



Admiralty Island from Taku Inlet

Snettisham 2007 – 11: Gray Water August 24-25

Summer was winding down with one last project to finish at the homestead--running water and completion of the gray water treatment system. I'd begun work on it the week before, building a support for the sink and plumbing it, but I wanted to finish the whole system before September when more guests arrived. In town I purchased a faucet and supplies to bring drinking water from my filter system into the lodge, then headed down to the boat Friday afternoon. My first task was to bail the *Ronquil*, which has suffered from heavier rains as fall approaches. For the first time all season I had so little to carry that I hardly needed a cart to get my load to the boat.

As I sipped my ceremonial beer on the way out of the harbor (around 5:15), Nigel again impressed me with his comfort on the boat, standing on the bench in the back and taking in the harbor air (until I got up to speed). Low billowing clouds to the west crept around the mountains, illuminated by brilliant shafts of sunshine in stunning displays near Taku Inlet. Unfortunately, we fought against a southern breeze that kicked up just enough of a swell to slow us down and make the trip uncomfortable. A bull sea lion dove in the kelp at Taku Harbor, but conditions were not good for spotting whales. Two and a half long hours later we arrived and I anchored the boat in the river.



Nigel Boat Dog leaving Douglas Harbor

Daylight was already waning when I started to work, so I used a flashlight to help out. First I adjusted the hose connection inside the olive barrel at the outlet end (which was a



Grand Island

little loose), adding a few shims to tighten it up and slapping on some extra plumber's putty. I also wove a zip tie around the opening of one of the filter bags and secured it to the outlet pipe, snug behind one of the hose clamps (see photo below). Then I opened the ABS pipe glue and glued together all the fittings between the sink and the olive barrel, putting the barrel in place outside. I also secured a filter bag to the end of the pipe entering the barrel, making a few wraps with duct tape first

so the zip tie wouldn't slip off. Finally I started working on the faucet. I hooked up the sprayer and the inlet hose, but didn't have the right fitting to attach it to the filters outside. By then it was pretty well dark so I left the rest until the next day.

Nigel and I slept well and didn't even wake up until 7:00 am. I quickly got up, made the bed, locked the cabin and headed back to the lodge. Hoping to drain the rest of the water out of the boat, I was disappointed to find that, although the tide was low, I'd anchored the boat far enough out that it was still floating. Resigning myself to more bailing, I ate a hasty breakfast and set to work digging. The drain field for the water system is a simple ten foot long eight inch wide "gravel-less" pipe (black corrugated pipe with holes in it); in order to work without gravel, the pipe is wrapped in felt which I'd purchased separately. Most drain fields require whole leaching areas filled with gravel (the original plan for my system called for an 6'x8' area with a foot or more of gravel—not something I relished constructing). Thankfully, the DEC pre-approved gray water system plan I used requires only the gravel-less pipe buried 12" below the surface. So with clippers, a pick, a hoe and shovel I started out digging the trench along the hillside next to the



The outlet system to be installed in the olive barrel (through-hull fitting attached to a pipe with holes drilled into it and covered with a filter bag)

lodge and below the second outhouse.

The digging had its usual root and rock issues, but I was used to that; two hours later I had a reasonable trench dug and after some extra scraping managed to fit the pipe inside. Nigel loved laying down in the piles of freshly dug dirt I made and I felt bad about bothering him every time he found a new spot as I continued to move dirt around. Pulling the pipe out again, I began to devise a way to secure the felt around the outside of it. I ended up using three zip ties strung together and threaded through both ends of the felt at 18" intervals all down the pipe. It worked great. I cinched up the end and the pipe went back in the trench. Then I cut a five foot length of poly pipe to connect the olive barrel to the trench and there began a series of frustrations...

The through-hull fitting I'd used as the outlet in the olive barrel was set up for a 1 1/4" hose, but apparently it was for some other kind of 1 1/4" hose and it was just a little too narrow to fit securely. Hoping it wouldn't leak, I secured the poly pipe with a hose clamp and crossed my fingers. It was fairly snug, but I think I could have pulled it out if I tried.

Unfortunately, the poly pipe had been coiled so long that it curved severely on its short way to the drain pipe, making it difficult to place without putting a lot of pressure on the outlet at the olive barrel. Plus, there wasn't much of an elevation difference between the outlet and the bottom of the drain pipe and the curve complicated this. Because there is no pressure in the system, the water won't get pushed through low places in the pipe. After much scraping and frowning, I finally gave up on the existing setup and pulled the gravel-less pipe out of the trench to dig it deeper, making sure to keep a gentle slope toward the far end. After replacing the drain pipe and making some further readjustment on the poly



About to wrap felt around the drain pipe

pipe, I was fairly confident of a steady drop.

But it really needed a test, which required a lot of water (the outlet on the olive barrel is several inches off the bottom). No problem, right? I have unlimited water coursing through my drinking water system! I grabbed another short length of pipe and loosely connected the outlet on the water filters to the olive barrel and went about cleaning the lodge while it filled. Inside I ripped up cardboard for making fires (and getting rid of old boxes), brought in firewood, organized, and cleaned. When I checked back on the olive barrel later, excited to see if the system worked, I found that the water flow had slowed to a trickle and no amount of finagling would increase it.

I figured I'd better hike to the creek to take a look around, something I'd neglected to do the last few trips. I found the olive barrel in place but the water level significantly lower despite the rains of late summer. Although early summer has sunnier weather, the water is evidently higher at that time of year due to melting snow on the mountain top. The rains of late summer don't make up for the diminished snow patches. I rotated the barrel enough to allow what I hoped was some water through the system and figured I'd dig it out or dam the creek another time. Back at the lodge I found a trickle coming out of the pipe and left it again to work inside, not hopeful that it would reach the outlet before I left.

Inside I went about continuing my mouse-proofing efforts. On my very first trip down this spring my mother and I had secured all the soffits with hardware cloth. There didn't appear to be any other major avenues for entrance,

yet mice continued to enter all summer. As fall approached, the mouse activity increased and I decided I'd better get proactive again or risk another winter of infestation. A few weeks ago I'd plugged a gap next to the ridge beam and while I was on the ladder discovered soffits at the very end of the building over the top plates and hidden from



Drain pipe in the trench

view (while on the floor) behind the ceiling rafters. Though I couldn't staple the hardware cloth in these spaces due to the lack of room, I jammed some into each corner in the hopes that that would discourage entrance. We'll see.

When I was finished I went back outside to find that the water had just reached the outlet pipe. With a flashlight I could see that a small trickle of water was running all the way down to the end of the drain pipe—success! I put the lid on the olive barrel, packed up, and kayaked out to the *Ronquil* while Nigel waited on shore. As I bailed the boat, I started to think about the felt-covered drain pipe and convinced myself that I really should at least partially bury it before I left for two weeks. So when I brought the boat to shore I got out and walked it away from the beach as far as my hip waders would allow, then dropped the anchor on a short line to keep it from going dry as the tide dropped. Then I raced back up, put the kayak under the porch, grabbed a hoe and shovel, and quickly put a few inches of dirt on the pipe before calling it good.



The whole system (sink outlet to olive barrel to trench)

Back at the shore, my plan had worked a little better than I intended. The boat had drifted out about five feet farther than I could walk with my hip waders and I hadn't bothered to tie a line to shore for dragging it back in. I stood in uncertainty for a few minutes, debating between dragging the kayak back down to the water (and up again before I left), or just getting wet. I chose the latter, sucking in my breath as the icy water filled my waders. Once off shore I changed pants and climbed into my warm and cozy mustang suit for the ride to town.

The water was calm through Gilbert Bay and I saw another cetacean that I hadn't seen in

Snettisham before—a single harbor porpoise passed in front as we neared Sentinel Point. Harbor porpoise are very abundant around Juneau (especially north) but I've rarely seen them in my section of Stephen's Passage and never in the Port. They are shy and elusive, are rumored to be monogamous (!) and I have a bit of a soft spot for them.

The swells in Stephen's Passage came from the south, mercifully putting them on our stern for the ride home. Nevertheless, it was a bumpier ride than Nigel and I would have liked. Thankfully, the water calmed north of Grand Island while a steady rain soaked us. Passing Pt. Arden I saw the *Alaskan* drifting along the shore and swung by to say hello to my parents, out coho fishing for the day. Then Nigel and I sped for home and a hot shower. I had at last completed every major project for the summer and could finally relax with a guilt-free, totally satisfied mind! It was wonderful. (Okay, there's a little more adjustment and some shoveling yet to do, but not much!)



My parents and Rosie on the *Alaskan*