

Where Can You Land Your Seaplane?

Seaplane Examiners agree, Applicants can't answer the question, "Where can you land your seaplane?"

I recently taught an all-day ground school for aspiring seaplane pilots in Seattle. While preparing for the class, I contacted several designated examiners and asked, "What are the most common areas that applicants are lacking knowledge?" Universally, they said, "Knowing where they can land a seaplane." As SPA Field Director for Washington State I can confirm that this is one of the most common questions I get from members and people wanting to fly seaplanes in the area.

This is a really a great question for examiners because it can lead to many other areas, including where can you not land?, how do you know?, what are the rules for departure into protected airspace?, safety and area assessment, flight planning, federal and local regulations, and CRM.

So, what is the answer? Where can you land your seaplane?

CONSULT THE FEDERAL REGULATIONS (FAR'S)

Your first and the simple answer is: *Anywhere in an emergency*. Remember that **FAR 91.3** says, (a) You are the Pilot in Command, (b) You can break any rule in an emergency, (c) You better be able to explain why.

THINK SAFETY FIRST

You *should not* land where it is not safe. This should go without saying, but it is worth mentioning to an examiner on a Checkride and certainly should be your first thought in all cases. Unsafe landing areas include: shallow water, water that you can't see below and clear for obstructions, short bodies of water (landable but not departable), areas of wind shear or challenging terrain. Determine your personal limitations and go to challenging areas with an instructor knowledgeable in that area.

How small is too small to land on? Too small to depart from is too small to land! Look in your Pilots Operating Handbook, (POH) and study the landing and takeoff tables. Then, don't believe them, go flight-test your plane and figure out what it and you can do at max gross weight. It's unlikely that your results match the POH any longer. As a starting point for minimum lake size I recommend one landing distance plus one takeoff distance **TIMES TWO** on a standard day at sea level as a starting point. For a common single engine seaplane this typically ends up being 4,500 to 6,000 feet on a cool day at low elevations. It will get much worse on a hot day at

altitude with no wind or a tail wind, and terrain. Just be careful, get to know your own and the airplanes limitations.

LOOK AT YOUR CHARTS

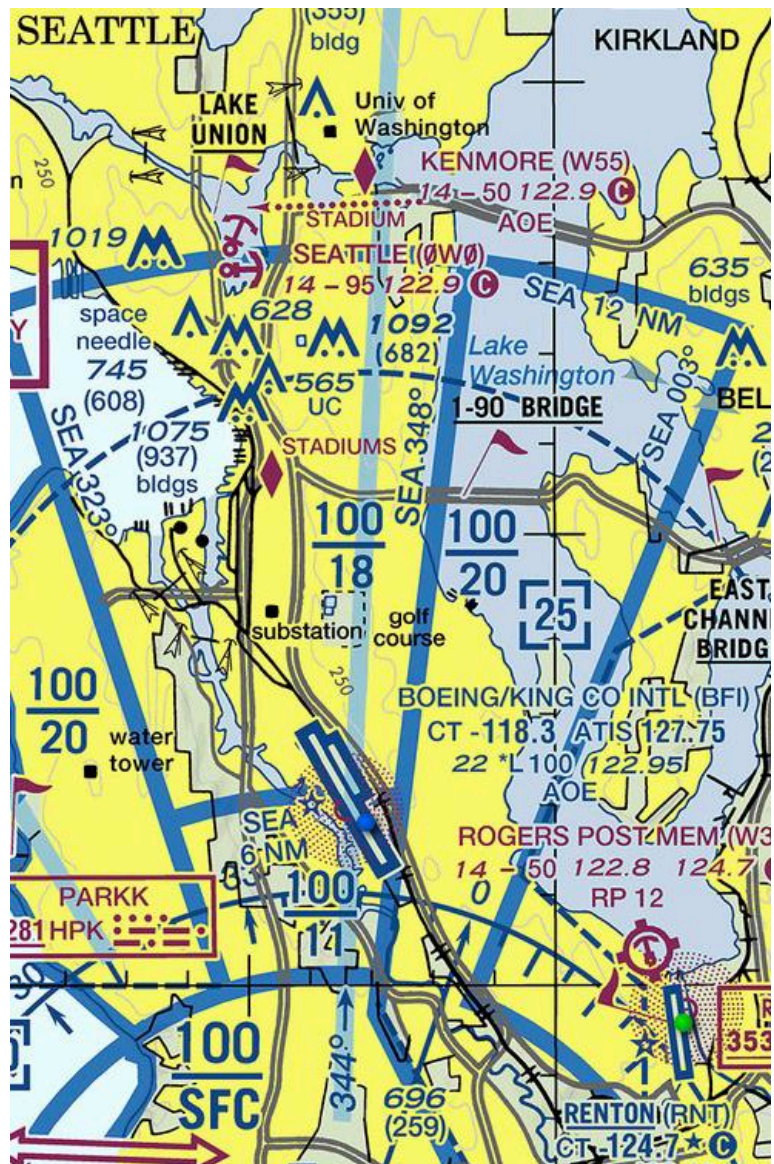
The next textbook answer is, Look on your Sectional and Terminal area charts for seaplane base symbols. The Terminal Chart below shows three seaplane bases in the Seattle area, one at Renton (W36) with fuel and services, and two on Lake Union(W55, 0W0).



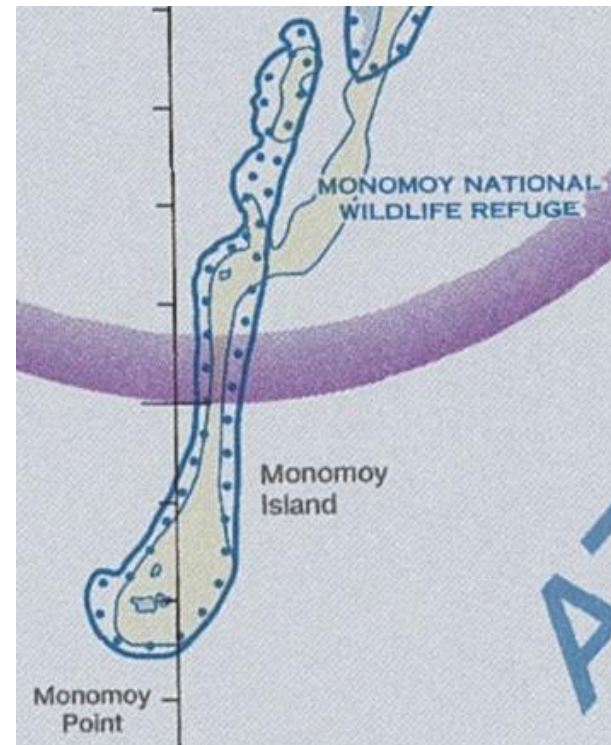
What does the placement of seaplane base symbols indicate?

According to the Interagency Air Committee Specifications for Sectional Aeronautical and VFR Terminal Area Charts Section 3.9.2.2, Plotting of Airports (Landplane and Seaplane) - *When depicting a seaplane base, the eye of the anchor symbol should be as close to the docking area as possible, with the remainder of the symbol in the water (orientation is not an issue).*

Note that on the Seattle Terminal Chart (0W0) is incorrect, It is 180 degrees incorrect in fact but the chart maker has considerable freedom placing symbols on crowded charts. Apparently, it is “close as possible”.



According to the FAA, “the landing of aircraft is prohibited on lands and waters administered by the National Park Service, U.S. Fish and Wildlife Service, or U.S. Forest service without authorization from the respective agency.” Note that if boats are allowed within these areas, then you may land and takeoff outside and taxi inside.



LOOK IN THE CHART SUPPLEMENT

Look in your Chart Supplement, previously called the Airport Facility Directory (AFD), or *the little green book*. In the Table of Contents under GENERAL INFORMATION, you will find a section called Seaplane Landing Areas. From there go to the AFD section and read about each listed seaplane base. You will also look here to determine if the seaplane base is a port of entry and has customs services.

AIRCRAFT LANDING RESTRICTIONS

Landing of aircraft at locations other than public use airports may be a violation of Federal or local law. All land and water areas are owned or controlled by private individuals or organizations, states, cities, local governments, or U.S. Government agencies. Except in emergency, prior permission should be obtained before landing at any location that is not a designated public use airport or seaplane base.

Landing of aircraft is prohibited on lands or waters administered by the National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, and on many areas controlled by the U.S. Army Corps of Engineers, unless prior authorization is obtained from the respective agency.

Canada provides an excellent [Water Aerodrome Supplement](#) for those going to Canada.

READ THE AIRMEN’S INFORMATION MANUAL (AIM)

Read your Airman’s Information Manual (AIM) Section 7-5-8, Seaplane Safety. Section C discusses jurisdiction of waterways and (AIM) Table 7-5-1 identifies specific agencies having jurisdiction.

(AIM) Section 7-5-8 (c) Unless they are under Federal jurisdiction, navigable bodies of water are under the jurisdiction of the state, or in a few cases, privately owned. Unless they are specifically restricted, aircraft have as much right to operate on these bodies of water as other vessels. To avoid problems, check with Federal or local officials in advance of operating on unfamiliar waters. In addition to the agencies listed in TBL 7-5-1, the nearest Flight Standards District Office can usually offer some practical suggestions as well as regulatory information. If you land on a restricted body of water because of an inflight emergency, or in ignorance of the restrictions you have violated, report as quickly as practical to the nearest local official having jurisdiction and explain your situation.

TBL 7-5-1
Jurisdictions Controlling Navigable Bodies of Water

Authority to Consult For Use of a Body of Water		
Location	Authority	Contact
Wilderness Area	U.S. Department of Agriculture, Forest Service	Local forest ranger
National Forest	USDA Forest Service	Local forest ranger
National Park	U.S. Department of the Interior, National Park Service	Local park ranger
Indian Reservation	USDI, Bureau of Indian Affairs	Local Bureau office
State Park	State government or state forestry or park service	Local state aviation office for further information
Canadian National and Provincial Parks	Supervised and restricted on an individual basis from province to province and by different departments of the Canadian government; consult Canadian Flight Information Manual and/or Water Aerodrome Supplement	Park Superintendent in an emergency

NOAA CONTROLS SOME LOCATIONS

According to 15 CFR Part 922, flying motorized aircraft below the minimum altitude limits of NOAA regulated overflight zones is immediately presumed to disturb marine mammals and seabirds and is subject to NOAA enforcement action.

National Marine Sanctuary	Flights Prohibited Below	Location

Channel Islands	1000 feet	Within one nautical mile of any of the islands of the sanctuary
Greater Farallones	1000 feet	Within 7 prescribed zones as defined in sanctuary regulations at 15 CFR Part 82(a)(11)
Monterey Bay	1000 feet	Within four prescribed zones as defined in sanctuary regulations at 15 CFR Part 922.132(a)(6)
Olympic Coast	2000 feet	Within four prescribed zones as defined in sanctuary regulations at 15 CFR 922.152(a)(7)

DON'T FORGET LOCAL JURISDICTIONS, TRIBES, STATES COUNTIES, CITIES, AND NEIGHBORHOOD ASSOCIATIONS

Look up state, county, and city laws which are generally on the internet nowadays. Search for seaplane, floatplane, boat, vessel or the name of the body of water.

Many laws will be written in terms of vessels. Seaplanes are generally considered Vessels when operating on the water. This is not true in The State of Washington however. Per [RCW 79A.60.010 Definitions](#): (29) "Vessel" includes every description of watercraft on the water, *other than a seaplane*, used or capable of being used as a means of transportation on the water.

If you decide to call the authorities, beware that you may be the first to call them and you may create an issue where none previously existed. "No" is generally an easier answer than "May I help you". In Washington, we have seen one case in recent years in Washington where the sheriff inspected a seaplane as if it were a boat even though he had no authority or jurisdiction. He did have a gun however and our pilot was savvy enough not to debate the law with the sheriff. Nothing came of the incident other than increased awareness on the part of the seaplane community and a post incident discussion with the authorities. The sheriff, as it turned out, was excited to tell his boss that he had inspected his first seaplane. Glad we could make his day. We now recommend pilots carry the following information with them in the unlikely event that they are stopped in Washington

Seaplane Pilots in WA are NOT required to have boater education card or boater's safety equipment.

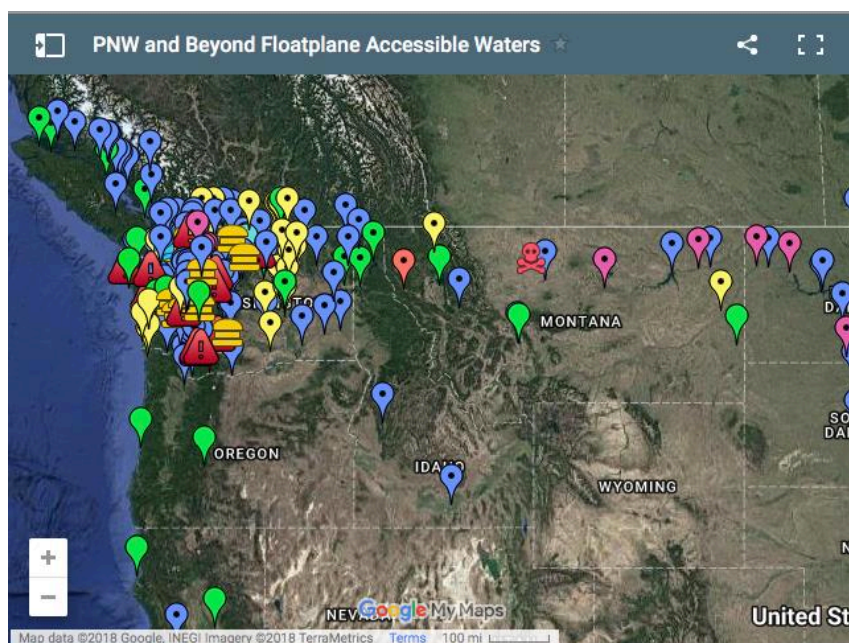
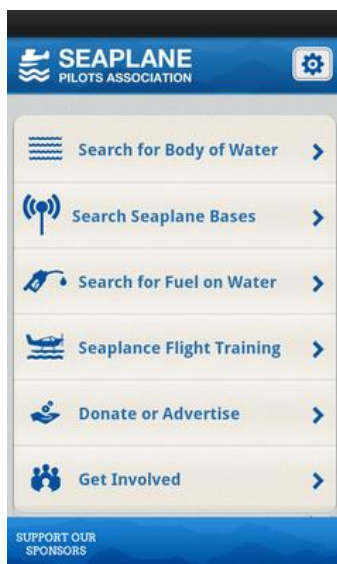
Safety card - Although the mandatory boater education law is specific to operation of vessels under state laws, "Seaplanes are specifically exempted from the definition of a vessel per RCW 79A.60.010 Definitions: (29) "Vessel" includes every description of watercraft on the water, other than a seaplane . . ." Hoyle E Hodges, WA. State Parks, Marine Law Enforcement Coordinator

Safety equipment – A seaplane is considered a vessel when on the water (USCG), however seaplanes are exempted from the safety equipment that the USCG requires of boaters by 33 CFR 175.1(e).

“Seaplane pilots are expected to know and adhere to both the U.S. Coast Guard’s (USCG) Navigation Rules, International–Inland, and 14 CFR Section 91.115, Right–of–Way Rules; Water Operations.”

CONSULT YOUR SEAPLANE PILOT ASSOCIATIONS

The Seaplane Pilots Association (SPA) provides a members-only mobile app with a directory of seaplane bases. The Washington Seaplane Pilots Association (WSPA) provides a free web-based google map of seaplane operating areas, primarily in the Pacific Northwest. It is available online at <https://washingtonseaplanepilots.org/destinations> Anybody willing to help maintain or improve these products should contact the organizations.



ASK LOCAL PILOTS AND KNOW A FEW RULES OF THUMB

Ask local pilots for local knowledge about places to go and about operational procedures for arrival and departure. In general, if you see a body of water with motorboats, then consider it ok for seaplanes. If you see a body of water that is devoid of motor boats, then do not land there. If you see a body of water which is a drinking water reservoir, then do not land there. Do not land in national parks or federal wilderness areas.

Check the tide tables and weather conditions. Beaching in a rising or falling tide each has its own challenges, getting stuck on a falling tide, or being bashed into a seawall on rising tide.

Currents and Weather may be fine for landing but unsafe for departure. Study them and go with all available knowledge at your disposal. Be aware of passing ships creating large swells that can capsize your plane or throw it upon the rocks.

Don't land if the water is too shallow. How shallow is too shallow? Know your floats. How much do they displace at maximum gross weight and how much more do they displace on a hard landing? A good conservative rule of thumb to start with is two times maximum float height, which is likely 4 to 6 feet deep, even though a properly executed landing will displace less than half a float height.

How do you know the depth? Study nautical charts if you can. Fly over it, several times if need be. Look at the terrain. If the terrain slopes steeply out of the water it likely slopes steeply into the water. An exception is that a shelf often forms over time as the cliff side is sloughed off combining with deadheads which may be just offshore as trees have fallen downslope. If the terrain is flat or gently sloping as it approaches the shore, it likely continues to do so into the water and it is shallow. If a river or stream enters the water it deposits silt and is shallow for a considerable way out. It may also carry debris during high flow which can be invisible under the surface. Have a good reason to go anywhere new and then land in what you judge the deepest part, then taxi slowly keeping a way to turn out if need be. Finally, if the landing path worked out, it should be the safe takeoff path as well.

GET ON THE PHONE OR GO VISIT

If in doubt, get on the phone and call someone in the area you are interested in. Call the marina, restaurant operator, landowner, local airport, seaplane base operator, local seaplane association or pilots association, or whoever you think might know something. The Chart supplement contains phone numbers for seaplane bases and airports. Whenever possible go there in a car and inspect it.

LOOK AT GOOGLE EARTH AND THE INTERNET

Google earth, the internet, and web cameras are great resources seaplane pilots use for assessing potential seaplane operating areas. WSPA maintains links to popular cameras in the Pacific Northwest on its website.

ADVOCATE FOR SEAPLANE LANDING LOCATIONS

Join your national and local seaplane and aviation advocacy organizations and participate in keeping waters open and in opening new waters. In the past few years, new bases and operating areas have been proposed or opened in the Northwest due to a burgeoning economy, challenging transportation issues and advocacy by regional groups. Many local

communities are welcoming seaplanes in the NW as they bring tourists and visitors with money to their local downtowns.

Austin G. Watson, CFI
MAY 1ST, 2018
Revision 1.1