

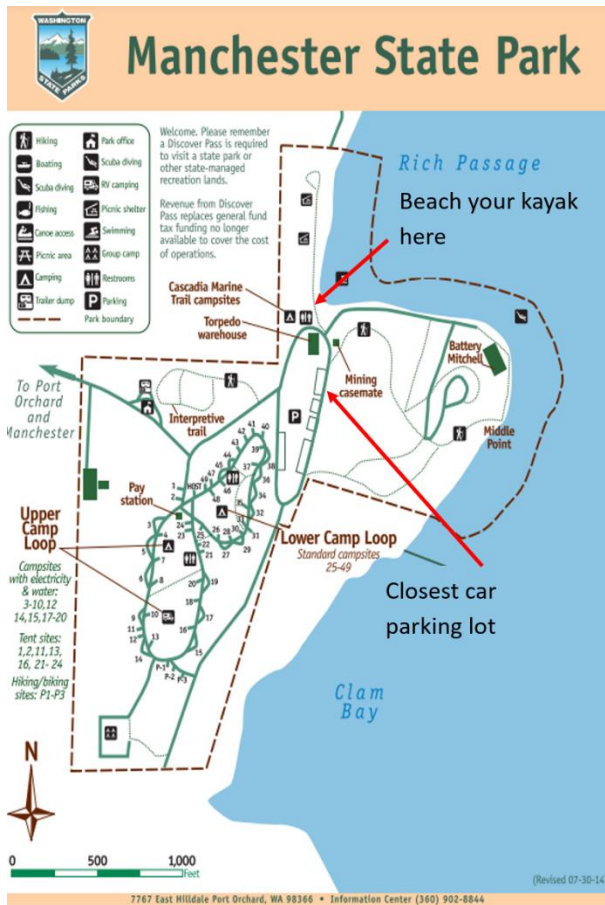
Stop #1: Manchester State Park - Guardians of the Sound

Welcome to Manchester State Park, a truly special place where the serene beauty of the Salish Sea intertwines with a compelling chapter of American military history! As we stand here, taking in the panoramic vista of Rich Passage, try to envision this tranquil waterway transformed into a bustling hub of defensive activity more than 100 hundred years ago, a crucial component in the protection of Puget Sound.

Your journey here, whether by road or by paddle, has brought you to a site of significant historical importance. If you arrived by car, you likely parked in the lot situated atop the impressive Torpedo Warehouse. For those arriving by kayak or canoe, the shore or the grassy area just west of the warehouse offers a convenient landing. Remember, if you've parked a vehicle, a Discover Pass or daily admission is necessary. Now, take a moment to notice the readily visible signs indicating the Cascadia Marine Trail (CMT). This park serves as an excellent starting point for those keen to explore the Salish Sea by water. Feel free to scan the QR code on the CMT information sign to delve deeper into the Maritime Heritage Trail. If you're planning a multi-day exploration, consider taking advantage of the camping facilities here. The campground offers a pleasant experience for car campers, while the CMT campsites provide a unique waterfront experience for kayakers, complete with a stunning view of Rich Passage.



Mine exploding in test between Manchester and Fort Ward, Oct 18, 1916.



Clockwise from left: Manchester State Park map. Note location of closest parking area, Cascade Marine Trail campsites, Torpedo Warehouse, Mining Casemate and Battery Mitchell. A pleasant way to learn about the Maritime Heritage offered here is to start at the Torpedo Warehouse, then take a short walk to the Casemate, then to the remnants of Battery Mitchell, and finally to the picnic grounds in front of the Cascade Marine Trail campsites, where there are picnic tables for breakfast or an early lunch.

The Sculpting Power of Ice: Why This Place?

Before we delve into the military history that unfolded here, it's essential to understand the very foundation upon which it was built: the land itself. The story of Manchester State Park, and indeed the entire Salish Sea region, begins with ice—massive, continental glaciers that shaped the landscape we see today.

Between 2.5 million and 11,000 years ago, southwestern British Columbia and the Puget Sound region were repeatedly buried beneath massive ice sheets. On at least seven occasions, a single, powerful glacial lobe flowed southward, reaching as far as several miles beyond today's Puget Sound. The four most recent glaciations—occurring between roughly 280,000 and 10,000 years ago—were especially significant in sculpting the terrain we now see.

As the glaciers melted, they left behind a remarkable variety of rocks and sediments. Boulders and pebbles carried from far-off regions—Canada, the Cascades, and the Olympic Mountains—were dropped into new resting places. Many of the larger rocks, known as *glacial erratics*, were transported tens or even hundreds of miles by ice. One such erratic can be seen right here on the beach at Manchester State Park during low tide. Its coordinates are 47°34'36.2"N, 122°32'40.4"W, and it is accessible at moderately low tides.



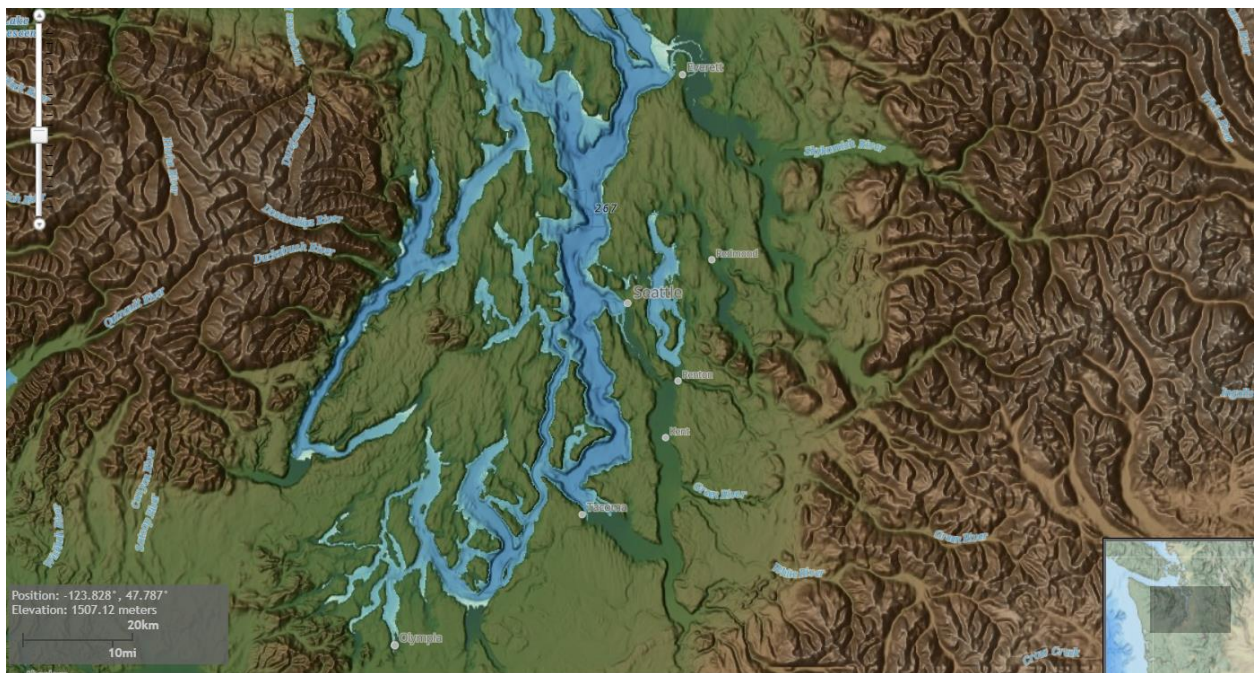
This glacial erratic is located at 47°34'36.2"N 122°32'40.4"W, and is reachable at moderately low tides.

These stones serve as geological "breadcrumbs," helping scientists trace the path of the glaciers. Granitoid, metamorphic, and some volcanic rocks likely originated in Canada. Volcanic debris-rich stones trace their origin to the Cascade volcanoes, while darker rocks—basalt and chaotic graywacke sandstone—were plucked from the Olympic Mountains.

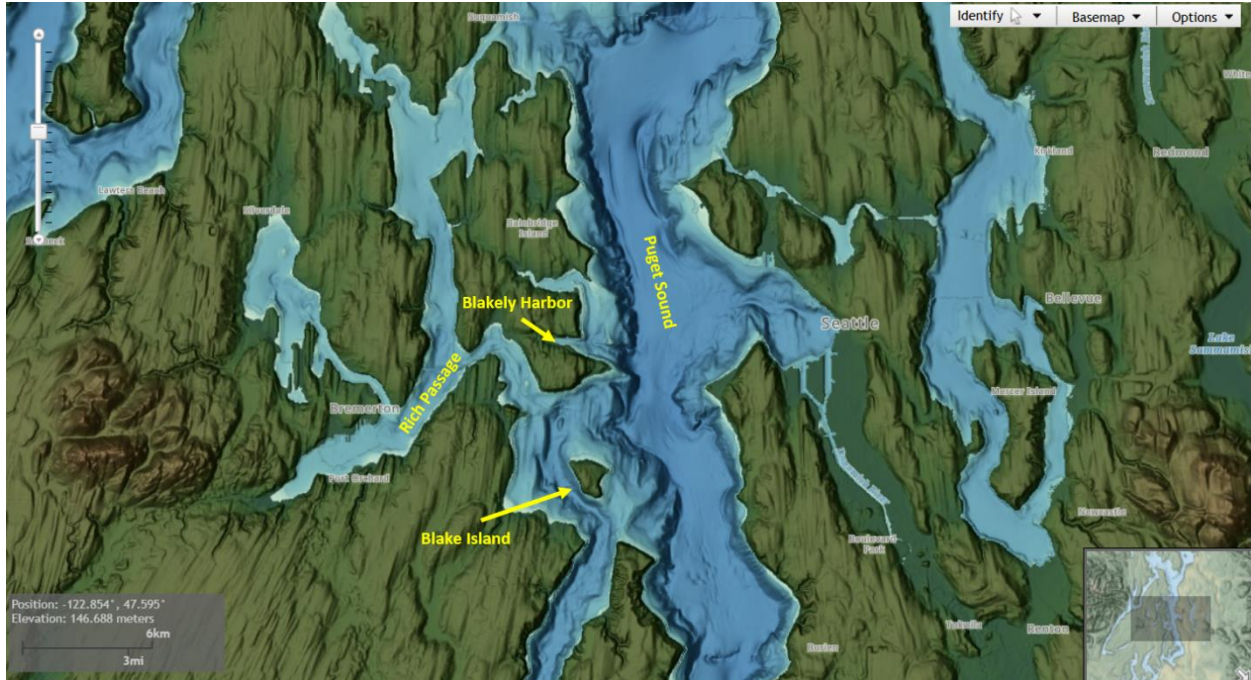
Some glacial erratics are more than geological artifacts; they hold cultural significance. Indigenous peoples, including the Suquamish Tribe, have carved petroglyphs into some of these stones. One well-known example is *x̄alilc* (pronounced "halilch"), or "marked rock," located at the northern end of Bainbridge Island (47°43'07.1"N, 122°32'40.1"W). Believed to have been carved between 1000 BCE and 400-500 CE, the stone's original purpose remains uncertain. Suquamish cultural archivists and archaeologists suggest it may have served as a boundary marker, welcome sign, or even a calendar. Today, it remains a

powerful symbol, forming the first ceremonial stop in the Suquamish Tribe's annual canoe awakening journey—an enduring link between land, ice, sea, and maritime culture.

Moreover, indigenous peoples such as the Suquamish have inscribed petroglyphs on some erratics. A well-known example lies on the northern end of Bainbridge Island (47°43'07.1"N 122°32'40.1"W), and is known as *x̌alilc* (marked rock). The petroglyphs were likely carved between 1000 BCE to 400 or 500 CE. The purpose of the carvings remain unknown, but indigenous archivists and archaeologists suggest that it could be a boundary marker, a welcome sign or a calendar. The stone is the first stopping point for the tribe's annual canoe awakening ceremony, and whether it played the same role in the past, now forms part of the maritime culture of the Suquamish Tribe.



The Salish Sea and surrounding landforms. The areas colored blue and green were mostly underneath the Puget Sound lobe during the last glaciation of this region that began about 19,000 years ago and ended about 14,000 years ago. The waterways present today were once streams that formed beneath the ice sheets or emerged at the southern end of the ice.



Close-up of the area around Bainbridge Island, Rich Passage and Manchester State Park. Note the darker blue (deeper) waters in the main Puget Sound Channel, including the area around Blake Island and the mouth of Blakely Harbor, and the lighter blue (shallower) waters in Rich Passage

Imagine, tens of thousands of years ago, during the Pleistocene epoch, the very ground beneath our feet was buried under a thick blanket of ice, nearly 3000 ft thick in some places. The Cordilleran Ice Sheet, a colossal force of nature, extended its icy grip across the Pacific Northwest. As these glaciers advanced and retreated, they acted as immense bulldozers, carving out valleys and gouging deep channels into the earth. This relentless activity sculpted the very fabric of the Puget Sound basin, creating the intricate network of waterways that define this region.

The formation of Rich Passage, the narrow waterway separating Bainbridge Island from the Kitsap Peninsula, is a direct result of this glacial sculpting. As the ice began to melt, a process that commenced roughly 10,000 to 15,000 years ago, the landscape underwent a dramatic transformation. Sea levels rose, and the glacially carved channels were flooded, giving rise to the waterways we see today. Rich Passage, in particular, was born from this melting and flooding, a natural channel created by the immense power of ice.

However, the story doesn't end with the initial flooding. Over millennia, the forces of nature continued to refine this waterway. Tidal currents and the relentless action of waves played a crucial role in shaping and smoothing the passage. Erosion gradually wore down the surrounding land, while sedimentation deposited finer materials, further defining the contours of Rich Passage. This ongoing interplay of forces created the navigable

channel we see today, a waterway that would later become a critical point of strategic defense.

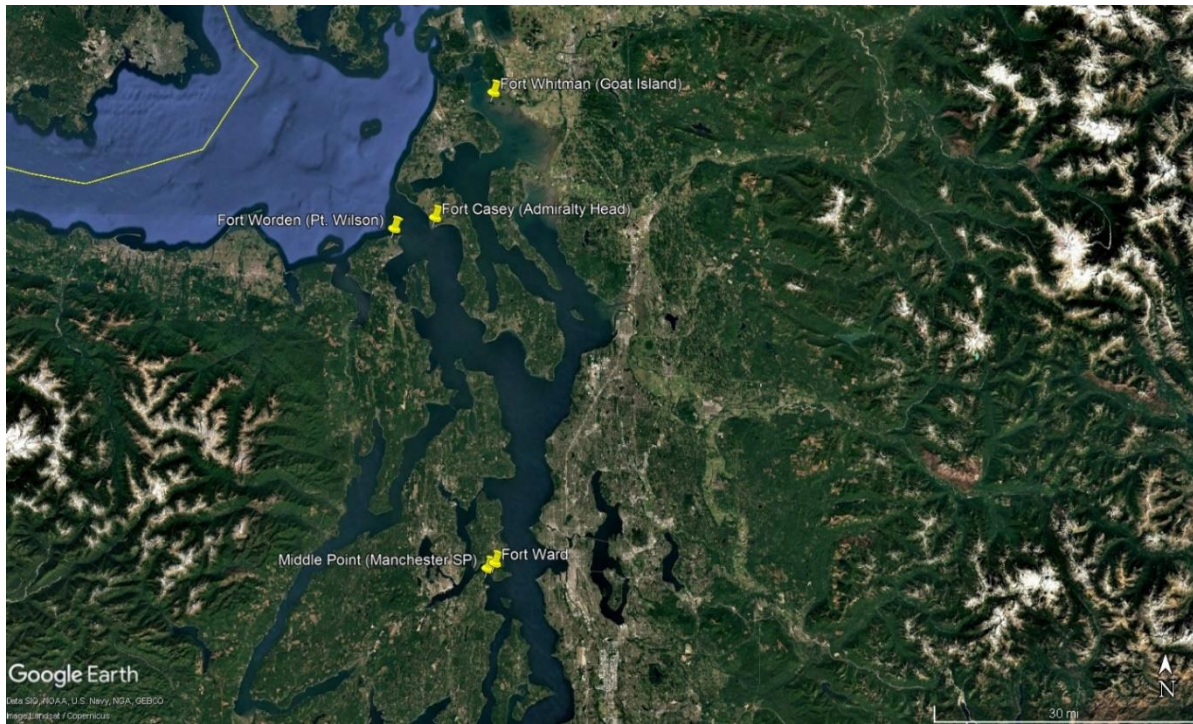
It's fascinating to consider that the very features that made this location ideal for military fortifications—the narrow passage, the strategic access to deeper waters—were themselves the product of ancient glacial activity. The ice that carved these channels established the deep passageways needed for the future naval shipyards at Bremerton, which the land fortifications were designed to protect. Thus, the story of Manchester State Park is not just a tale of human endeavor, but also a testament to the enduring power of geological forces that have shaped this region for millennia.

Please visit <https://www.youtube.com/watch?v=DI2rObdNUFw> for an excellent video showing the advance & retreat of the glaciers and the formation of modern-day Salish Sea in order to better appreciate where you are standing and how ancient geological forces created an ideal location for a naval shipyard and its fortifications.

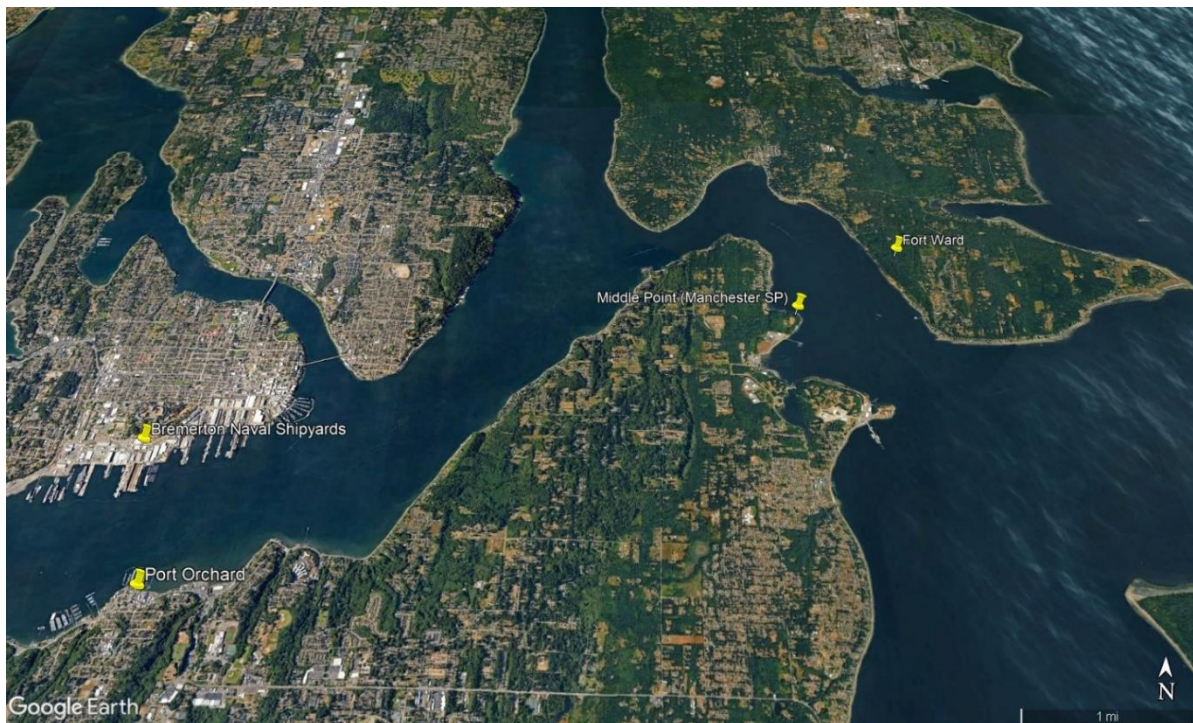
The Strategic Imperative

Standing here at Manchester State Park, it's crucial to understand the global political and military forces driving the construction of these local fortifications. Over a century ago, this very site, along with Fort Ward Park across Rich Passage, was designated as a critical point of defense. Artillery placements and potential underwater minefields were established here, forming a vital part of a network designed to protect essential military installations, industrial facilities, and civilian settlements from naval attacks by foreign powers.

The military installations at both Fort Ward and Manchester State Park, alongside other batteries scattered throughout the Salish Sea, were built primarily as a defensive measure. The United States, during a period of expanding global influence around the turn of the 20th century, faced potential maritime threats. The U.S. military harbored concerns about possible naval assaults from foreign powers, notably the British Empire and Japan, who might attempt to seize control of strategically important Pacific ports.



Yellow markers indicate the location and names of the five batteries established to protect Puget Sound and the Bremerton Naval Shipyard from foreign naval attacks.



Bremerton was selected because of its proximity to resources and facilities in the Seattle region, and its defensible location. Large naval vessels would have difficulty getting past the batteries farther to the north, and the shallow waters, narrow twisting passage, and strong currents made the fortifications and minefield at Fort Ward and Middle Point an effective defense for any smaller ship that might get through the northern batteries.

Interestingly, when Congress authorized a national fortification plan in 1885, Puget Sound was initially excluded. However, the region's strategic importance was undeniable. Positioned near the U.S.-Canada border and offering direct access to the vast expanse of the Pacific Ocean, Puget Sound was deemed a crucial area for defense. The five defensive artillery fortifications constructed here were part of a larger coastal defense system, meticulously designed to shield Seattle and the broader Puget Sound region from enemy ships. Fort Ward and its sister installations were equipped with powerful coastal artillery guns, capable of defending the entrance to the Sound and safeguarding vital infrastructure, including shipyards and naval bases.

Over time, as military technology advanced and evolved, these fortifications became obsolete and were eventually decommissioned. However, many of them, like Fort Ward, remain as historical sites, offering a tangible link to the past.

A Long and Deliberate Path to Defense

The process of selecting suitable locations for these fortifications was far from straightforward. The Pacific Coast of North America presented significant challenges, with few natural harbors. Much of the coastline is characterized by steep, rocky cliffs and headlands, or low, sandy beaches, offering limited sheltered inlets or bays. Only a handful of locations, such as San Francisco Bay, the Columbia River, and Puget Sound, provided the necessary large, sheltered deepwater harbors.

The boundary between Canada (then under British rule) and the United States in the Pacific Northwest was not definitively settled until the Treaty of 1846, which established the 49th parallel as the border. European settlement in the region remained relatively sparse until the 1850s, when timber exports to California began to attract more settlers and stimulate industry. [We'll learn a lot more about these exports and the impact that they had at Stop #3]. Discussions regarding the construction of defensive fortifications in Puget Sound commenced as early as 1850, but progress was slow. In the 1850s and 1860s, little was accomplished beyond discussions and reports. The aftermath of the Civil War further dampened Congressional enthusiasm for military expenditures and fortifications in the distant Pacific Northwest. A significant obstacle was Congress's insistence on identifying a location for a naval station and drydock before any fortifications could be considered.

In 1877, Lieutenant Ambrose Wyckoff conducted hydrographic surveys between Seattle and Olympia, ultimately recommending a location near present-day Port Orchard. At the time, only one naval drydock existed on the U.S. Pacific Coast, located at Mare Island in

San Francisco. The desire to establish a second West Coast facility was paramount. Furthermore, underwater mines were considered a vital component of shipyard defense. The deep waters of Admiralty Inlet were deemed unsuitable for effective placement of underwater land mines making the shallower waters of Rich Passage, leading into the Port Orchard area, a more ideal location. This area was not only suitable for underwater mines but also for gun batteries, as the narrow waterway leading into Port Orchard was easily within range of shore-based artillery.

Construction began in earnest in the late 1890s and early 1900s, initially focusing on the three batteries guarding Admiralty Inlet (Forts Worden and Casey) and the Saratoga Passage (Fort Whitman). The original plan to establish numerous gun emplacements was eventually scaled back. The prevailing strategy shifted to relying on the large batteries at Admiralty Inlet and the Saratoga Passage to handle the larger, heavily armed ships. Smaller, swifter vessels that might slip through were to be dealt with by fewer, smaller batteries in a "mop-up" operation along Rich Passage. Consequently, only two gun emplacements, known as Battery Mitchell, were constructed at Middle Point. The primary focus here was on development of a naval minefield.

The operation required the construction of several essential facilities: the casemate that housed the operators and detonation equipment; a storehouse for the mines; a storage facility for the cables, requiring a large tank of fresh water to prevent corrosion; a powder magazine for storing explosives; a tramway for moving the mines; and a wharf for transporting the mines to boats for deployment. Many of these facilities still exist today, providing a tangible link to this fascinating chapter of military history.



Scheme for placing mines across Rich Passage.

Let's start with a tour of the Torpedo House. In the 19th century the word "torpedo" was used to refer to any underwater explosive device, not to what we think of today as the underwater projectile launched from a submarine. In this case, the torpedoes were underwater mines.

The underwater mines of the era consisted of spherical metal containers, approximately 32 inches in diameter, containing a fuse and explosives. These mines were interconnected by electrical cables, which ran to a central station, or casemate, where operators could detonate the mines as needed. The mines were strategically positioned at specific depths and locations, with groups of mines, known as sets, being placed at water depths corresponding to the draft of warships at both high and low tides. Approximately 200 mines were planned for deployment when needed.

This building served as a storage and maintenance facility for these mines. Inside, you can almost visualize the spherical mines and the intricate network of cables that connected them.



The Torpedo House. This is where the mines were stored when not deployed.



The front of the Torpedo House, with some of the underwater mines that would have been filled with explosive and networked together by electrical cables.

After walking through the Torpedo Warehouse, amble over to the ruins of the Mine Casement structure. Imagine the scene a century ago, when this room would have been a hive of activity. Telegraph operators, their faces illuminated by the glow of flickering lanterns, would have been monitoring the network of underwater mines, their fingers poised to send the fatal signal. You can almost hear the tense whispers, the clicking of Morse code, the anticipation of a potential attack.

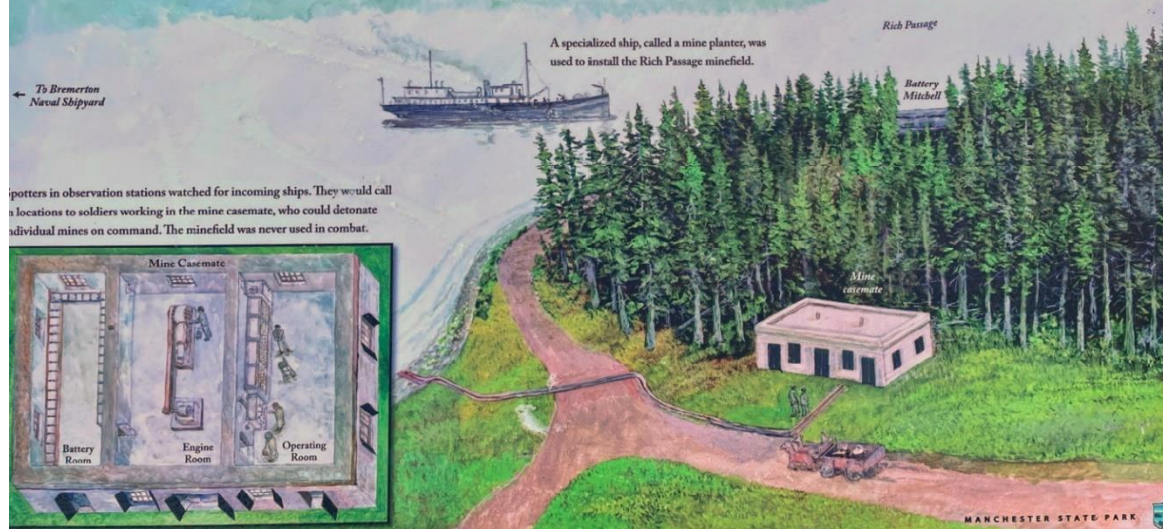


The Casemate where operators would have been sought shelter when mines were detonated.

REMOTE CONTROL MINES

Electrically controlled mines were an innovative new technology when Middle Point was established here in 1900. Unlike contact mines, which immediately explode when struck by a floating object, electrically controlled mines could be detonated on command. This would prevent enemy navies from sending empty vessels to

clear a path through the field and save the mines for a serious attack. The defense could also send decoy ships across the minefield to lure enemy vessels towards it. All the mines were wired to a mine casemate, the concrete structure in front of you, which served as the central command center for the minefield.



Schematic overview of the Casemate.

Now let's follow the short path along the water to the remnants of Battery Mitchell



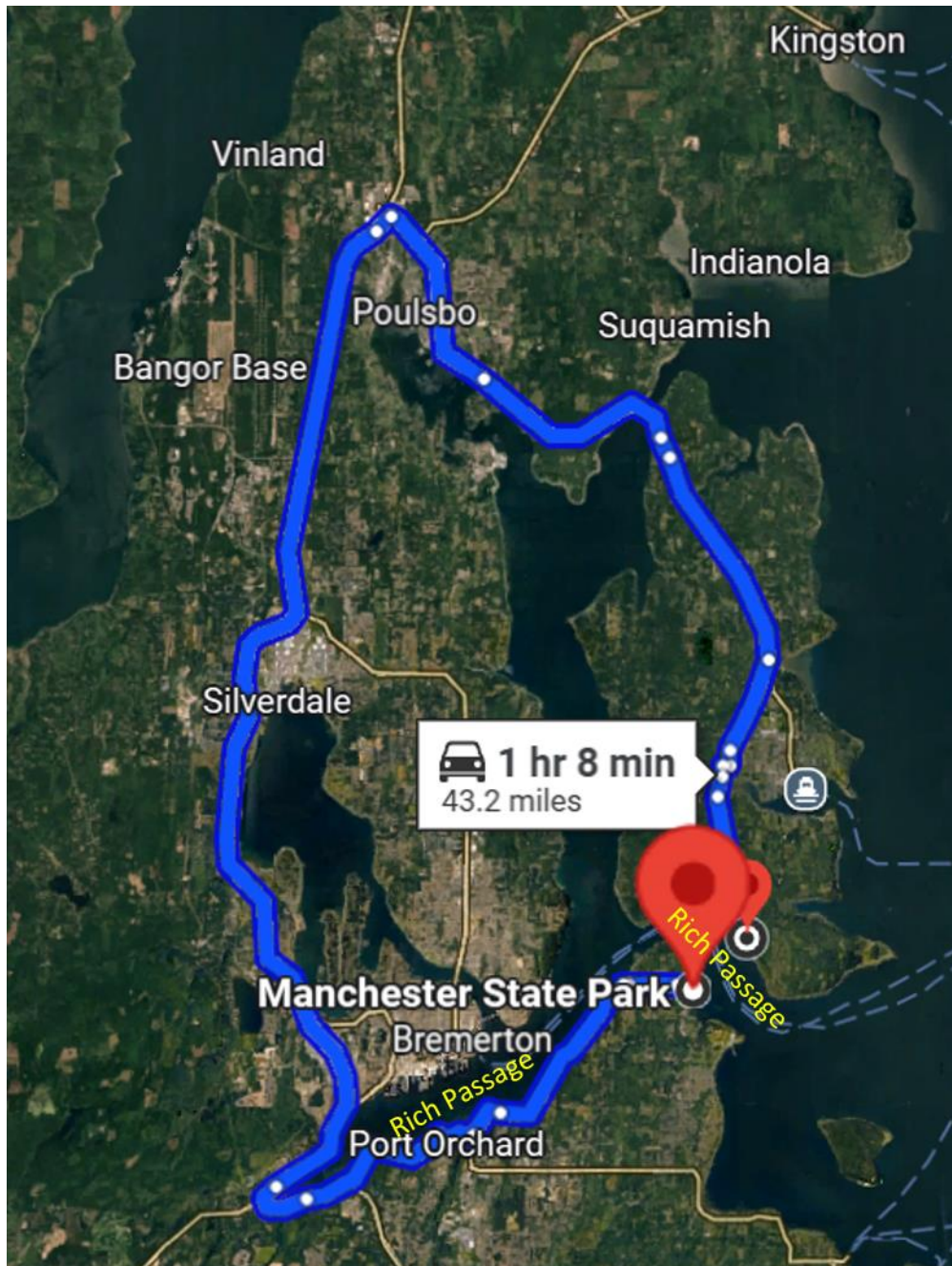
What remains of the Battery Mitchell, looking out across Rich Passage to Fort Ward and Bean Point.

Look out across Rich Passage, and try to visualize the minefields as they would have been positioned. What remains of Battery Mitchell can be seen, allowing you to look across the passage to Fort Ward, and Bean Point.

Manchester State Park provides a unique window into the past, reminding us of the strategic significance of the Salish Sea and the considerable efforts made to protect it. These fortifications, though no longer in active use, stand as a testament to the region's rich maritime history and the evolution of military technology. The park also serves as a reminder of the delicate equilibrium between nature and human activity. The preservation of these historic sites allows us to learn from the past and appreciate the enduring beauty of the Salish Sea. By understanding the history of this place, we gain a deeper appreciation for the present. The peaceful waters of Rich Passage once bristled with defensive measures, and that story is worth remembering.

The Journey to Stop #2

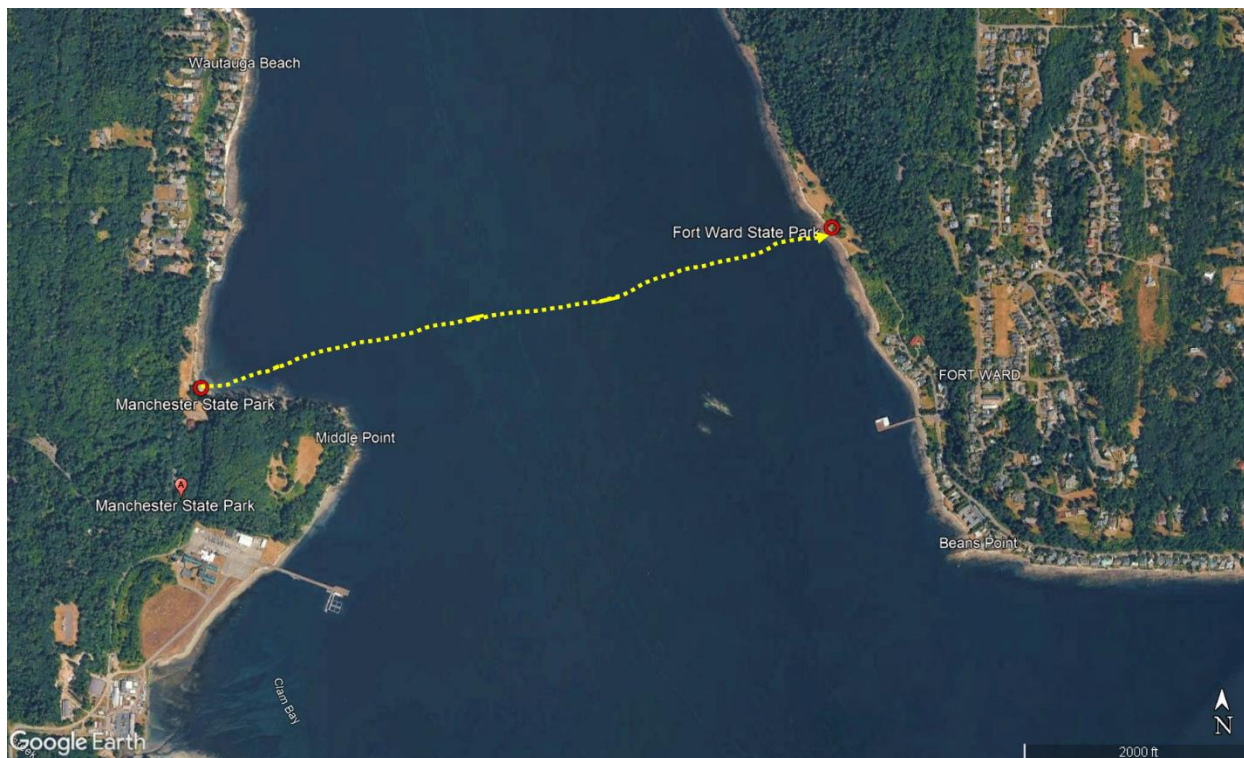
If you are following this trail by car, you will need to drive a 45 mile loop from Manchester State Park to Fort Ward Park. The drive should take just over an hour under normal driving conditions.



Should you be travelling the Trail by car, or decide that you will skip the paddle across Rich Passage, a somewhat circuitous route will bring you from Manchester State Park to Fort Ward in about an hour. You can park at the boat landing area in Fort Ward Park and launch your kayak from there.

As you might conclude from the driving route, it is a far shorter distance to paddle across Rich Passage to Stop #2. However, the currents in Rich Passage can be quite strong, and eddies, rips and other turbulence can make the short crossing challenging to inexperienced paddlers. The straight-line crossing is just shy of one mile, so if you are uncomfortable with paddling in potentially strong currents, you might consider either waiting until slack,

or driving to Fort Ward and continuing by water from that location. The remainder of the water route from Stop 2 to trail's end can easily be paddled close to shore, avoiding turbulence or strong tidal currents.



A straight-line crossing from Manchester State Park to Fort Ward Park. Unless you are paddling at slack tide, you will probably need to adjust this route to accommodate the currents by ferrying across. You can land either at the boat launch area that is northwest of the route shown, or at the CMT and Day-Use area. For those paddling, this latter landing point offers many more amenities, including picnic tables, barbecue stands, a Sani-Can and potable water.

If you do choose to paddle from Manchester to Fort Ward during low tide, be prepared to drag your boat across a mud flat. If you love mud, you will definitely enjoy this!

Landing at the Fort Ward side is easy except at extreme high tides, as at the highest tides, there is no beach. Time your paddle accordingly! Another consideration at lower tides is the slipperiness of the rocky substrate that you'll be landing on. Be careful walking on the wet, slimy surface, as it is easy to slip and fall if you don't pay attention to where you are stepping. If tides are coming in, they can come in fast, so a good practice if you plan to walk around the Park and look at the old fortifications, stop for a lunch or snack, is to drag your kayaks up onto the grassy bluff above even the highest tide's reach.

Safe paddling!