STREAMS
OF
BAINBRIDGE ISLAND:

NAMES, HISTORY, FOLKLORE & CULTURE

by Gerald Elfendahl with drawings by Dale Cox

Stream study no. 1, drawing by Dale Victor Cox (c)1996

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INTRODUCTION

This flow through waters and time began with a request for a short island history for a remarkable planning book, BAINBRIDGE ISLAND WATERSHEDS. Soon island stream teams and study groups of all ages began, as people have for centuries here, splashing, sloshing and quietly observing among the watersheds. They requested lists of stream names. They needed a common nomenclature-- *"What stream were you talking about?"* And folks wanted other historical information. We began to collect stories, histories, and wet socks..

Thus began, innocently enough, an island stream and watershed history, better suited to the original request. It is a beginning, a playful and serious work in progress. It flows not so much down the main stream of the technical and hydrological, as about the back eddies of history and cultural drift.

The editor, author, and assembler is an historic map and story collector, beachcomber, stream scavenger, "Creek Geek", and island history curator. He has slogged around long enough to be "all wet"! So, if you find a stream missing, a name misspelled or not included, or a good story left out, don't feel bad. Join the celebration. Please, write it down and send it along. Many folks have.

This grew through the patient help and encouragement of Lawrence Webster, Laurie Usher, Leigh Kennel, Sally O'Callaghan, Patty Johns, Sally Metcalf, Wayne Daly, Steve Morse, Terry Ashe, Gale Cool, Andrew Price, Ralph Munro, Gail Smith, Alfred Williams, Mike Sciacca, Erik Smith, Scott Stricklund, Jim Cutler, Junkoh Harui, Olive and Emma Myers, Terry Domico, Conrad Mahnken, Mike Bonoff, Karl Shearer, Barnard Hallet, Bob Bucknam, Brian Atwater, Brian Sherrod, Leonard Forsman, The Suquamish Museum, The Bainbridge Island Land Trust, The Association of Bainbridge Communities, the City, island educators, others, and mostly Judie Elfendahl. Past and future generations provided the inspiration.

The drawings flowed from the Rapidograph pen of island artist Dale Victor Cox. His 1962 series, *"Dangers of the Road"*, depict salmon struggling to return home. They were drawn after wading a Northwest coastal island stream so full of salmon they nudged his every step.

G. W. Elfendahl
Bainbridge Island
March, 1997

A LITTLE ABOUT GEOLOGY & STREAM BEDS

Streams are flowing fluids. Jet streams of air flow through atmospheres. Gulf streams of seawater stir oceans. Blood streams nurture life within us all. Streams of consciousness cascade through minds.

Water flows under and upon the surface of an island. Island Earth is Island Water. On big islands-- continents-- flowing surface waters.become enormous rivers. On small islands-- Bainbridge-- flowing surface waters become short streams, creeks, brooks, trickles and springs.

Some surfaces soak up water. Others don't. When saturated, water on both gets up and goes, sometimes powerfully, other times gently. When a saturated earth and gravity combine, we can be blessed. Water's ancient song stirs harmonies within us. A rainbow of white sound relaxes, heals, transcends pain and noise. We are blessed with an unending, planetary chorus of wonder, balance, and joy-- ***a stream!***

RAINFALL & STREAM FLOW

In geologic time, the climate, like the land, has seen enormous changes. Recently, our climate has been mild. Cloud cover, not rain, is our claim to fame! Rainfall, believe it or not, is not as heavy here as elsewhere in North America. More than an inch of rain a day is fairly rare. However, five-feet of barn crushing snow fell in 1880, four-feet in 1916, and nearly two-feet in 1996. These frozen accumulations followed by warm rainy weather can turn peaceful creeks into raging torrents. In March of 1997, an already saturated island was riddled with mudslides, pummeled by a ten-year rain (S. Morris).

Flash flooding is often affected by humans, as much as by nature. The combination of geology and climate, of soil and rain, combined with the holding capacity of our lush vegetation or the lack of holding capacity of our clear-cuts, roofs, roads and pavement, give us either our magical, musical, rejuvenating, wildlife-supporting clearwaters, or our fertilizer, feces, fuel-soaked, sand clogging, polluted ditchwaters. We'll hear more about "dynamic wetlands" in Stream #11.

PREHISTORIC RIVERS

In glacial deposits have also been found the dried remains of two ancient rivers. They flowed before nature created an inland sea and island, across a large valley between the Cascades and Olympics, similar to today's Willamette Valley. Both were larger than any streams today.

One river, from Mt. Rainier, likely an extension of the Duwamish, flowed near Eagle Harbor before Puget Sound was carved. It's black volcanic sand has shown up in well logs (PUD#1). Another river, from the Olympics, has been traced from near Fletcher's Bay to bluffs south of Point Monroe before Hood Canal was formed. Its size, volume and source is read by geologists from their lens-shaped cross-sections of sand and gravel high on area bluffs (J. Deeter).

WATER SHAPES THE LAND

Over eons, our planet has been throbbing hot and cold. During the Ice Ages, enormous thick ice sheets flowed south into this area. Rivers flowing from the surrounding mountains and other melt water beneath the ice, long ago began the process of shaping our region.

15,000-years-ago, the island's land mass was weighted down heavily by some 3,000-feet of ice! It was part of an ice sheet that extended all across the continent. When it, too, finally began to melt, the melt water formed enormous rivers that most recently helped carve Puget Sound. 1,000-cubic-kilometers-- 240-cubic-miles!-- of sand and soils were washed out of the lowlands.

The receding glaciers formed a high, freshwater lake that covered much of today's island and was larger than today's Puget Sound. It drained south to the sea via Gray's Harbor. An ice dam to the north prevented the water from flowing there.

Then, as the ice receded further north, the large freshwater lake found a way to drain northwestward around the ice as lower outlets to the sea opened up.via Hood Canal, Lake Leland and Discovery Bay. An embryonic island took shape in the middle of a lower elevation freshwater lake.

A few centuries later, a major event took place. It was likely spectacular! The ice dam to the north melted. And sea water from the north, 300 feet below today's sealevel, began its twice daily scouring and flushing of the northern Puget Sound lowlands!

10,000-years-ago, the ice in these parts had melted. The land began to rebound. And the sea level began to rise rapidly-- some 300-feet! This not-so-old island was likely an isthmus, an extension of a much different shaped Kitsap peninsula-- barely recognizable by today's map. Perhaps 6,000-years ago, waters began to flow through Agate Passage.

The island's largest stream then was not Grisdale or Murden Creek, but one flowing from the valley that is now Eagle Harbor. With the lower sea level, a ridge of land extended from a much wider Wing Point all the way to Blakely Rock! And the many streams of today's Eagle Harbor combined into a large one following the center of today's harbor south around Blakely Rock to the Sound. And the high bluffs of today's Wing Point and Sunrise Drive areas were the fastest erroding, possibly losing 300-feet or more each millenium! That's over a quarter-mile in 5,000 years!

THE SHAPE OF THE ISLAND TODAY

North and central island areas are sand, gravel and grey clay deposits laid down by glaciers during the many ice ages here, the last as recent as 15,000-years-ago. The island's best freshwater aquifers are found among these mostly porous glacial deposits, as are commercial sand and gravel resources, and the occasional remains of prehistoric forests and mammoths!

The island's vast, bountiful, tideflats, beaches, and sand spits owe their existence to eroding feeder bluffs, to continuous stream deposits, and to the powerful, life-like, forces of *coastal drift*-- wind, current, and tide. Streams carry, soils, nutrients and whatever else we put in them. They traverse and build the tide flats daily. The sandy, intertidal zone teems with life, large meadows of eel grass, beds of clams, and a diverse community including the world's largest burrowing bivalve, the *gweduc* ("dig deep", Nisqually), *Hyas Squish Squish* ("big squirt", Chinook jargon) or geoduck. Some are over eleven lbs. and 100-years-old!

In southern island areas, between Rockaway and Pleasant Beach, 18 to 30-million-year-old sedementary bedrock thrusts above sea level. Part of the *Blakely Formation,* this ancient ocean bottom-- today's rocky shoreline and stream washed cliffs--yields fossils of marine life similar to those found there today-- clams, snails, crab, shrimp, marine mammels, and microscopic critters.

Some see this east-west ridge as Puget Sound's third mountain range. It runs between Cougar Mountain to the east and Green and Gold Mountains to the west. North America's steepest gravity gradient is recorded along the formation's northern edge. Travelling north from it, a gravity meter would show a greater change in a shorter distance than anywhere on the continent-- even the Grand Canyon! Geologists finding evidence of past movement in the earth's crust here-- It was a big one!-- renamed the formation "The Seattle Fault". The island's ferry route traces the fault line. We ponder gravity and setting Olympic high jump records aboard the *WALLA WALLA!*

Scientists have learned that betwen 1,000 and 1,100-years-ago, a large earthquake shook the region. It created a *tsunami.* This non-tidal "tidal wave" crashed across the Sound's shorelines. Restoration Point had been an island. Blakely Rock had been an underwater shoal. After the event, no more! They, the beach shelf between Rockaway Beach and Crystal Springs, and the floor of Puget Sound, were uplifted-- 23-feet! (R. Bucknam, B. Atwater) More on this later.

This southern sedementary bedrock is no place to drill for water. No deep aquifers here; water can't penetrate it. It runs off in streams. Or the bedrock and its fine, slippery, yellow-ochre-colored, clay holds water in many surface ponds. Ceramists and potters have use the clay to make a natural slip glaze.

Among the rocky crags and underwater caves of the southern coast are found the world's largest octopus! Perhaps as many as 6,000 reside in the tidal stream between Restoration Point and Point White. Divers observe their complex network of undersea highways and seasonal dwellings (J. Welfare).

All around the island near sea level can be found a layer of peat, the compressed organic matter from before the last Ice Age. Some date to 34,000-years-ago. It is coal in the making, or diamonds to the more patient. Occasionally, streams cascade over sheets of it. Folks at Ryderville on Port Blakely's southeast shore, once burned it for fuel. Some say the island is a multi-layer cake with peat as chocolate frosting. Peat shows up layered in well logs beneath the central valley. And scuba divers find neat peat roofs in octopus lodges offshore of Sunrise Drive.

PEOPLES OF STREAMS

The first people called the inland sea the *"Whulj"*, "the saltwater", and took their names from the rivers around which they lived-- Skokomish, Snoqualmie, Nisqually, Puyallup, Duwamish, Skagits, Skokomish, Sammamish. For the longest residents of Kitsap, the Suquamish, living on Agate Passage, their name derived from *dsuqwub,* the "clear saltwater" swiftly flowing there. Their names described and enriched other island places. We share several here.

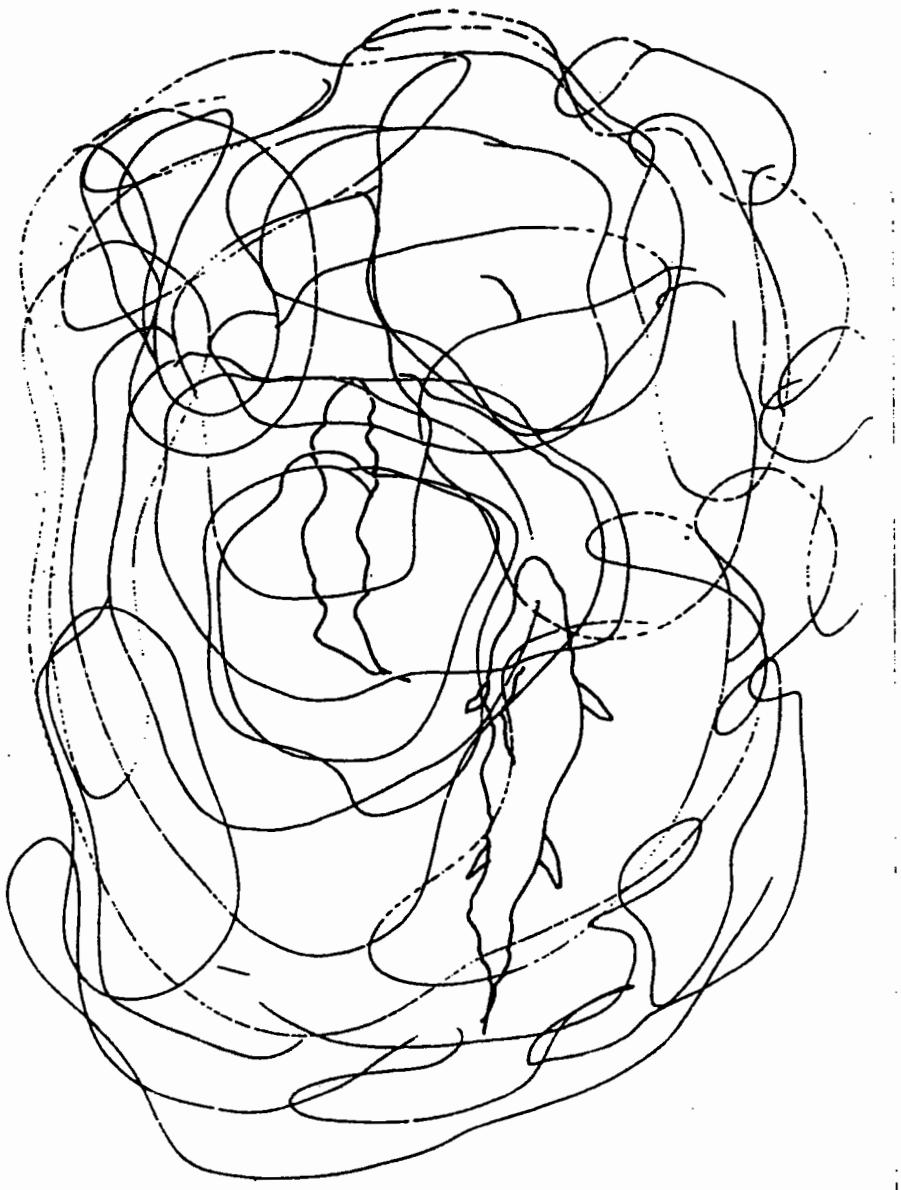
Today, as always, we continue to be people of streams. Our watersheds connect us, and help define our local neighborhoods.

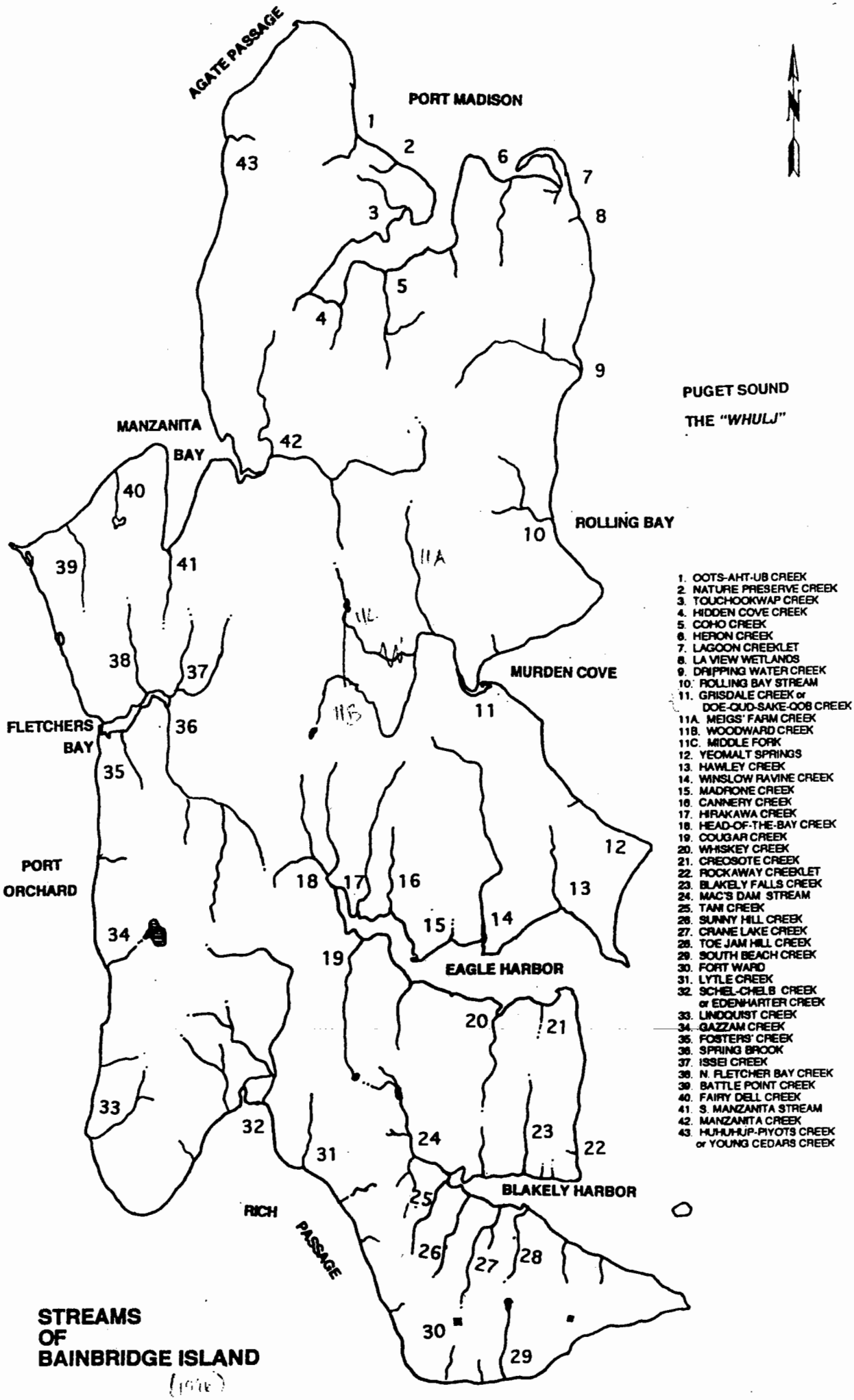
And so, too, do we-- who are 95% water-- hear an ancient philosopher ask, *"When does the air and water that you just exhaled stop becoming a part of you and begin to be a part of me and all the living things around us?"*

STREAM NAMES

"If you don't give them names, careless developers and the unknowing may just call them 'ditch water'."-- Harvey Manning.

These stream names are suggested from historic usage, common usage, or from the name of the watershed or body of water into which the stream flows. We favor names reflecting a colorful history, or otherwise, those which easily define the location. We've tried to capture that elusive "Sense of Place". Where possible, we have tried to incorporate the Suquamish names in Lushootseed dialect of Coast Salish.





STREAMS OF BAINBRIDGE ISLAND

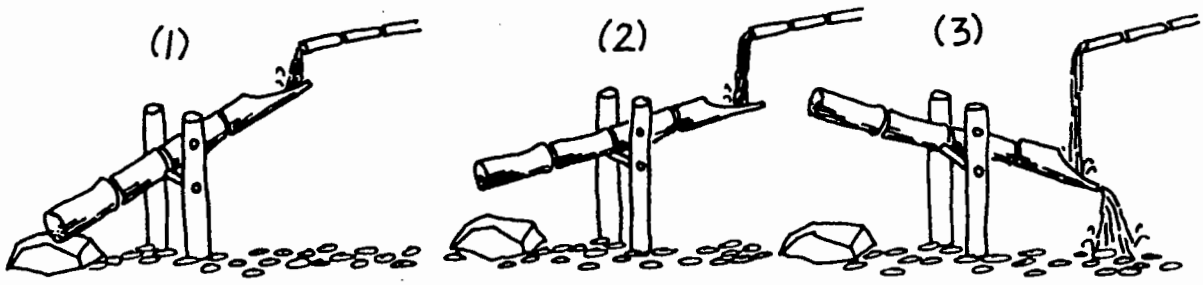
(1976)

ISLAND STREAMS

Here is an historic tour of our relationships with island streams. They run year-round, or once did, unless otherwise noted. Some have disappeared! They are listed clockwise by watershed beginning in the north. Some information sources are shown in parentheses.

1. Oots-aht-ub Creek (Suquamish, T. T. Waterman), an east Agate Point stream, runs through the Bloedel Reserve's landscaped ponds before flowing down the hill to a pond near an old Suquamish beach campsite. The creek had its own name meaning "water runs down". The campsite had another name, "Fern Place", a favorite place to harvest bracken or fiddlehead fern sprouts in spring. Large stone adze blades useful in making cedar planks or canoes, were found here long ago. The stream's beach outlet is accessible to public view. Use the West Port Madison Nature Preserve.

This stream has been blessed with a Japanese timber bamboo stream gong or *shishi-odoshi*. Its deep, hollow thuds echo south of the Bloedel Reserve's tea house. Farmers invented them to scare off deer and protect crops. (1) Stream water spills from an elevated bamboo pipe into the end of a two-foot length of plugged timber bamboo or "striker". It balances on pivots in the middle. (2) It fills. (3) The striker rises until it dumps its water, drops, clacking against the rock. The cycle repeats.



Shishi-odoshi or "deer scarer", a Japanese bamboo stream gong for farm or garden

Water flow and quality for streams #1 and #2 are affected by Reserve pond and garden management practices. Washington State Fisheries (WSF) inventoried this stream and it bears WSF# 0319.

2. West Port Madison Nature Preserve Stream flows east from the Bloedel Reserve through an old stand of firs housing osprey nests in the island park district's West Port Madison Nature Preserve before cascading

down a medium high clay bank to the beach, a delightful little waterfall that sings year-round. The beach is accessible from the Preserve.

In addition to the Bloedel Reserve's watershed management, there've been two other significant manipulations. During the days of the Port Madison Mill and Shipbuilding Company (circa 1854-1892), water from this stream's source was transported by an overhead timber flume for nearly a mile to West Port Madison's inner harbor shore. Its water was essential for the steam powered shipyard that once built steamers and sailing vessels, including the *WILD WOOD,* the largest full-rigged ship built on the West Coast. Old timers remember the flume's ruins (S. Komedal, G. Smith).

During 1930's Great Depression, when a different wetlands ethic prevailed, federal dollars funded the draining of stagnant island swamps and eradication of mosquitos along Sunrise Drive and in West Port Madison. Their ditches are still evidenced in the Nature Preserve. (For another ethic, see Stream #14)

3. Touchookwap Creek, or Grotle Creek is a small stream that flows into inner Port Madison bay, or "Touchookwap" (Suquamish, L. Webster), north of Treasure or Dead Man's Island near Grotle Road, and may not now be year-round. Hudson Bay Company trade beads were once found here (J. Walganski). Bay Company surveyors first visited here in 1824. A village site was nearby during mill days. "Touchookwap" means "crawling up in there" and refers to the way in which inner Port Madison Bay winds narrowly inland a geat distance (L. Webster). Nearby, dogfish were rendered into mill lamp oil.

4. Hidden Cove Creek or *"Scwa-qob"* Creek flows to the south shore at the head-of-the-cove, an old Suquamish campsite called *"Scwa-qob"* or "Little Harbor". The stream has supported a private steelhead and coho salmon rearing pond. It once ran through a goat and pig farm south of Hidden Cove Road. A baby Orca or killer whale once floundered in the cove's mud during an outgoing tide. It was rescued, carried from the cove, and returned to its mother by true *"Seaboldians"* (S. Komedal).

5. Coho Creek (C. Mahnken), Mill Creek (J. Quitslund), "Basket" Olson Creek (G. Smith), Port Madison Yacht Club Creek, or Port Madison South Stream, flows north through the 1990's plat of Hidden Cove Estates. It enters the bay west of PMYC at the site of Andrew Olsen's lumber mill (ca.1910's & 1920's) and, later, Halvorson Towing Co., whose tugs and barges provisioned a booming post-WW II Alaska. An extensive study of this stream was done for Hidden Cove Estates' Environmental Impact Statement (EIS), a good tool for other stream studies, too. Coho salmon and cutthroat trout have been seen here.

"We used to go up the creek and catch trout with a bent pin and thread. They didn't have fish hooks in them days!" chuckles Carl McLean recalling his Tom Sawyer years there in the 1920's. *"That stream drains a long way, all the way from the old Beaton Ranch and out Phelps Road. I saw dog salmon trying to get up there, an odd one or two. But I never saw salmon above the road fill on Hidden Cove Road."*

"'Basket' Olson was a popular Swedish basketmaker, a fine craftsman who, through the 1930's, lived with his wife in a little house that still stands south of Hidden Cove Road, just west of the stream. He'd work cedar strips wet into beautiful creations. They were kind of square. Everyone in Port Madison had two or three. Lots of them found their way to Seattle buyers on the steamer HYAK." remembers Gail Smith, who has lived here most of his life.

Lumber mill Olson, no relation, built his mill on the shore flat next to the stream sometime after Meigs' mill closed. It was there a long time, judging by the pile of slab wood. A log and timber dam transformed the estuary into a mill pond at low tide. Olson's mill water came from up the creek. (G. Smith, C. McLean)

George Meig's steam-powered and fire-prone Port Madison Mill, 1854 to 1893, may have collected some water from this site, and anywhere else he could find it. A wooden flume would have been used, same as on the western side of the bay, to carry water to the eastern side (G. Smith). He also likely drew water from a small year-round stream in the inner bay's southeast corner, a stone throw from the mill's early shoreside sawdust pile.

Meigs developed a large spring to the south and flumed water to the town. It is still in use, as is a large concrete, 1905, post-mill period, reservoir (Marriott).
The 1901 plat map shows two earlier "reservoirs" on the hillside above the mill site west of today's Euclid Avenue.

The mill had no electricity. It's sawdust-filled interior was illuminated, especially during the long, dark winters, by open-wicked, dogfish oil lamps-- a recipe for disaster! When fires ultimately swept the mill, the reservoirs provided lots of water, and <u>fast</u>! Meigs' creative, pioneer, water system also used flumes, wooden pipe and, courtesy of the state militia, even a few recycled rifle barrels! (R. Ross).

6. Heron Creek, Kane Cemetery Creek, or Point Monroe West Stream, enters Port Madison west of the cemetery, sand spit, and Point Monroe lagoon. As many island streams, its drainage area has seen much change.

Once it drained cool evergreen forests. After extensive logging a century ago, early photos reveal it drained mostly cleared land, farms and pastures! Today, its watershed has many land-uses-- second and third-growth evergreen forests, deciduous forests, marshes, fields, farms, homes and paved roads-- and its shady habitat for fish may be the best its been in a century.

A wetlands south of Kane Cemetery provide some protection from predators for a new community-- the island's largest Great Blue Heron rookery! The long-necked and spindly-legged wading birds range tidelands, streams, ponds, marshes and meadows for about three-miles. They grow in height to four-feet!

State park rangers once escorted curious view-seekers of this sword-billed, pterodactyl-like, creature into the wetlands-- armed with metal garbage can lid shields for protection! There were only a few birds then. Their breeding season tree-top choruses are easily heard from Lafayette Avenue, a safer viewpoint as by 1996 the heronry had grown to several dozen pairs. Quiet spectators help preserve this rare community.

7. Point Monroe Lagoon Creeklet or "Salagwep" Creeklet (T. T. Waterman, Suquamish) enters the lagoon at the inner end of the sandspit near Fay-Bainbridge State Park. This was also a popular and historic gathering place of the Suquamish, called "Salagwep" for the "butt-ends of trees" and driftwood nearby. Later, Port Madison families taught their young how to swim here. The lagoon's warm summer waters were the closest thing to a heated pool for beginners (K. Warner).

Some believe the lagoon stream has contributed to a summertime stench causing past attempts to manipulate it. The intertidal lands of Puget Sound are some of the planet's richest producers of animal and plant life. Anerobic bacterial breakdown of organic matter on warm, daytime, summer low tides is a natural and to some, pleasant, characteristic of our fertile beaches. Could the density or quality of sandspit septic system's be a more likely culprit? The nose knows.

8. LaView Wetlands Creeklet runs into and out of the wetlands south of Fay-Bainbridge State Park and seeps onto the beach. These wetlands are actually a lagoon behind a sandspit that extends north from the bluffs to the south to Point Monroe. Northern portions of this lagoon have been filled in at the State Park, a former Fay family farm pasture. The pre-1914 "LaView" steamer landing was located south of the park. At low tide, the wetland, when wet, drains across tideflats.

Island streams don't end at the water's edge. After traversing the intertidal sandflats, they form steep gulleys down the underwater drop-off. These are treacherous to crabbers and other offshore waders who learn to head for the beach when you see a stream to avoid stepping into the deep.

One winter night, a few years ago, two crabbers wading across a dropoff valley by lantern light, found themselves staring into the gaping mouth of a Basking Shark!-- a frightening enough experience to warm the water around even the most experienced crabber!! The largest shark in the Whulj and a toothless plankton filterer, it was doing what many other creatures do, including fisherpeople-- harvesting from the food rich underwater extensions of land's streams.

9. Dripping Water Creek, or "C'txa" Creek (Suquamish, T. T. Waterman), or Peterson Creek (J. Quitslund, See also #27), drains a watershed along Sunrise Drive and enters the Sound at a small headland midway between Point Monroe and Rolling Bay. A favorite native campsite also used by Suquamish and others travelling through the Whulj. The stream has small cutthroat trout and has known salmon (WSF# 0320). In 1968, the stream left an indelible memory, as it had for generations before, and a poem:

THE SOUND

When his daughter was only two,
they'd pore over "expotitions" to do
at a winter home beside the sea.

They'd hobble cobble upon the beach
and peer through driftwood, where, out of reach,
sea birds danced and soared among the surf.

And nature's rythmns ruled each day--
tide's, waves', sea grasses' sways.
Sou'westers, rain, rang forest and sea songs.

Gulley tumbling to the sea,
a creek babbled near, where, often he
would go to share the best sounds of them all.

Through brush they'd glide, silent as snails,
to where a peat layer dammed the dale.
The stream became a wonderous waterfall!

Its cascade carved a tiny cave
in which they'd crawl to moments save,
in awe of drip-drop music trickling there.

Strings pizzacato, harps, wind chimes,
and no part of these meager rhymnes,
can capture the enchantment of those sounds.

Those camping there long, long, long before
left a name for this magical shore.
The place has no remembered English name.

Road building since destroyed the falls,
but not for them. They still recall
as clearly as if were yesterday ...
Quietly listening, father and daughter,
at a place Suquamish called ... *"Dripping Water"*,
and they, one, with them in The Sound.

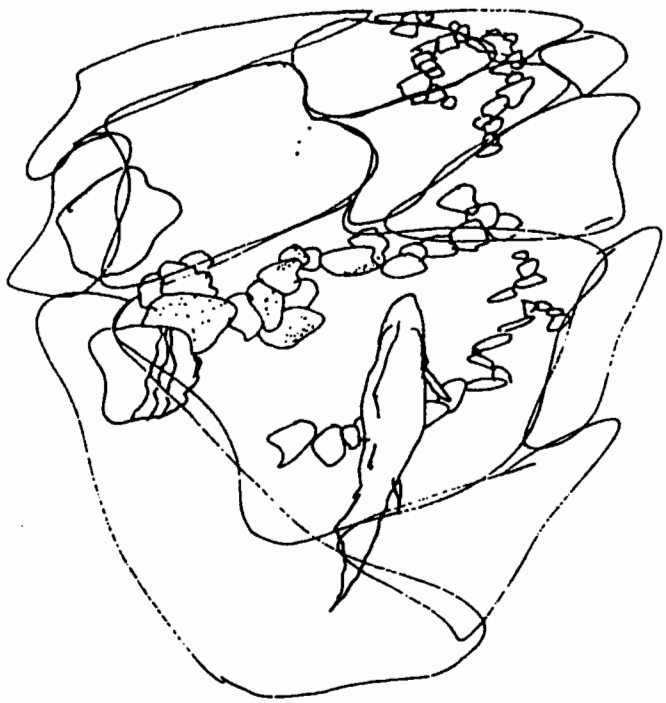
Last we checked, "Dripping Water's" fall was slowly rebuilding.

10. Rolling Bay Stream, South Sunrise Drive Stream, or Berry Creek (C. Courtier) enters the Sound north of Skiff Point. A culvert and fill replaced a timber bridge across a ravine on Sunrise Drive near Roberts Road. An overhead bridge sign read: *"Notice: Walk Your Horses, Fast Driving Over Bridge Forbidden."*

Mention bridges today, and one comes to mind-- Agate Pass Bridge. There were once over two-dozen island bridges (see Appendix I). They were everywhere until a slick salesman showed up with another dream: *Running Horses, Fast Driving.* Even in the heart of timber and creosote-scented, wood preservation country, horseless carriage futurists saw an advantage. Road builders bought a revolutionary new product-- corrugated steel culvert!

The salesmen gushed, *"Just buy some of this here new-fangled steel pipe. Bury it in your ravine over there so the stream'll go through. Build your road on top and, presto, there'll be no more rattlin' good bridges to maintain 'round these parts!"*

But for some streams, the modernist was unknowingly peddling death to salmon runs. Fish often could not leap to high culvert outfalls, would not swim the long, dark tunnels. Today, too, roads criss-cross every watershed, re-routing many streams and creating new ones. Fisheries experts seek to remedy the "Dangers of the Road."



"Dangers of the Road" series, *Stream study no. 2,* drawing by Dale Victor Cox (c)1996

11. Doe-qud-sake-qub Creek (T. T. Waterman, W. Snyder, Suquamish), Grisdale Creek (Marriott, A. Williams, M. Bonoff), Murden Creek, or Manitou Creek, is the island's largest stream *"with the greatest salmon rearing potential"* according to Lawrence Webster, Suquamish tribal chairman in the 1970's and 1980's. Its drainage basin includes the southern portion of the island's central valley and the Meigs' Farm wetlands. The lower stream's pea gravel spawning beds seem ideal. Activity here has spawned a wealth of stream names.

"Doe-qud-sake-qub" or "the place where the water gets jumping" refers to the shallow bay, today's Murden Cove, and earlier "Rolling Bay" (now north of Skiff Point). The enormous tideflats were built here in part by the alluvial sand deposits of the creek. Exposed to strong, southerly winds from a long distance, waves coming across this shoal grow tall and close together. They get jumping and rolling! Canoeists and smallboat sailors learn fast of "Doe-qud-sake-qub" and have bailers handy.

Arrowheads found in this stream by Ted Weld are displayed in the island's Museum. They were found in the early decades of European-American settlement. Were they from native skirmishes with northern raiders (Marriott), or from hunting?

Suquamish elders in 1920 remembered early camps near the "mouths of streams" here, T. T. Waterman recorded. Today, there is only one creek in the

cove. Where was the other one? The county road built along the north beach dams the estuary and salt marsh of an early day stream.

Over a century ago, workers for George Meigs, Port Madison's mill owner, built a farm here. It was some of the only unforested land on the island. They transformed the swamp and bogs into pasture and farm land by building split-cedar, plank-lined, drainage canals across the wetlands. They began growing plants and animals not before seen here, except the potato which the Suquamish had grown on the island for more than a half-century. Meigs farm had orchards, vegetables, poultry, pigs and dairy cows-- all the cultural food stuffs of New Englanders. Meigs' mill closed in 1893, but other dairy operations continued at his farm site until the 1950's. These included the enterprise of a Danish circus strong man, Pete Ahrenkeil, and his Maplewood Dairy who distributed milk from Rolling Bay to Wing Point (A. Williams).

For a century, many have known Grisdale Creek. The Grisdale family's original logging camp and home overlooked the stream south of the intersection of today's North Madison Avenue and Manitou Beach Drive. The stream, a bridge and later highway project-- Grisdale Fill, (about 1927)-- bore their name. An unsolved turn-of-the-nineteenth-century "murder" at Grisdale logging camp is believed to have contributed the misspelled name "Murden" Cove.

The Grisdales were early settlers and a famous logging family. Near Shelton in Mason County, a large logging camp, now a ghost town, bore their name. Grisdales' island neighbor, Luke McRedmond, an employee of Meigs Mill, was better remembered in the name of a King County town-- Redmond.

Wells were hard to get at Rolling Bay. Early settlers collected rain in cisterns. In dry seasons, they'd haul water from Grisdale Creek until the fall rains. (Marriott)
A concrete ruin stands in the tidal estuary mystifying the curious. It was the foundation of a former radio tower (A. Williams).

Murden Creek has three tributaries:

a. North Fork or Meig's Farm Creek, flows south from Meadowmeer, Koura Road, and the north central valley area. Enough salmon once came up this stream that folks living in "Finn Valley" could pitchfork whatever they wanted right out of the stream (A. Williams). We suspect the streams also cooled baked bodies in this former valley of wood-fired Finnish *saunas.* (WSF# 0322)

b. South Fork or Woodward Creek, flows in an irregular "S" shaped path west from Meigs Farm, south to Woodward School, around a ridge and north to the area of the Bart Berg residence, then south again to bass ponds on New Brooklyn Road. Boy Scouts built a viewpoint overlooking this beautiful stream in a gulley northwest of the school. (WSF# 0321)

c. Middle Fork joins the south fork near its crossing of Wardwell Road (a nice viewpoint) and flows from the eastern hillside of "The Grand Forest" and a large pond and horse farm there. (WSF# 0323)

Protected in part by the Bainbridge Island Land Trust, fertile bogs persist here, a diverse and fragile environment including cranberries, Labrador tea or *Ledum,* the island's largest alder, spruce and cedars; muskrats, otters, coyotes and much more. Recently, some have quietly re-introduced salmon into the streams and beaver, *Castor candensis,* into the wetlands. Gale Cool, an active wetlands visionary, describes "*Castor* Remediation"-- the beaver remedy.

Cool says, *"Our streams have suffered many degradations. In our efforts to help salmon, we've begun to learn that we must restore habitat, watershed-by-watershed and stream-by-stream."*

"Once, the land had the ability to hold the deluge of winter rains and then to release it slowly during drier seasons. Streams flourished year-round. and wetlands were alive, dynamic. They grew and changed. Beavers helped with this. For eons, they built reservoirs which kept water tables high, provided food for wildlife, and created rich salmon rearing areas. A few decades ago, humans severed this link to our past-- beavers were extinguished as a nuisance to suburbia."

"Can human beings co-exist with eager beavers? In 1995, in a cooperative experiment, beaver were re-introduced to the island in the hope that the landscape's natural functions and human land uses need not be incompatable. We welcome the beaver back so that our island's wetlands and streams may once again flourish and salmon might once again abound."

Will Cool's neighbors understand what he and the beavers are trying to create?
Will nature's four-legged water creatures be trapped and killed by uncaring outsiders, or will we preserve habitat for them?

Meigs farm wetlands, and other natural reservoirs provide essential rearing areas for young Coho salmon. Once viewed as malaria swamps, today, we see few if any mosquitos in these healthy, salmon-rearing wetlands. As

quick as the insects hatch in the water, they become food for Coho and trout. Cool proudly points out that you don't needed mosquito repellant at Meigs Farm Wetland!

Coho salmon are amazing at getting around. Biologist Terry Domico, while surveying western Washington streams, observed Coho easily climbing over beaver dams, crawling through grass, and leaping two-feet on their travels. Coho swim-- and more!

"Dangers of the Road" series, *Stream study No 3,* Dale V. Cox, (c)1996

As visitors to the *Tennant Lake Interpretive Center* next to Hovander Park in Ferndale, WA, perhaps someday visitors to a *Meigs Farm Wetlands Interpretive Center* may share tours. As the wetlands filter and hold water flowing through it, visitors on elevated boardwalks and observation decks may physically and visually flow through "A Wetlands Experience" they hold forever. Without leaving footprints, they'd become water stewards and stream keepers.

12. **Yeomalt Creeklet**-- there must have been, at least, some trickles-- at this former Suquamish and YWCA campsite. Early residents relied upon a small stream north of today's Broomgerrie Road and springs which percolated

from the hill and beach. The Suquamish name, yeomalt, is still used today. It means "the place where the north and south winds come together and do battle", an expression of what meteorologists today call *"a convergence zone"*-- another reason to carry bailers on this eastern shore.

13. Hawley Creek is one of nine (9!) streams in Eagle Harbor (Lt. Chas. Wilkes) or "Home of the Eagles" (Suquamish, T. T. Waterman). Folks never had trouble naming this bay! Majestic bald eagles, our largest birds of prey, flocked to this rich ecosystem. They feasted mostly on beaches and up streams in salmon spawning grounds.

Hawley Creek drains a watershed including the Wing Point Golf Course and flows into Eagle Harbor west of the base of Wing Point. The creek was the site of seasonal native fishing camps before 1912. The remains of the 1927 Hawley steamer landing stand nearby, about a quarter-mile east of today's ferry terminal. The neighborhood retains the name "Hawley".

Aerial photos show much of the drainage basin's water flowing onto the tide flats through the porous beach gravel and not all within the stream bed. The City's Winslow Sewage Treatment Plant sits beside Hawley Creek's seaside salt marsh. It is engineered to pump its secondary treated "Gray Water Creek" via three-foot concrete pipe, underground to Puget Sound bottom outfalls east of Wing Point.

14. Winslow Ravine Creek or Winslow Shipyard Creek flows from wetlands near the Village northwest and northeast of Hwy. 305 and High School Road, which at least once, was home to a heron rookery. It drains south through a ravine and enters the harbor behind the former Winslow shipyard sand spit and lagoon, now filled in. A similar ravine exists to the south, across the harbor, in Eagledale.

The stream was dammed just north of Winslow Way for over a half-century beginning in 1903, and its water was piped to the shipyard. A former native camp and archaeological site exists in Waterfront Park on the west side of the stream's inlet. A public trail crosses this bridged slough, occasionally granting a glimpse of feeding racoons.

The stream flows through large and long culverts under Winslow Way, Hwy. 305 and High School Road. Salmon have been seen north of Winslow Way (J. Rudolph, T. Domico). The EIS for a proposed ARCO Station on High School Road contains much information on the area wetlands and stream. Year-round waterflow is threatened as urban development increases rapid runoff and decreases the land's water holding capacity and aquifer recharge areas. (WSF# 0324)

15. Madrone Creek, or Madison Avenue Creek, used to enter the harbor in the inlet east of the foot of Madison Avenue South. This was the site of the town's first steamer landing and a large *madrone* or *madrona* tree that gave the town its name.

The stream was eliminated by inclusion of its waters into holding ponds and an underground storm sewer system. In island Museum photos of Madrone (Winslow) in 1898, it is seen running in a swale across Winslow Way at today's Molsted's Alley. In the 1920s and 30s, folks from the foot of Madison maintained a plank bridge across the inlet and a trail NE through the woods to the Post Office and Morrill & Kellam Drugstore on Winslow Way, east of Ericksen Avenue. Winslow's first sewerage system, since moved, dumped its primary treated effluent into the harbor here.

Here's a little on the history of stormwater management. The City of Winslow incorporated in 1947 and by the 1970's, it established a stormwater management utility. While suburban and rural town leaders around the state reminded one another that *"there's nothing cheaper than an open ditch!"*, formally engineered, more expensive, underground systems were designed for growing neighborhoods. They often came with catch basins for pollutants and other ongoing maintenance costs. Their main philosophy then was: *"Get the water off the land as quickly as possible!"*

In a few years, philosophies changed, replaced with concepts of water retention. Drinking water was mined from the ground and aquifer recharge areas needed replenishing. Efforts to bring back salmon runs and maintain fish habitats favored year-round streams rather than fast draining watersheds.

Today, we are beginning to recognize that we need a combination of the two ideas. In some areas, because of slope instability, for instance, we must get the water off the land as rapidly as possible. Other areas, like Meig's Farm, are natural reservoirs, perfect for retention. And we are learning that we have to work with nature and natural drainage patterns.

16. Cannery Creek, Strawberry Creek or Weaver Creek, flows south through a valley of former strawberry farms to enter the harbor east of the former Winslow Berry Growers' Strawberry Cannery pier (built ca.1930) east of Weaver Road. Through the 1930's, 500 each, 55-gallon wooden barrels a day of canned strawberries were hauled by barge to Seattle markets. The water for this and later industry came from artesian wells, not the stream.

17. Hirakawa Creek, Sportsmen's Club Creek, or Head-of-the-Bay East Creek, flows south from Sportsmen's Club pond area through former strawberry fields and the site of the former Japanese Baptist Church, the *Winslow Lighthouse*, just north of Wyatt Way. It was administered by Rev. Kihachi Hirakawa, a longtime Japanese community leader and scholar.

The creek flows east of Saint Barnabas Episcopal Church into "Dexter's Pond" (W. Henshaw, R. West) or "Aiken's Pond" (F. Sakuma), a former farm's shoreside irrigation pond. It overflows the pond to enter the bay in an inlet between Tawresey and Rudolph properties. Early residents enjoyed the water sounds and trickles coming from the swale as they walked the road home, today's Gowan Lane (F, Sakuma). It is a summertime trickle now. (WSF# 0325)

Four streams dilute the head-of-the-bay's saltwater (#16-19). So much so, that in freezing weather, kids in the 1920's and 30's would ice skate there using skates made from crushed cans! (F. Sakuma)

18. Head-of-the-Bay Stream enters the harbor just south of Eagle Harbor Dr. and Wyatt Way. A culvert, fill and asphalt replaced early wooden bridges that once drummed the sounds of horses hooves across the salt marsh (Emma Swedine).

This stream has two tributaries. One, runs north up "Flavor Valley", coined for its wild ginger, wild vanilla and licorice root, through farm fields to "Bare Ass Pond" coined for the type of swim suits kids used to wear there. After a long winter day cutting firewood, some residents of this stream used to bake in a wood-fired Finnish sauna. When the folks were done, they'd race steaming hot through leg-scarring, nettles and blackberries to cool off by cannonballing into one of the stream's deep pools. Neighbors once placed boulders in this lower stream bed to create a cascade whose noise drowned out the Head-of-the-Bay traffic. Log bridge seats were added for this meditation and relaxation spot. This tributary drains the east and south side of Strawberry Hill.

The other, main tributary, drains a special wetlands to the north and west as far as Strawberry Hill and Fletcher Bay Road. Cedar stumps stand tall in a deep ravine near the western headwaters. One oldtimer sees them as tombstones to the forest giants that were. The isolated watershed today supports a diverse wildlife habitat. Salmon annually splashed upstream in earlier autumns. A few recent spawned-out chum carcasses on the banks give hope to a comeback. Cutthroat trout are here as are meadows of watercress. Otters travel past kingfishers' nests burrowed beside the

stream near patches of giant skunk cabbage and trilliums. This and other island watersheds show wonderful *biodiversity!*

Once, an island Tom Sawyer was seen shyly coming from this tributary. A smile seemed ready to burst upon his face. Suddenly, as he passed a local farmer, his heart seemed about to pound out of his shirt. His shirt pocket was a-flutter. Should he reveal his secret? The excitement was too much to contain as three six-inch cutthroat wiggled from his pocket! *"Look what I caught!"*

Some folk call these *"sleevers"*, fish taken too small and hidden up sleeves. Sleevers are leavers.

The estuary extends over a-quarter-mile at low tide. It is a fascinating hike-- spelled w-a-d-e. The footing is solid mid-stream. But in the past, some farmers' cows trying to cross the bay had to be pulled out of the primal ooze by tow truck!

The estuary hosts many unique species, including rare clams and feeding seabirds. Every spring, for reasons known only to them and not to marine biologists, giant male octopuses venture to the head of this and other estuaries and die in the diluted saltwater. In the 1970's, an 85-pounder was caught in a small mill pond here. It measured 14-feet between tentacle tips, large enough to enwrap the neighborhood kids for a photo sufficient to horrify out-of-state pen pals and prospective immigrants. It was far short of the 146 lb. island and world record! (J. Welfare).

This shaded stream is fed by many cool underground springs. In places, it disappears beneath the thick forest duff and can be heard gurgling under foot. One of the island's only *"stream houses"* is built in the middle of the stream. These roofed, natural cooling houses were often used on non-electric homesteads and dairies to separate milk and preserve dairy products (M. Cooper).

This stream is dammed at the City's Head-of-the-Bay well site. This was done in the 1950's when Winslow took its summer drinking water from a small reservoir behind the dam (J. Mikkola). Land owners further upstream were required by City and State hydrologists to add a culvert to their road building project to keep stream flow optimized. Yet downstream, the same City has left this stream dammed! *"Well, we'll be dammed!"* you say!? Shouldn't the City's dam be removed and stream habitat re-established for spawning salmon? Damn right!! (WSF# 0326)

19. Cougar Creek, Blueberry Creek, The Lagoon Room Stream (G. Flodin), or Head-of-the-Bay South Stream, is a large, shaded, year-round stream fed by ponds and springs, including those of the Old Mill Road area, and the beautiful wetlands east of and behind Blakely School. It cascades through a steep ravine and enters the bay near a bend in Eagle Harbor Drive west of "Place 18" and east of a domestic blueberry patch.

Otters travel this stream (and many others) once feasting on duck and geese eggs beside the pond west of Old Mill Road (R. Callahan). This may also be a part of cougar country with a few historic encounters and sightings near here over the last century (D. Ekholm, S. Metcalf, K. Warner). The shy felines are by no means permanent local residents. They range over a hundred miles. And they can swim.

Following WW II, a small, summer cabin was placed west of the forested, cave-like, stream mouth. Friends gathered there for picnics. They rowed their beer *("Olympia's-- Its the Water!")* and beverages into the stream's shady*"Lagoon Room"* for cooling (G. Flodin). Harbor seals frequent the estuary and large schools of perch.

A-quarter-mile east, a seasonal creek drains a west Eagledale valley near McDonald Road. It carries sand to shallow tideflats in the harbor's southwest corner.

20. Whiskey Creek (Capt. R. Lundgren), or Taylor Creek (D. Lundgren), flows north through a ravine west and parallel to Taylor Avenue. It enters the harbor in a colorful secluded inlet once housing several Norwegian fishermen's piers and net sheds. They are still there. A sign on one shed once read: *"BEVARE OF DOG"!* Several old salts have retired there such as "Hard Luck" Jack Warner, in the 1960's. Early day Suquamish and settlers harvested salmon from the creek.

"Dangers of the Road" series, *Stream study No 4,* Dale V. Cox, (c)1996

With a laugh and a whisper, folks here tell tales of Prohibition-era smuggling. We see rum-runners' sleek hulls, flush-decked except for a small bow cabin, gliding this dark, fog enshrouded slough on a nighttime high tide. We hear their twin 12-cylinder Liberty. engines deep purring , and the tinkling of glass bottles, golden cargos being off-loaded at the head of the secluded inlet. Today, an old cruiser rotting there beneath a composting blanket of maple leaves, seems almost hiding from revenuers.

Warning, inlet hikers: Ferry wake tidal surges can sweep you off your feet! ***Warning , ravine hikers:*** Old dug wells are creek bottom hazards. Don't hike alone!

21. Creosote Creek runs north, seasonally, down a swale from Creoste Hill In the 1960's or so, it was placed underground in a culvert to allow for expansion of the pole storage yard at the world's largest wood preservation plant. In the 1890's to 1905, this creek was the closest surface water source to the site of Puget Sound's second largest brick plant. Clay and sand in the area were mined. A bridge once crossed this creek connecting Creosote's industrial community with a community park, bathing beach and dance pavillion-- a most romantic walkway, so folklore has it.

22. Rockaway Beach Creeklet, at the beach's southern end, supported a Port Blakely Mill era, and possibly earlier, Indian camp and a small Scandinavian settlement. Water also supported the construction of Yukon River boats on the beach here in 1898. They were built parallel to the beach and launched sideways. The source of the water may have been springs or a small creeklet from the hill.

23. Blakely Falls Creek, or Seaborn Creek, flows from Eagledale, across ivy-covered, Port Blakely Mill Company land and cascades over a 14-foot drop, the island's largest regular waterfall, before passing under Seaborn Road and entering Blakely Harbor. Waterflow varies greatly with the season. Two small creeklets to the east trickle from Halls' Hill and may have assisted Hall Brothers', Carlson, MacAteer, and J. C. Johnson shipyards there (1880-1929).

Once home to "the world's largest lumber mill," all but six of the harbor's more than 250 buildings are gone. The stream site is seen in early photos, running between workers' row houses. One of these 1878 houses remain relatively intact west of the creek. Some evidence of archaeological remains are here.

"The Bridge House", an American Institute of Architects Home-of-the-Year in 1989, bridges this stream. A heavy glass hearth provides a port hole

to view cutthroat trout congregating in the stream's mouth below! A stream observer says the Seaborn Road culvert prevents chum spawning below the falls.

The Port Blakely Mill Company inventoried Blakely Harbor's streams with letter designations. Blakely Falls Creek is Blakely Harbor #A (BH-#A). #B is indicated on the map. We've never seen it, except in heavy rains. When it flows, it does so down the swale west of Blakely Hill Road from wetlands south of New Sweden and Taylor Avenue. A mill-period boardwalk once crossed the New Sweden wetlands (E. Hanson). Saint Andrew's, the island's first Catholic Church, once stood beautifully reflected in a mill fire-control pond east of the hilltop road (K. Warner). The pond is now overgrown.

24. Mac's Dam Stream (A. Price) or Blaklely Mill Pond Stream flows from a watershed that includes Mac's Dam, a man-made pond formed behind a high timber and earthen dam. It was once used for mill water, fire control and, for more than 100 years, the source of drinking water to Port Blakely's north shore. A visitor to the dam remembers this also being a sulfurous summer swimming hole. Old time water system drinkers remember much tinier critters swimming in their water! For awhile, a smaller, concrete dam located below Mac's Dam collected drinking water. Today, a deep, swimmer-free, drilled well supplies the area.

Mac's Dam was named for Malcolm McDonald, early Bainbridge Hotel manager and later Pleasant Beach Hotel owner, whose Eagledale farm was nearby on (where else) McDonald Road. Developers once suggested a pond name change to "Max Lake"! We can't forget McDonald, nor that it is a dam!

An archaeological site, probably a fish camp used for several decades, was found east of this stream on a former shoreline pre-dating a geologic uplift here 1,100-years-ago. Clam shell from the campfire there carbon-dated at 600 AD! (R. Bucknam, R. Daugherty).

We search Hilary Stewart's *INDIAN FISHING* and wonder what kind of salmon weirs or traps might have been used here long ago. Where they basket traps? Fence traps? Log dam traps? Are the remains of a stone trap waiting to be discovered buried beneath the stream delta's sand deposits? And why didn't the fish harvesters 1,400-years-ago stay longer?

The stream enters the harbor at the NW corner of the former mill pond after travelling through steepish culverts under Blakely Avenue and Country Club Road. Sandstone masonry bulwarks remain from the mill pond's flood gates. Green blennies come seasonally to the rocky raceway. (BH-#C). Tani or Yama Creek (#25) also empties into the tidal mill pond.

25. Tani Creek (S. Nakao), or Yama Creek flows north from wetlands atop Fort Ward Hill down through a pretty glade that was once the terraced hillside site of the mill town's Japanese Village, referred to today as *"Yama"*, and further down the hill to Port Blakely's Mill Pond. Part of a concrete water cistern and the hotel's hot-tub firebox grate remain to mark the village site. *"Tani"* refers to the steep "gulch" in which the stream flows. The island's Museum has an exhibit of cultural objects found in the creek and its watershed. (BH-#D)

The Fort Ward Sewer Treatment Plant (1996) near the hilltop wetlands pumps secondary treated grey water *south* from this watershed to an offshore outfall in Rich Passage (see #30).

26. Sunny Hill Creek, Pettersson Creek (A. Price), or Port Blakely Southwest Stream, flows into the harbor just east of the mill pond gate on the south side of Blakely Harbor. Archaeological resources were found near the stream's mouth.

The stream is fed by wetlands and flows through one of several former hillside fire control ponds built to flood the mill in case of fire. This stream once ran *up* hill! Seawater was pumped up into this and other ponds when their water ran low. They often contained crabs and other sea life, much to the surprise of children swimming there! (S. Nakao, E. Anderson).

The upper watershed drains north Fort Ward Hill including the former pastures of J. Pettersson family's 1887 farm. Family photos of their 1940 *Sunny Hill Dairy* show several dozen cows and the stream crossing the pasture and passing beneath their giant barn. Pettersson's grandchildren laugh remembering how they used to paddle downstream in galvanized wash tubs! This stream's water helped feed the cows, that gave the milk, that was hauled down the hill, to Takayoshi's Store, that was mixed in ice, from Tani Creek, that made the ice cream, that was scooped into cones, that old timers remember, was the BEST they ever had!

Once, the south shore of Blakely Harbor was an enormous lumber storage yard. Large buried timber culverts drained the many streams. After the mill closed, young hikers were careful not to fall into these rotting, deep culverts. Parents advised against hiking here alone or to take a shot gun and dog along, so, if needed, you could signal for help (J. Walganski). (BH-#E)

27. Crane Lake Creek (A. Price) or Port Blakely South Stream enters the harbor west of Toe Jam Hill Road after flowing through another former mill fire control pond recalled as "Crane Lake" for the herons often seen feeding

there. Stone hammers were found and a burial ground, since relocated, was once nearby. (BH-#F)

28. Toe Jam Hill Creek drains the north side of Toe Jam Hill named for a rare blend of rot-gut whiskey doled out at Mike Lyon's mill-period tavern to thirsty residents of on the hill on their way home. The creek collects the overflow from a large hilltop irrigation pond built in the 1930's west of the road. Known as "Nute's Pond," it was formed by two man-made, beaver-style dams built out of tree limbs and dirt in thick, repeated, layers across the ends of a valley. Water from it travels via water pipe south and east over a mile to residents' water tanks on "The Flat" at Bean's Bight, west of the Country Club.(E. Anderson, A. Price). Vancouver's DISCOVERY anchored off shore here in 1792. He likely replenished his water supply from streams no longer running here.

Toe Jam Creek enters Blakely Harbor near several homes and a sandbar on the south harbor shore, across the harbor from the (1923-1937) island ferry dock. The creek is mostly underground between Country Club Road and the harbor (E. Anderson).

This beach was a popular Indian campsite. Old timers recall a time when 75 cedar dugout canoes hauled out here, their paddlers enroute to work in Puyallup's hop fields. (J. Walganski). Archaeological resources have been found. (BH-#G)

Two spectacular waterfalls, the island's tallest, cascade after heavy rains, down the high cliff a half-mile east of here. Surface water flows off the pioneering Elofson's "Mosebake" plateau (pronounced *"Moosa-baka"* for a hill in Stockholm, Sweden). It pours over the steep, fossil-laden, sedimentary cliffs above Country Club Road. When a freeze follows the rains, nature creates an unforgettable phenomenon-- an ice falls! The stream was likely an unreliable water source for the one-time community of Ryderville on the shoreside flat below the falls (A. Price). (BH-#H & #I)

Today, a large concrete reservoir collects water from Mosebaka for Restoration Point area residents. For centuries, a larger, natural reservoir near Restoration Point has collected incredible information about Puget Sound's past for us all!

Geologists have been studying this and other ancient ponds. They've taken core samples, 10-foot tubes of layered debris, from the pond bottom. Plants and animals found in the core reveal past changes from saltwater to freshwater life forms: Volcanic ash layers in the core help date the changes. From this and later discoveries, new geologic histories evolve.

These suggest that between 1,000 to 1,100-years-ago, a large earthquake shook the region. A tidal wave raced the Sound. Restoration Point, then an island, and Blakely Rock, then an underwater shoal, and the whole beach shelf between Rockaway Beach and Crystal Springs-- were uplifted from the sea 23-feet! An event of similar magnitude rocked Anchorage, Alaska in the 1960's. Continued geologic investigations may likely find proof of other such events here.

29. South Beach Creek is barely a trickle in summertime. It flows from atop Toe Jam Hill down the gully west of the road. Some families have wells in this swale.

30. Fort Ward "No Creek" deserves a tale, even without a stream. In this watershed, humans have performed the island's most amazing feats for water. The Army and Navy were desperate for it. For a half-century, they tried everything!

They engineered the *most elaborate* surface water collection system. Every loose trickle was collected, pumped and siphoned into cisterns and tanks from all corners of the fort. They drilled the *deepest* wells-- into bedrock! Nothing. Empty. Dust. They built the *largest* concrete reservoir, a six-million-gallon concrete giant-- to collect rain! It still stands on the hill east of the fort.

They dug the *longest* waterline- - all the way to Creosote! They built *the most secure* 250-thousand-gallon underground storage reservoir. And, after the Creosote line was removed following World War II, and the Korean War suddenly re-flooded the Navy base with over 1,500 recruits, they *brought water across Puget Sound - -.by barge!* -- before *Perrier!!*

This radically affected the watershed. Today, for the first time in several generations, a *new* balance is being established. There is no longer an old sewer system into which surface water can drain. Lowlands may fill. Runoffs may find new paths. Folks are planning for changes in wetlands and drainage. There's no creek yet, just a few sighs.

31. Lytle Creek drains a small valley enclosing Lytle Road, remembered fondly for Billie Lytle, a former tavern owner famous for his vocal parrot that regularly escaped to the tree tops shouting, "Get down from there you son-of-a-bitch!". The creek gets down to Rich Passage west of the road. A lagoon (1870's), now filled, was to the west. Archaeological resources are suggested (T. T. Waterman).

32. Schel-chelb Creek (G. Cool), Edenharter Creek (R. Munro, H. Bucey) or Lynwood Stream, flows south from Bucklin Hill and enters Rich Passage west of Lynwood Center.

This watershed once provided water for *"Schel-chelb"*, a Suquamish winter village. It was a home of our county's namesake, Kitsap (Suquamish, T. T. Waterman, W. Snyder). The stream also provided water for Edenharter Dairy , much of Pleasant Beach, and horticulural pursuits including two large greenhouse operations (Furuta's and Kitayama's). Edenharters' dammed the creek and built a "beautiful pond." Young folk used to fish for and catch minnows there (H. Bucey).

Before the days of garbage dumps and solid waste transfer stations, ravines and gulleys were too often used to dispose of trash. Streams suffered from it!
The island's first garbage dump, or solid waste landfill, began about 1940 near the headwaters of Schel-chelb Creek with resultant leaching of numerous pollutants into the water over the years. To date, over a million-tax-dollars have been spent to clean up contaminats and to monitor their existence in the wells and watershed. They include lead, arsenic, coliform bacteria, vinyl chloride, and freon.

The stream, and early dirt road beside it, used to wind in parallel, like a lazy "S", down the valley toward Rich Passage. Both were made straight by 1930's road building. An "improvement" put the last few hundred feet of stream <u>under ground!</u> Since then, it gurgles to the beach through a large pipe and beach cobble, often *impenetrable by fish!* Another road project, "improved" the road west along the beach to Point White. This "improvement", like one at Manitou Beach, dammed the bay's other streams and salt marsh.

A project is underway to give new life to this estuary. The stream is being re-routed further west down Baker Hill Road and through a new, re-established wetlands-- an enlarged salt marsh and intertidal lagoon-- the *"Schel-chelb Estuary Project"*. The dream is another from wetlands visionary, developer and former property owner, Gale Cool.

The estuary is being created with US Environmental Protection Agency Eagle Harbor Superfund dollars by the Washington State Department of Transportation as a mitigation or exchange for environmental damages created by the State at their Eagle Harbor Ferry Maintenance Yard. The project gained the support of the Suquamish Tribe, Fish & Wildlife agencies, and environmental stewards such as Adopt-A-Stream and Trout Unlimited.

The estuary is now the property of the citizens of Washington State, thanks to Cool, EPA, WSDOT, WSF, USFWS, WSFWS, COBI, and cooperation.

"Dangers of the Road" series, *Stream study No 5*, Dale V. Cox, (c)1996

Digging the estuary revealed a history which at first seemed common to many Puget Sound streams. Beneath a foot of topsoil was a large area covered by a thick layer of clean sand. It was, it appeared, the result of a dramatic event-- an event that had never before been seen here-- an event that changed the appearance of the whole Puget Sound region. Old timers' say, ***"It lowered the sky!"*** We are talking about ***logging!*** Sand, typically, was deposited by stream runoffs following periods of logging and watershed disruption (T. Domico, B. Sherrod). Was that what happened here?

As the excavation continued, geologist learned another story. The upper layer of sand proved to be discolored and showed evidence of having once contained shell, long since dissolved. It was found throughout the dig, just

below the topsoil, but, further down, the sand was full of ancient clam shells of every kind! And as the dig reached inland approaching a 23-foot elevation, the sand changed to pea gravel and larger cobble. Another event caused this! This looked too familiar. This was a former beach! Today's shoreside Schelchelb terrace was also uplifted 23-feet, perhaps, like the one at Restoration Point, in an event over a 1,000-years-ago! (D. Atwater)

Archaeologists made discoveries here, too! In the sand, they found human-built structures-- lengths of split cedar, bundled and layed end-to-end in parallel trenches, 60-feet-apart, across the former wetlands. These simple drains or water collection devices revealed an earlier estuary management project. We wonder who built them?

33. Lindquist Creek (R. Munro) or Shirley Mae's Creek (R. Hansen) is a seasonal stream that originates in a valley east of Sorrel Way just off Baker Hill Road. It flows through several farm ponds enroute to entering Port Orchard through a culvert a few houses south of the Point White dock.

34. Gazzam Creek flows from springs west of Gazzam Lake to the beach near Westwood when there's water. No stream flows regularly from the lake itself. The lake does not seem to be spring fed. It sits in its own inland watershed, the only one not bordering the *Whulj.* Old timers' say the lake went completely dry about 1926! (G. Munro). Warren Gazzam, a west side land developer and one time steamboat operator of Kitsap County Transportation Company's "White Collar Line", introduced black bass into the lake. Their dark silhouette against the dark lake bottom helped them survive the sharp eyes of feeding herons. (R. Gazzam) (WSF# 0339).

Many springs and creeklets flow from the hillsides and bluffs between Crystal Springs and north of Westwood. They account for some of the island's best cutthroat trout fishing as fish gather to feed on the food the streams carry (R. Munro). The wet area also accounts for the rare presence of "chain fern" or*Woodwardia fimbriata,* one of the few places it is found in Puget Sound (see the State Coastal Zone Management Atlas). It is the region's largest fern (they are more common further south), ultimately growing 5-feet tall with chain-patterned spores under its leaves. It requires a moist, west facing cliff for one phase in its two phase reproductive cycle.

35. Fosters' Resort Creek is a creeklet that flows in a steep gully to Fletcher's Bay on the south shore near the bay entrance. "Ma" and "Pa" Foster began a famous resort there in 1912 that boomed through the Prohibition era and during the Depression. Folks courted and sparked at the resort's dance pavillion to a mixture of jazz and Scandinavian folk dances.

The creeklet and gully once were crossed by a state highway bridge to provide a straight drive to the Fletcher Bay steamer, and later, ferry landing

from "The Farm to Market Road", later known as New Brooklyn Road. The timber tressle was re-cycled into a Rolling Bay barn! (A. Wiliams).

Harvey Manning's parents met at Fosters'. His dad once managed the Winslow dock warehouse. Harvey recalls a family memory. *"When I was still a student at the UW, my 1930 Model A was stolen, soon found by the Seattle police, and Dad accompanied me to the station for the paperwork. The detective assigned to the case came out of a room. He and dad exchanged startled looks of recognition, greeted each other by name."*

"On our way out of the station, Dad explained, 'Last time I saw Johnny was in 1929, jumping off the bridge across Fletcher's Bay, the revenuers at both ends of the bridge blasting away at him.' During Prohibition, this Seattle detective had been the island bootlegger!"

36. Fletcher Bay South Stream, Island Center Stream, or Spring Brook flows through Island Center's valley east of Spring Ridge Road splitting into two tributaries south of High School Road. Many man-made, trout-filled ponds fill this large Fletcher Bay watershed.

Fisheries specialists have conducted fish surveys here and led scouts and other community groups in fish habitat enhancement efforts (Wayne Daly), (WSF# 0340 & 0342).

37. Issei Creek flows from the western slopes of the Grand Forest through an historic area of former Japanese residences, farms, gardens, and a building that served as a Buddhist Church and Japanese School. It crosses beneath Miller Road where a culvert reportedly impedes fish from spawning upstream, and enters the head-of-Fletcher Bay at its northeast corner. A pond, built at the stream's mouth for irrigation purposes, was enjoyed by ice skaters in freezing weather. (F. Kitamoto)

Bainbridge Gardens, founded by Mr. Seko and Mr. Harui, with its traditional Japanese gardens, landscaped ponds, greenhouses, nursery and store, was the island's main tourist destination in the 1930's. The *Gardens* required great care, which WW II's uprooting prevented. Discontinued for almost three decades, they have been re-established. Once a pair of Japanese stone lions spouted water from perches beside the creek east of Miller Road. One is on display at the *Gardens* with historic photos.

"Issei", means "first generation" and this is one of several streams associated with early residents of Japanese ancestry (see #16, #17 & #25). There were "first generation" settlers of many ethnicities here as the neighborhood's cemetery indicates. (WSF# 0341)

Junkoh Harui, second generation or nisei *Gardens* owner, recalls, *"Steam, and later electric pumps, drew water from landscaped reservoirs west of Miller Road traversing and irrigating the massive gardens on both sides of the road. The ponds were landscaped for aesthetic purposes. Folks coveted watercress from the stream, which was abundant. There were also crawfish and cutthroat trout. A ditch bypassed the reservoir for the trout. I'd sometimes skip school to fish for those trout!"*

"I don't remember salmon having been there when I was young. They may have been blocked or over fished. But a few years ago, after a heavy autumn downpour, I found a very confused salmon swimming in an irrigation ditch. It had to have found its way there through a mere 3-inch water pipe!"

"A few years ago, a group of neighbors in our watershed and members of the island Land Trust hiked from the stream's mouth to its headwaters in the Grand Forest. It was a <u>wonderful</u> experience! We hope ultimately that a wildlife corridor and trail system will run across the island from here to Murden Cove."

Stream restoration work was done here in 1995.

38. North Fletcher Bay Creek drains the valley south of Battle Point Park. (WSF# 0343).

39. Battle Point Creek once was the closest stream to a year-round Suquamish village near the point. It entered Port Orchard bay north of Battle Point near Skinner Road. Over the years, its watershed has been dramatically affected to the east by the former U. S. Navy Radio Transmitter Station's groundwater management system which re-routed much water northward; and to the south by a retention pond likely created to aid farm irrigation. Today, the once year-round stream is seasonal. A field reconnaissance indicates archaeological resources are highly probable.

40. Fairy Dell Creek, or Venice Creek, flows north from Battle Point Park beside a trail through Fairy Dell Park to Port Orchard bay. The small valley once ended at Puget Sound's longest mosquito fleet pier, remembered for its rustic architecture. The fern-lined valley was once used for church services. In the valley stands the remains of one of central Puget Sound's largest fir trees. It was nicknamed "Bill Taft" for our 27th President, a large, down-to-earth fellow who grazed his family milk cow on the White House Lawn. Topped by windstorms, "Bill Taft" is now our largest stump.

For a period, the Navy used this valley as the outfall for its waste water plant. Today, Battle Point Park's ponds hold much of the watershed's

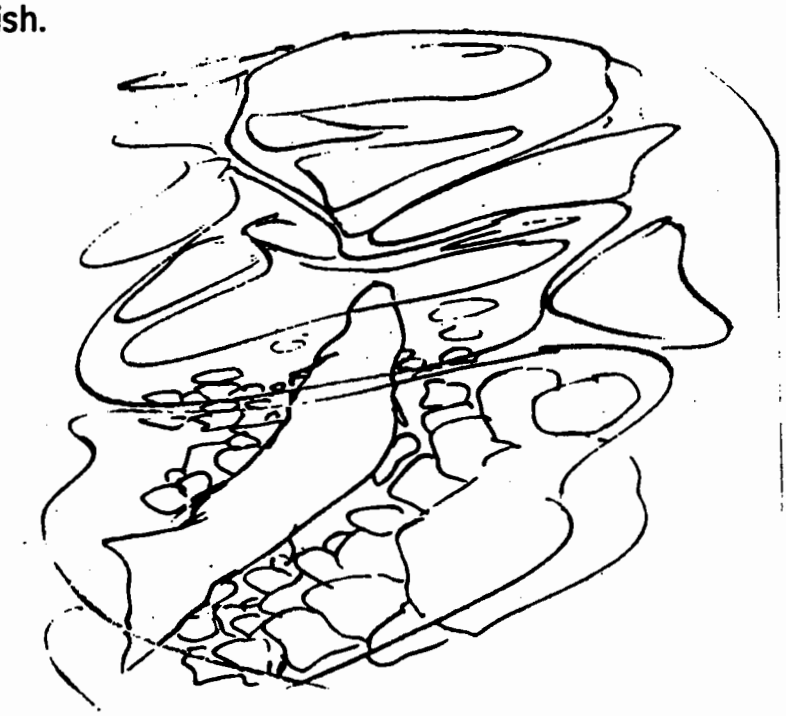
ground water and a healthy population of water fowl and some of the island's largest trout-- few "sleevers" here! (D. Sackett).

41. South Manzanita Stream flows into Big Manzanita Bay on its southern shore, a former Suquamish campsite. Some folks would probably call this "Big Manzanita Creek" except it isn't as big as the creek that flows into Little Manzanita Bay (41). You can't judge or name a creek by the size of its bay. → Anderson Creek - original homestead

42. Manzanita Creek , one the island's largest streams, flows from ~~1890~~ - Decidu accessible wetlands in Manzanita Park north of Day Road West-- a great day hike!-- and from the north central valley across the former pastures of several former farms including
Leo and Minnie Rose Lovegreen's *Bainbridge Dairy* . The farm's landscape was preserved along Hwy. 305 through the stewardship of the Bainbridge Island Land Trust.

It flows on near Lovgreen Road and Peterson Gravel Pit areas and enters Little Manzanita Bay, formerly Little Mosquito Bay, through a long winding inlet favored by waterfowl and kayakers at high tide. Several archaeological sites are in the area. (WSF# 0344 & 0345)

Crawfish were once trapped commercially in this stream and exported to Sweden. Cutthroat trout and salmon filled it in earlier days. Salmon runs (silvers, chums) are growing again in the lower stream as witnessed by some in recent years. Unfortunately, Miller Road now effectively blocks the stream for many fish.



"Dangers of the Road" series, *Stream study No 6*, Dale V. Cox, (c)1996.

43. Huhuhup-piyots Creek or Young Cedars Creek flows into Agate Pass near a once popular Suquamish camp called "young cedars" and "there was a little stream nearby" (Suquamish, T. T. Waterman).

The campsite and stream were also used by visitors to Ol' Man House. The longhouse was across the pass and to the north. The campsite sat in a grove of cedars and the ground around them was thick with fallen cedar needles. It was a soft, dry, and comfortable place to sleep. Suquamish elders remember that cedar branches shed rainwater outward (L. Webster).

Stream study No 7, Dale V. Cox, (c)1996

JOIN A *STREAM TEAM!*

Join with your watershed neighbors in fun and rewarding Stream Team projects such as measuring seasonal water temperatures and volumes, mapping, modest non-obtrusive stream name signing, enhancing habitat, building fish ladders at culverts and stream blockages, fish planting, art, photography, poetry, music and story collecting that keeps the stream dream flowing.

Looking for stream team leaders? Have an idea for a project? Call the City's Watershed Coordinator, Terry Ash, or Watershed Technician, Steve Morse, at the Planning Office, 842-2552; the local chapter of *Trout Unlimited* care of Scott Strickland, 842-2524; *Water Watchers* at Kitsap PUD No. 1 in Poulsbo, (360) 779-7656; or *Adopt-a-Stream Foundation,* Everett, (206) 388-3487. Your local school or Laurie Usher, *Enviro-Ed,* 842-2229, can put you in contact with projects.

There are fisheries specialists who can help develop a watershed or stream conservation plan: Wayne Daly, Conrad Mahnken, Karl Shearer, Suquamish Tribal Fisheries, State Fisheries and others they can suggest. Local stream owners can get together with neighbors to place stream corridors in perpetual conservation easements-- a great legacy! And there may be tax benefits! *The Bainbridge Island Land Trust* has experts who can help.

There are great books. Local libraries share these:

1. *BAINBRIDGE ISLAND WATERSHEDS* was published in 1995 by the Puget Sound Cooperative River Basin Team, PO Box 47600, Olympia, WA 98504;
2. Steve Yate's *ADOPTING A STREAM: A NORTHWEST HANDBOOK,* published by Adopt-A-Stream Foundation in 1988 is distributed by U of W Press; and
3. Kitsap County Commissioner, Charolette Garrido's *A STREAMWATCHER'S GUIDE* is distributed by Kitsap PUD No.1 in Poulsbo.

APPENDIX I:

HISTORIC BRIDGES of BAINBRIDGE ISLAND:
WATERWAYS & ROADWAYS

All have been replaced with culverts, except the Agate Pass Bridge and the soon to be completed Schel-chelb Creek bridge on Point White Drive. Bridges are listed clockwise around the island from Port Madison.

1. Coho Creek on Hidden Cove Road
2.* Heron Creek on Lafayette Avenue, west of cemetery
3.* Rolling Bay Creek on Sunrise Drive, near Robert's Road
4.* Manitou Beach lagoon along Manitou Beach (photo)
5. Doe-qud-sake-qub or Grisdale Creek on Wardwell Road
6. Doe-qud-sake-qub Creek on Madison Avenue
7.* Winslow Ravine Creek on Winslow Way
8. Log foot bridge across Winslow Ravine Creek near Village
   (accessed from 1900 Percy Henderson home)
9. Head-of-the-Bay Creek on Eagle Harbor Drive
10. Whiskey Creek on Eagle Harbor Drive
11. Creosote Creek between old plant and former park and pavillion
12.* Halls Hill tressel up to Hall's Hill houses
13. Blakely Falls Creek on Seaborn Road
14. Mac's Dam Creek at head of Blakely Harbor on early road around west end of mill pond
   (replaced, further west, by today's Country Club Road)
15. Tani Creek in Japanese Village
16. Tani Creek on former road around west end of mill pond
   (replaced further west by today's Country Club Road)
17. Toe Jam Creek on Toe Jam Hill Road near Country Club Road
18. Toe Jam Creek on Toe Jam Hill Road further up the hill
   (rebuilt from lumber salvaged from the old tram tower).
19. Schel-chelb lagoon on Point White Drive
20. Fosters' Resort Creek near Fletcher Bay Landing
   on west New Brooklyn Road (former state highway bridge).
21. Issei Creek on Miller Road
22. Manzanita Creek on Miller Road
23. Manzanita Creek on Peterson Hill Road
24. Manzanita Creek on Lovgreen Road
25.* Agate Pass on Highway 305

* Photos available from Bainbridge Island Historical Museum