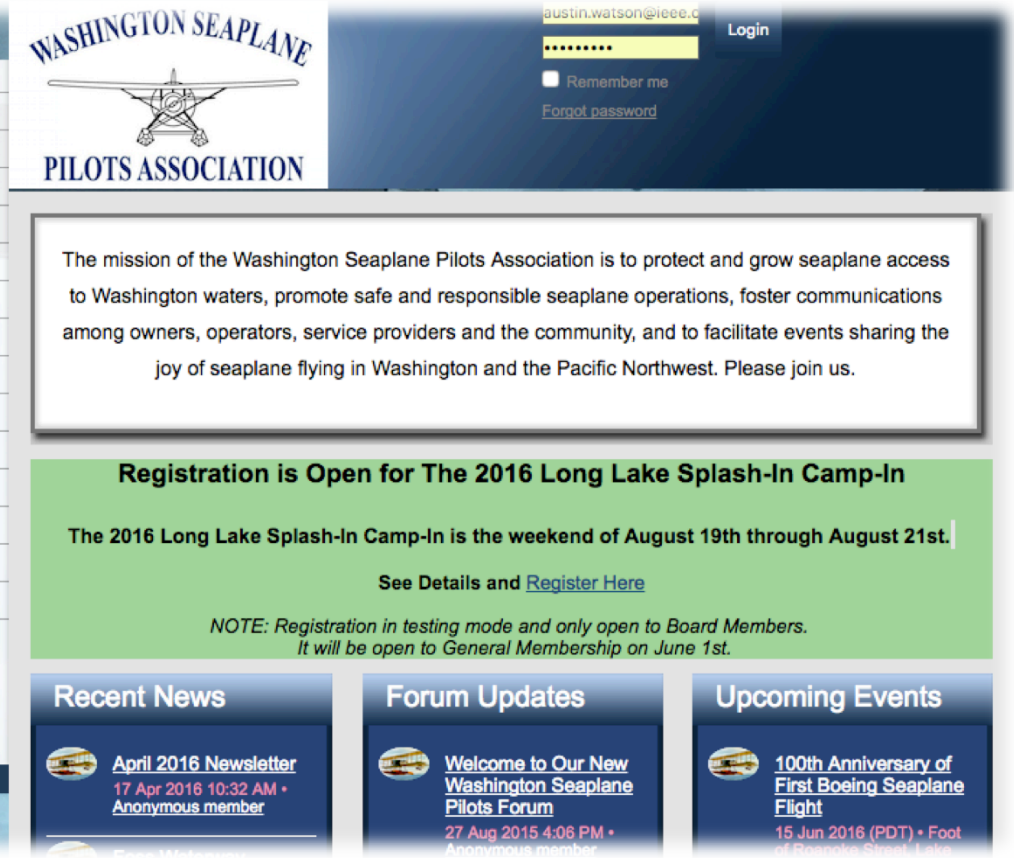
Summary

- Share the Dream
- Think First, Do Second
- Mitigate risk as soon as possible
- Stack the deck in your favor
- Live to fly another day

RESOURCES

- WSPA http://washingtonseaplanepilots.org
- SPA http://seaplanes.org





Video Links (YouTube)

- **Jim Howard NWSP**
  - https://www.youtube.com/user/ifoundjim
- **Austin Watson WSPA**
- https://www.youtube.com/user/austingwatson
  - Home Again – Landing North at W36
    - https://youtu.be/lOKIBrYwGB4
  - Washington One Low Approach – Landing North at W36
    - https://youtu.be/SYAA0ppgeGo

The End – *Live to Fly Another Day*