

Petersburg 2014



Scott and Rachel
Kandoll build
Frederick Point
dream home

Sprouts
program
teaches
gardening
to youngsters



Custom home with maximum water view

By **ORIN PIERSON**
Petersburg Pilot

This year Scott and Rachel Kandoll and their three children moved into their dream home—a custom built 3,000 square foot, four bedroom, abode with a waterfront view.

They bought the Littleton’s lot on Frederick Point, those familiar with the area might know it as that cleared lot with the old rock pad and picnic table and amazingly beautiful view of Frederick Sound.

The Kandolls started with the search for building plans. Sorting through the endless house plans available online can be a challenge, but they knew what their limitations were and what they wanted.

Because of the pre-existing rock pad they knew their dimen-

sional limits would be around 48-feet deep by 86-feet long, allowing for the easement and leaving 50 feet to the mean high-tide line as code required.

“We looked and looked. We knew what we wanted...a kitchen and family room attached,” said Rachel Kandoll. “Once we found the plans, we had to modify them a bit.”

One modification they made was lengthening the kitchen to ensure a good view of the sound.

“You spend so much time in the kitchen; you want to be able to see out,” said Rachel.

Scott redesigned the upstairs floor plan to make sure the master bedroom had a great water view as well.

“Most plans have the master bedroom near the back of the house, because they think you



ORIN PIERSON / Petersburg Pilot

This sitting room near the front door is a favorite place to enjoy coffee.



ORIN PIERSON / Petersburg Pilot

The kids spend lots of time in the family room attached to the open kitchen.

don’t want your bedroom near the street,” explained Rachel. The Kandolls, however, wanted their bedroom near the front of house.” We just really wanted to maximize the view.”

Their home features a sitting room with huge windows, “a place to drink your coffee,” said Rachel.

The dining room, kitchen and family room are one big open space, with natural light bouncing off Frederick sound through big windows filling the room with a glow, even without the lights on.

The kitchen features a big island with storage underneath, a cooktop on top, and bar seating all around. It’s topped, like the counters, with soapstone slab.

Rachel chose soapstone for its functionality.

“You can set a hot pot anywhere; they work great as a chilling block, and they’re nice for rolling out doughs and pie crust. They clean up really easily,” she said. “Our other house had hard to clean tile countertops.”

Built-ins for oven and microwave keep countertops free.

The enameled cast-iron apron-front sinks from Kohler they choose serve Rachel and her kids especially well.

“For a short person it’s nice. It’s a little lower and right at the edge of the counter,” said Rachel. “The kids can already help me with the dishes.”

There’s a fireplace in the

family room, located right off the kitchen.


“I’m looking forward to winter with the fire going...you can be cooking and not be in a totally different area from where everyone is hanging out,” she said.

All of the homes entries, bathrooms and laundry room have heated tile: slate for the front and side entries and marble for the rest.

The Kandolls did all the tiling themselves, which allowed them to put in the special touch of the heated floors.

“It’s an electric pad that we laid under before we put down tiles. It was time consuming, but worth it for sure,” said Rachel. “They’re cozy. It’s nice

Continued on page 3




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Kandoll

Continued from page 2
designing a house; you can put in little things like that. It just keeps everything so nice and dry, especially up here where it’s so wet.”
Since the project was new construction and not a remodel, that made the tile project easier in some ways. Working without the flooring in and everything still being square sure helped, said Rachel.

The house gets it’s heat almost entirely from the energy-efficient heated floor pads, with one heat pump in the main room downstairs, and small wall heaters in the bedrooms for cold snaps, plus the family room fireplace.

“Our heat bill hasn’t been much at all,” said Rachel.

Throughout the house the floors are Brazilian Teak, “because we liked the color,” which nicely complements the mossy and smoky tones of the wall paint. “Everything blended really well together,” Rachel said.

“The boys green room is the only wild one,” she said.

Her two little boys share a room with a football field painted across the walls. Before the yard markings were up one of the workers at the house remarked, “Can I ask what are those lines?” said Rachel. “We like it. They’re into football.”

Out the boys windows stretches a vast evergreen forest, while their daughter’s elegantly decorated room looks out over Frederick Sound.



ORIN PIERSON / Petersburg Pilot

Soapstone slab countertops combined with built-in appliances make great kitchen workspaces.

Both kids rooms have large walk-in closets.
The master bath features a very big tiled shower next to a claw foot tub. Dark wood cabinets use vertical storage to reduce the footprint on the heated marble floor. Tall windows wash the room in natural light.

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ORIN PIERSON / Petersburg Pilot

All of the home’s entries feature heated tile. The front door and the side entry, pictured above, feature slate tile. The heated tile floors and the one heat pump above this door provide nearly all the home’s heat.



ORIN PIERSON / Petersburg Pilot

The mud room, off the garage, features a heated marble tile floor. All tile work was done by Scott and Rachel Kandoll.



ORIN PIERSON / Petersburg Pilot

This beautiful new 3,000 sq. ft., four bedroom home features wildlife, a customized floorplan, efficient heating, and great views of Frederick Sound.

Kandoll

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The water view from the master bedroom is unbeatable.

“Scott said we’re never putting up curtains,” said Rachel.

And why bother? They have no close neighbors.

Being in a slightly remote location also allows the kids a special nature experience out at Frederick Point. All winter, the local pod of humpbacks could be heard in the sound. In recent weeks they’ve spotted black bears and a wolf from the house.

“The kids are in their own world,” said Rachel. Motioning down the beach, “Over there a little piece of land juts out and at low tide the kids cross the creek and spend time on their little island: many hours of fun on this beach.”

Throughout the house, smaller fixtures designed to make wise use of space along with high nine-foot ceilings and the open floor plan make the relatively small house feel expansive.

“When we first laid the footings we thought, ‘Oh! That doesn’t look very big,’ but it feels so big on the inside,” said Rachel.

Groundwork began last July with Reid Brothers putting significant volumes of rock fill over the preexisting rock pad with concrete footings for the foundation.

“I really like the rock foundation. Our previous house was on pilings and when a big truck went by you could feel everything,” said Rachel.

The construction, done by Jessie West and his crew at Rainforest Contracting, went pretty smoothly, with the building cost coming in right around the bid, according to Rachel.

There were some budget strains from putting in a water

tank and septic system, and underestimating how much rock work needed to be done, but they moved in on time, at the end of April, which coincided nicely with the sale of their previous home.

Darby Mattingly did the electrical work, and Stan

Eilenberger did the drywall.

Scott and Rachel did all the tile work themselves in addition to the painting projects.

“We used a paint sprayer for the primer and ceilings, and oh boy! That was not a pleasant week,” said Rachel.

Scott did the plumbing.

“In our other house we did a lot of repairs. We bought it as-is and it hadn’t been winterized. Scott learned plumbing on that house. He read a lot of books and these days you can get every question answered online,” said Rachel.

When asked if they’d recommend building a home versus buying one, despite the budget

risks and all the waiting for wrong materials from down south and the endless days of hard work Rachel definitively said, “When you build you get what you want. Even remodeling is expensive.”

“We definitely won’t be selling this one,” she said.

They have arrived in their permanent home.



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Food for thought:

School garden uses crops to teach science, life skills

By **MARY KOPPES**
Petersburg Pilot

Just behind Rae C. Stedman Elementary School a large garden teeming with life offers students and community members a new classroom for learning.

The School + Community Garden is comprised of a greenhouse, rows of raised beds that convert into hoop houses, a tool shed and planters fashioned from tires, crab pots and gutters now used to grow perennials, pole beans and strawberries.

The children's touches abound in the garden from hand-painted signs to the dinosaur figurines poured into round concrete tiles. The up-cycled tires take on a new life in vibrant tones of red, green and blue.

The garden operates with the

help of local volunteers, visiting educators, students and teachers. It's a project in constant evolution with new elements added each year as funding and volunteer labor allow.

"The garden's been here for several years. It's been a six-year process," Mindy Anderson, the garden's organizer said.

A 5-year \$65,000 grant from the U.S. Forest Service provided the seed money to start the garden. Volunteers helped build the raised beds which have become home for a variety of plants including kale, summer squash, raspberries, onions, cabbage, broccoli, herbs and salad greens. Tubing arches over the beds allowing them to be easily covered with plastic, which can extend the growing season into the fall and winter

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MARY KOPPES / Petersburg Pilot

Tubing arches over most of the raised beds in the school garden. As chilly weather arrives, gardeners can drape plastic sheeting over the beds to retain heat and keep frost and snow off of the plants. This extends the length of the growing season at the garden, which means more mixed green salads for the schools.



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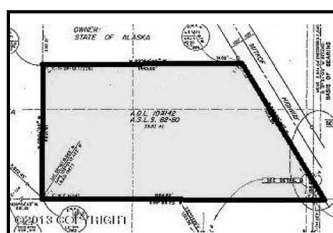
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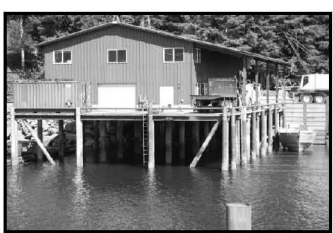
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School Garden

Continued from page 5
by trapping the heat and protecting plants from frost and snow.

Also providing a protected environment for plants and extra heat in the summer for warm-weather crops, is a 16-foot by 16-foot greenhouse designed and built by the Petersburg High School shop class. It can accommodate a full class of students and their instructors and functions as an outdoor classroom of sorts.

The greenhouse is bright and warm. Growing in the custom-built beds were red and yellow tomatoes, cucumbers and tomatillos—the garden’s most exotic crop.

“So far most of the plants in here were grown from seed,” Anderson explained. “The tomatillos were a huge experiment this year. It’s the first time we’ve had tomatillos ever.”

Summer squash with big yellow squash blossoms also grow in hanging baskets in the greenhouse, making good use of the available space.

A large rolling work table fits squarely in the center of the greenhouse and can be rolled out the wide door into the garden. This is especially useful in the spring when planting begins. Seedlings begun indoors are transplanted into the garden’s raised bed.

As Anderson watered the plants she explained, “Not everything in this garden is a success. There’s lots of dry things. There’s lots of weeds. There’s lots of things that don’t quite grow right, but it’s all a learning experience.”

It’s a learning experience for the adults and kids alike, and for the kids it’s often a sensory one.

“Anything that’s inside this garden you can put in your mouth and you’re not going to get hurt. So the kids are encouraged to taste, feel, touch, explore everything in here and try it,” Anderson said. “They literally pull things out of the ground, wipe it on their pants and put it in their mouth.”

The garden is designed with this in mind. Anderson said everything that’s planted is edible and they strive to keep the garden organic.

The garden has also provided opportunities for science education. Funds from the Healthy Living Grant, awarded by the state, have been used to bring in specialty instructors.

“Last spring we brought up Lisa Taylor from Seattle Tilth and she offered a workshop with educators,” said Ginger Evens, the grant’s coordinator.

Taylor, Seattle Tilth’s education program manager, educated staff on different ways to incorporate the garden into their classroom curriculum.

For instance, Evens said, “Kids can measure the temperature of the soils, temperature in the greenhouse itself and then graph it to see over the course of a month what it was like...and whether we had a sunny spring



MARY KOPPES / Petersburg Pilot

Mindy Anderson, garden organizer, waters plants inside the greenhouse. Summer squash occupy the hanging baskets and cucumbers and tomatillos are below in beds. “The tomatillos were a huge experiment this year. It’s the first time we’ve had tomatillos ever,” Anderson said.

or summer versus wet to determine how are things growing.”

Evens said funds from the Healthy Living Grant are being used to increase awareness of and interest in the garden and bringing in specialists is one way to do so.

In addition to helping pay for travel expenses to bring educators to Petersburg, the grant also helps bring the garden’s produce into the schools.

Evens said she’s working with the school’s food service director Carlee Wells to serve garden-grown veggies in the lunchroom.

“Last Friday the salad that was served was all from the community garden,” Evens said.

Anderson said the produce was also used for this year’s school summer lunch program.

Evens and Anderson both said the long-term sustainability of the garden and related projects is a priority. They are working toward that by buying

necessary supplies with current grant funds and establishing programs and curriculum that don’t rely on outside funding.

Still Anderson said she continues to apply for grants as there are many available for programs like the garden’s. In fact, there’s some evidence to suggest that the state is moving toward investing more in programs that promote healthy living.

For the fiscal year 2014 the Petersburg School District was awarded more than \$192,000 in grants relating to local food initiatives and healthy living and eating.

The largest source of funding for Petersburg schools came from the Obesity Prevention and

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MARY KOPPES / Petersburg Pilot

Gutters and crab pots are among the many items creatively repurposed in the school garden. Here strawberry plants grow out of gutters lashed to the fence and crab pots await soil and seedlings.

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Veggies

Continued from page 10

Control K-12 Grant Program—called the “Healthy Living Grant” by the district—which is dispersed over four years. The grant is awarded through the state Department of Health and Human Services.

In addition to helping get the garden’s produce into school lunches and funding travel for speciality educators to visit from down south, the grant funds are also being used to update physical education and health curriculum, develop staff exercise programs and purchase materials for programs like Girls on the Run and Play Everyday, which support physical activity in kids.

The Obesity Prevention, or Healthy Living, grant is quite new—the statewide program began last year. But it and similar programs in Alaska are already garnering national attention because of the gen-



MARY KOPPES / Petersburg Pilot

Brightly colored tires are used as planters to form a perennial garden outside the garden’s fence. Plans are in the works for a wild Alaskan garden on the other side of the garden property. “That side of the fence will be all things you can find on the side of the road or out when you’re hiking,” said Mindy Anderson, garden organizer.

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PREVENTION TIPS

Water Damage:

Purchasing a water detecting device for areas at a higher risk of water damage, like a laundry room, can alert you to a water leak quickly.

Replacing hoses on your refrigerator, washing machine, and dishwasher with wire mesh reinforced hoses can prolong the life of those hoses and aid in preventing water damage to your home.

Installing a water shut off valve for your washing machine can decrease the risk of a leak when the washing machine is not in use.

Theft:

Installing security devices like motion sensor lights can deter thieves.

Let your neighbors know when you are out of town so they can alert you to any unusual activity.

Lock common entry points such as garages and screen or sliding glass doors.

Vandalism:

Do not put travel plans on social media sites.

Ask someone to be a caretaker of your property while you are gone- mow the lawn, taking your garbage can to the curb, etc. Vandals are less likely to disturb a home they believe to be occupied.

Keep trees and shrubbery trimmed to increase visibility and decrease hiding spots for vandals.

Wind:

Cut down trees on your property that may have a compromised root system, have rotted, or have other issues that put them at a greater risk of falling.

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erosity of their funds.

The New York Times recently ran an article on state-sponsored local food programs in Alaska. “In a state with only about 131,000 public school students, \$3 million a year has been committed,” according to the article, adding that the school lunch program in particular is “one of the most generous in the nation.”

Those funds could help the garden continue to grow into the future.

Looking forward, Anderson said she hopes the garden will continue growing and integrating with the schools.

“I think the plan is just to bring the classrooms out here more if we can...And just grow more, learn more, learn as we go,” she said.

Volunteers have played an instrumental role in getting the garden to where it’s at today, and they’ll continue to do so in the future.

“We’re always looking for people who want to help. People who want to go into the classroom in the spring and plant from seed and help...lead some planting session and things like that,” Anderson said.

Those who’d like to learn more about volunteering at the garden can contact Mindy Anderson at 518-0571 or call the elementary school.



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Sprouts program teaches gardening to youngsters

By **MARY KOPPES**
Petersburg Pilot

The School + Community Garden that thrives behind the Rae C. Stedman Elementary School does so this year thanks in part to the first-ever Sprouts program.

Five high-energy youngsters participated in this summer's 10-week program, which was open to third through sixth graders and led by Christina Sargent. Garden organizer Mindy Anderson said she hopes to double the number of participants in next summer's program.

"Mostly the idea about the program was to get kids interested and excited about gardening," Sargent said. "They were a great bunch of kids and a lot of fun."

The Sprouts met three times a week to do the daily chores of tending a garden like planting, watering and weeding, and they also did arts and crafts projects.

Sprout participant Evelyn Anderson said harvesting was her favorite thing to do.

"Evelyn comes from a long line of gardeners," fellow participant Kara Newman said.

Evelyn Anderson was also a confident chef, quick to get out the paring knife and slice up cucumbers and tomatillos for the group to sample.

Newman said she felt good about the group's efforts in the garden: "We were working on harvesting and planting, and we must have took really good care of the plants because every week they would improve bigger and bigger and bigger."

The program also brought the kids out of the dirt and into the community.

"The Sprouts would pick produce from out here, the greens,

and then take it up to the Lutheran Church where they (the summer lunch program) met this year," Anderson said.

They even prepared a welcome lunch for new Superintendent Lisa Stroh. Preparing for that was Sprout participant Sarissa Miller's favorite memory.

"My favorite highlight over the whole summer was having lunch with the superintendent...we got some poundcake then we picked all kinds of berries from over here and mixed them with whipped cream...It was really good," Miller said. "And then we made an awesome salad."

The Sprouts also sold salad greens and baked goods at the summer market, which gave them a chance to practice math skills and get business experience. Sprouts also got some food preparation experience as they helped make baked goods, kale chips and mint tea for themselves and market goers.

Selling produce at The Market is one way the garden's organizers are working toward making the garden more sustainable, Anderson said.

Community members can also sponsor a garden bed for the first time this year, which is another effort at long-term sustainability for the garden. A \$100 sponsorship fee gets your name on a sign, hand-painted by the kids, and some of the garden's bountiful harvest.

The Sprouts delivered some of this summer's vegetables to local bed sponsors.

Those who'd like to learn more about sponsoring a garden bed or enrolling in the Sprouts program can contact Mindy Anderson at 518-0571.



MARY KOPPES / Petersburg Pilot

(Clockwise from left) Sarissa Miller, Christina Sargent, Evelyn Anderson and Kara Newman show off recently harvested onions and carrots under the magic climbing bean teepee. The teepee was formed with three recycled crab pots fashioned into planters as the base. Crab pots, tires and gutters have all been creatively refashioned into planters for the garden.

Fall gardening checklist:

The weeks between harvest and the first hard freeze are crucial for preparing your garden for the next growing season. The following checklist helps ensure a successful garden.

- **Remove remaining crops from garden beds.** Enrich your compost with this material and help prevent disease and other pests from wintering in the beds.
- **Remove poles, trellises and portable frames** to avoid winter damage and weathering and use a stake to mark the locations of perennials for spring.
- **Apply mulch.** Using straw or hay as an insulating layer around perennials helps conserve moisture, reduces erosion, prevents some temperature fluctuations and improved soil structure. Remove the mulch in the spring.
- **Turn heavy soil, and add organic materials** like seaweed to improve draining and amend nutrients into the soil for next spring.
- **Dig compost into raised or deep beds** to improve drainage, improve soil structure and add nutrients. Material should be well composted to avoid adding weed seeds and potential pests.
- **Use fences or windbreaks** like burlap sacks to protect woody perennials from winter damage.
- **Build a compost pile.** Plant debris and select household scraps can be piled in an open site with good drainage. Turn the pile periodically. Add this material to next year's beds to add nutrients and improve the physical structure of your soil.
- **Empty buckets, watering cans and rain barrels** to help prevent damage from freezing.
- **Drain and properly store hoses** and sprinklers.
- **Clean and store clay pots** in a dry location.

- **Expand your garden for next year** by constructing new raised beds and improving the soil.
- **Plant bulbs** in soil with good drainage and add mulch to prevent extremes of temperature.
- **Winterize perennials** by watering, pruning, mulching, and wrapping bark trees.
- **Prune berries.** Remove any damaged, dead or diseased parts of raspberry, currant, rose, gooseberry or other berry bushes.
- **Cover shrubs** or crops still in the ground to prevent frost damage before the plants have had time to prepare for dormancy. Frost covers could include newspapers, plastic sheeting, paper bags, bed sheets, or panes of glass.
- **Sharpen and repair hand tools.** Hoes call for an angle of 30°. Other sharp tools should be honed to around 25°. Clean off rust and dirt and apply a protective coat of oil prior to winter storing.
- **Clean the flats** to be used for next year's starters, with a mixture of one part bleach to 9 parts water.
- **Collect seeds** and store in a cool dry location.
- **Manage greenhouse** activities according to the weather. Colder temperatures and shorter days slow plant activity diminishing the need for water and nutrients. Remove the plants from the greenhouse once harvest is over.
- **Organize your inventory of canned crops** and use them as soon as possible to maintain quality.
- **Collect and dry your herbs** to enhance winter meals.
- **Jams, Jellies,** and canned produce make thoughtful Christmas gifts.

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HOMEOWNERS' DILEMMA



"We can't afford to burn oil."
"To install electric heat we might have to upgrade our electrical service!"
"That might cost a small fortune!"
"Our local electrical utility is nearly maxed out, and electrical rates are bound to go up more!"
"What can we do?"



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F.A.Q.'s

• **I have an oil-fired boiler and baseboard units - can you convert that to a heat pump?**

Short answer: no, because baseboards are sized to operate at a higher boiler water temperature than a heat pump will produce, but if you have in-floor hydronic heat, a heat pump system is very efficient.

• **I have an oil-fired furnace with attached duct work. Can this be converted to heat pump?**

Yes, the heat pump can discharge 100+ degree air through your existing ductwork - with the added benefit that you will also have air conditioning and dehumidification capabilities.

• **I'm not sure I can afford to replace my entire heating system - do I have any options?**

Sure, you can have a moderately sized simple, through-the-wall heat pump unit installed for your primary heat source, and supplement that during extreme weather with your existing system, such as a Toyo oil-fired heater, a Rinnai wall-mount propane heater, a wood-fired heater, or even 110-volt plug-in radiant heaters. You can take advantage of low-cost heat pump operation during a majority of conditions.

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Insulation project provides fast pay-back; parishioners worship in warmth

By MARY KOPPES
Petersburg Pilot

When Father Thomas Weise returned to his apartment at Saint Catherine of Siena Catholic Church after a trip to Wrangell last winter, he was greeted by a chilly sight.

"I came home from Wrangell and the water in my tub had frozen," Weise said. "I'm like 'why is my tub frozen?'"

To find out Weise took a look underneath the building. That's when he first saw the bare joists supporting the floor and decided it was time to improve the building's insulation, starting from the bottom up.

Instead of hiring a contractor, Weise decided to save money by putting his knowledge of cold-climate construction to the test as the project foreman.

"I learned it by taking the



ORIN PIERSON/ Petersburg Pilot

Volunteers have been working on this insulation project since April. Ray Ochoa takes a momentary break from installing a layer of insulation to wave to the camera. By hand cutting the insulation and making odd size pieces fit, the crew wastes almost none of their materials.



ORIN PIERSON/ Petersburg Pilot

Father Thomas Weise points to this outdoor light to illustrate just how much insulation is being added to the building. The insulation and new siding will be flush with the white base of the light.

cold weather climate construction class at UAS (University of Alaska Southeast) when I lived in Juneau," he said.

He had also observed contractors doing a similar project in 2010 at the Catholic church in Wrangell where he's also the pastor.

This April, with volunteers from his congregation as well as his crew, Weise began the first phase of the project installing insulation 5 1/2 inches thick between the joists across the 5000-square-foot floor. They saw the payback almost instantly.

"We spend \$3,300 on insulation...and we saved \$3,000 on the heating bill that winter, a three-month payback," he said.

Proving a good investment, Weise and his volunteer crew moved on to the insulating the exterior walls of the church.

Installation of 6 inches of insulation is in progress at the church right now, which will make the building more insulated than what is typical for the region.

"Six inches is more like insulated for Fairbanks, four inches is standard for Southeast Alaska," he said.

The insulation is overlaid on top of the existing exterior walls of the building making the project less time consuming than it would be if demolition was required.

"What's really nice about this project is you're not actually taking your building apart,"

Weise said.

In fact, starting with empty walls proved advantageous for the project. According to Weise, if insulation installed outside the wall is thicker than what's inside the wall, water can condense inside the wall, rusting out metal frames or leading to other problems.

Weise and all-star volunteer Ray Ochoa manually install the pieces of insulation layer by layer, starting with a 2-inch thick layer and filling in the nonlinear portions of the building--like the triangle-shaped space under the slope of the roof--with scraps of insulation from larger cut pieces.

"Putting on the insulation is like doing a giant jigsaw puzzle where you get to cut out the pieces," Weise said. "It's really fun; you don't have to throw any pieces away."

The crew has also extended the insulation beyond the existing exposed walls by layering up insulation as far down as 8-inches underground. Weise said he hopes this will keep the crawl space around 40 degrees year round, causing less stress on the building.

Like with many construction projects, one project begets another. The insulation project has added about 7 inches of depth to the exterior of the building which has resulted in the need to reposition some of the exterior elements on the building.

Continued on page 12

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Insulation

Continued from page 11

“While we’re doing this we took the opportunity to do small things like adding an outlet for Christmas lights outside, instead of extension cords running everywhere,” Weise said.

They also did larger projects like moving all the wiring from outside the building to inside the walls or underneath the building.

The church’s electrical wires were relocated below the sidewalk running parallel to the church with help from the Petersburg Indian Association crew that was remodeling the sidewalks and Reid Brothers Construction who dug the trenches.

The church is also having new windows installed by foreman Weise and his crew, including at one point the church bishop.

They’ve also added a building surge protector sold by Petersburg Municipal Power and Light (PMPL).

“I don’t know why every

building doesn’t have one of these. They stop your brown outs and power fluctuations,” Weise said.

PMPL Superintendent Joe Nelson said the units are available for residences and small businesses for \$125 from his department.

Small investments like the surge protector and bigger investments like the insulation have cost about \$40,000 for materials, but the church has saved about the same amount on labor using a volunteer crew. The long-term savings remains unknown, but the church plans to get an energy audit in three years and track the data to discover the exact value of the project.

Weise said he hopes to complete the project by the end of the year.

In the meantime, “People have been taking their coats off when they come to church because it’s finally warm in there,” Weise said, which has a value all its own.



ORIN PIERSON/ Petersburg Pilot

Weise points out the newly installed building surge protector, available for \$125 from Petersburg’s electric utility.



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Reid Brothers helped with the rocks for the firepit and made the terraces.

ORIN PIERSON / Petersburg Pilot

Gjerde garden

There was an old house on this lot built by the Gjerdes, some of Petersburg’s earliest settlers.

Hardtimes came two generations later and the bank took the house, which was run down and in need of demolition.

New owners cleared the lot and Bob and Signe Haltiner, who live in the house above, found themselves with a wonderful new view of the Wrangell Narrows, so they offered to buy the empty lot five years ago.

“I didn’t want anyone to build there...I didn’t want to look at a mess either, so I’ve been fixing it up each year,” said Signe Haltiner.

There are some goose berries and a cherry tree from the Gjerdes.

“I bought that old drift wood bench in Gig Harbor. There was a little girl here helping me and she said, ‘You better be careful. That bench isn’t too sturdy.’ And I said, ‘What do you mean its not too sturdy?’ I sat down on it and broke it,” said Signe.

There are plans to install a dry creek, up where there grass is too steep to mow.

“It’s an ongoing project,” said Signe. “There’s a lot of space to take up and a lot to figure out.”



Corks along the gravel path are from Signe Haltiner’s grandfather Martin, who was a gillnetter.

Thank you...

To those who share their home construction stories with us each year, you make this publication possible. If you, or a friend of yours is doing a construction or remodel project, please let us know. We would appreciate the opportunity to talk about featuring your work in a future edition.

Please call us at **772-9393** or email: **pilotpub@gmail.com**



Heat pumps are what’s hot this winter

By **MARY KOPPES**
Petersburg Pilot

More Petersburg homes than ever will be warmed by heat pumps this winter.

These appliances have been gaining popularity as rising crude oil prices in the past five years have motivated home and business owners to look for cheaper heating alternatives.

Though some residents have made the switch from oil to electric boilers, an increasing number are installing electric heat pumps instead.

In the past two years especially there’s been a rise in the number of heat-pump installations in Petersburg. Wally McDonald, owner of Fleet Refrigeration, estimates he’s installed 40 this summer alone.

“Generally we’re just installing stand-alone heat pumps. But there are some cases where we’re actually replacing oil-fired furnaces with a heat pump equivalent which seems to work real well,” McDonald said.

A heat pump, also called an air source heat pump (ASHP), is actually comprised of two units, one inside and one outside the home. Heat is extracted from outside air sucked into the outdoor unit.

That heat warms a refrigerant gas running in a line inside the home. Once it reaches the indoor unit, the gas is condensed into a liquid. In this physical process heat is released and a fan circulates that heat into the home.

Another line transports the cooled liquid resulting from this process back to the outdoor unit where the liquid evaporates into a gas and the process begins again.

How can the system extract heat from cold air?

Air contains moisture that soaks up heat from the atmosphere which is warmed by the sun.

McDonald describes it this way, “What you’re actually doing is getting the heat of the sun that’s stored in the atmosphere.”

The efficiency of the heat pump system, McDonald said,

depends on outside temperatures, “but overall there’s an advantage of about 3.5 to 1 over electric (boilers),” he said.

This means that for every one kilowatt burned by the heat pump, users get 3.5 times as many BTU’s—or British thermal units, the most commonly used measure of power—as they would for every one kilowatt burned with an electric boiler.

Comparing the efficiency of different heating systems, even highly efficient combustion furnaces operate below 90 percent efficiency, according to a 2013 study by the Cold Climate Housing Research Center (CCHRC) in Fairbanks.

“Some heat is inevitably lost ‘up the chimney,’” the study reported.

Electric heating units like boilers, furnaces and baseboards can achieve 100 percent efficiency since all electricity used by the unit is converted into heat. But heat pumps can often achieve efficiency over 100 percent because “the heat energy delivered to the building is more than the energy required to run the heat pump,” according to the CCHRC study.

That means heat pumps use electric power more efficiently than other electric heating appliances, which can lead to a long-term savings for customers since the electric rates in Petersburg are among the lowest in Alaska.

That savings, McDonald said, is the biggest reason his customers are switching over to heat pump technology.

According to the CCHRC study, “The use of an ASHP results in approximately \$1,000 per year savings when compared to heating with oil-fired appliances...” The amount of savings, of course, depends on the size of

Continued on page 15



ORIN PIERSON / Petersburg Pilot

An interior heat pump unit gets installed by James Larson, an employee of Fleet Refrigeration, at a remodel project on Birch Street.

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Heat Pumps

Continued from page 14
the building being heated.
The appliance also offers the

advantages of comparatively lower maintenance costs and the ability to be used for heating and cooling, particularly useful in buildings operating a lot of electronic equipment that needs to

be cooled.
Though heat pumps have many advantages, there are some disadvantages.

Advances in technology for the appliance in the last decade have made them more efficient, but the pumps efficiency and heat output rate decrease as the temperature outside drops.

This was noted as one of the main drawbacks of the appliance in the CCHRC study.

“Most systems currently available have a declining heat output rate as the outside temperatures decrease...in colder regions, it is advised to have a backup heating system for days when the ASHP model is operating at lower efficiencies or is incapable of meeting the head load.”

Though Petersburg’s climate is mild compared with areas farther north in the state, temperatures in the 20s are not uncommon in winter months.

One way to address this deficiency is by employing a supplemental heating unit.

The CCHRC study found that 59 percent of homes in Petersburg already have a secondary heating source, the highest of any community in Southeast.

McDonald said though the pumps he’s installing for residential use are rated for minus 15 degrees, he’s found many people, himself included, use

the heat pump in tandem with other systems like the popular Toyo oil heaters when the temperature drops.

“What we’ve found with a lot of our Toyo customers is we’ll have the Toyo heater right there and we’ll have the heat pump right up above it,” McDonald said. “Basically the heat pump runs 90 percent of the time and then when it gets really cold...just turn on the thermostat on the Toyo and let the Toyo take over the load.”

While using a supplemental heating source like the Toyo still requires customers to fill their oil tanks, McDonald said using the heat pump as his primary heater resulted in filling his oil tank one time instead of three last year.

As more customers make the switch from oil to electric, the local electric utility, Petersburg Municipal Power and Light (PMPL), has felt the impact.

“Over the past three to four years we’ve seen a lot of conversions of existing heating systems over to electric,” PMPL Superintendent Joe Nelson said.

This conversion has led to an increased demand for electric power from the department, which comes primarily from the Tyee hydroelectric power project.

“It (hydroelectric power) is a limited resource and we need to

Continued on page 16



ORIN PIERSON / Petersburg Pilot

The exterior unit of an air source heat pump extracts heat from the atmospheric moisture that retains heat from the sun.



ORIN PIERSON / Petersburg Pilot

Two refrigerant lines like these run between the indoor and outdoor units. One carries refrigerant gas while the other carries the condensed liquid. Once this installation is complete the lines are insulated and secured to the building.

Planning & Construction Assistance

The Petersburg Community Development Department would like to offer you assistance in the successful planning and construction of your building projects. The Borough is a Class A member of the International Conference of Building Officials (ICBO) and has received approval from the Alaska Housing Finance Corporation (AHFC). As a service to you, the city provides ICBO and AHFC certified plan review and inspection of all permitted building projects. Building permits are required for all buildings within Service Area 1.

The Borough has recently updated the WOODSTOVE INSTALLATION GUIDE. Copies are available free of charge at the Fire Hall and Building Department. The guide is also available on the Borough’s website.

In addition, the Public Library has available on loan:

- Current International Building, Fire, Mechanical and Plumbing Code Books
- Instructional Books and Videos

Please contact the Community Development Department at 772-4533 if we can be of assistance to you with your building projects. Also, please note that Petersburg Municipal Code 17.04.050 has established a substantial penalty for beginning work on a building project in Service Area 1 prior to obtaining a building permit.



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Joe Bertagnoli
Building Official
PETERSBURG BOROUGH
Community Development Department
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Heat Pumps

Continued from page 15
make wise use of the resource,” Nelson said.

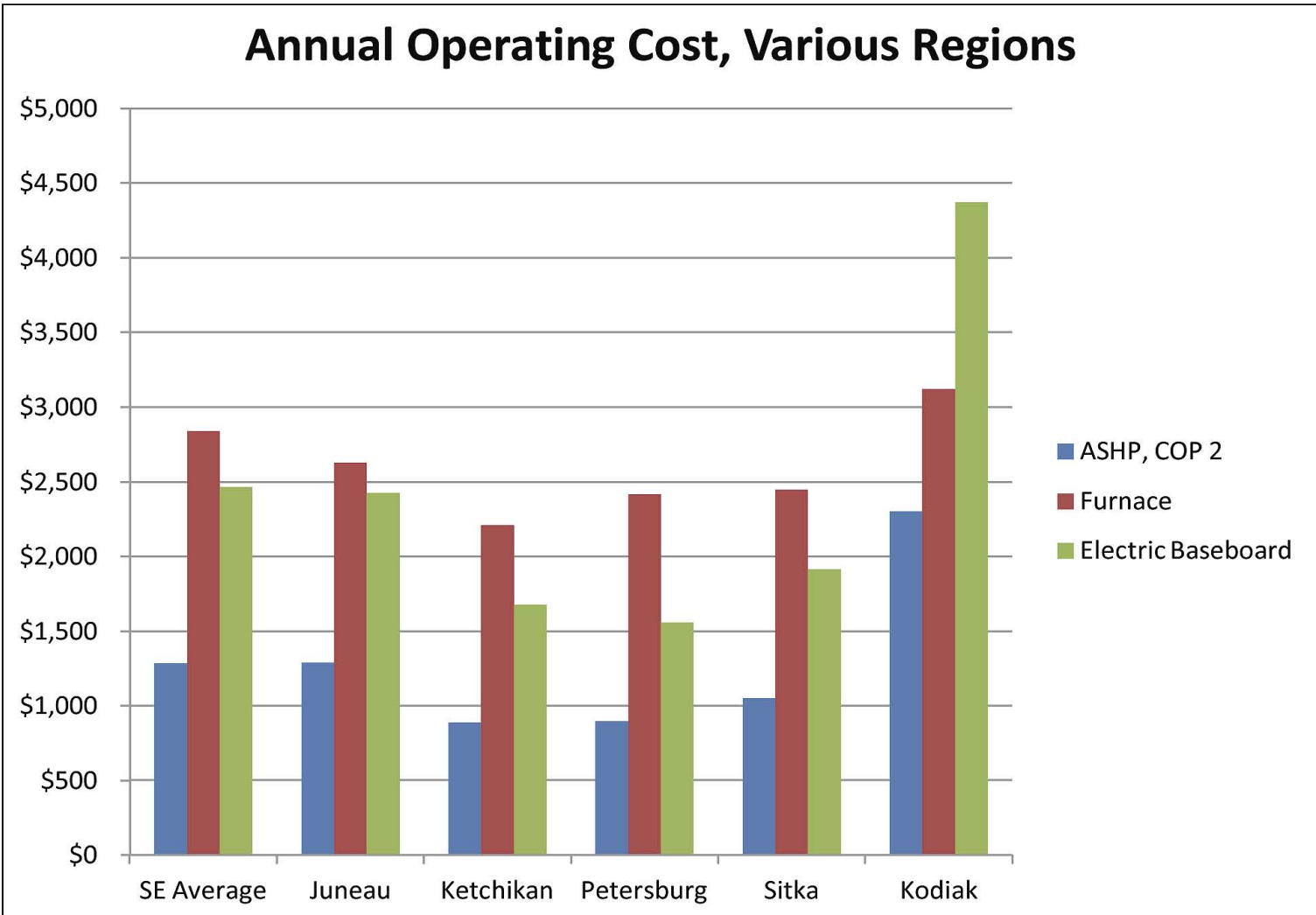
To that end, PMPL has begun offering a rebate to residential customers installing heat pumps.

The program began last December and offers residential customers rebates from \$450 to \$1500, depending on the size of the system, for verified heat pump installations.

“We’ve recognized for several years that in our mild climate that we have here that heat pumps are probably a good option. And especially with the newer technology now that makes them efficient down to much lower temperatures than what they were say 10 or 15 years ago,” Nelson said.

McDonald said the average cost for a residential system is about \$4,000.

For more information about the rebate program contact PMPL at 772-4203.



The annual cost of Air Source Heat Pumps in comparison to other heating systems in Southern Alaska.

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3. Switch to compact fluorescent bulbs. They use a fourth of the energy used by regular bulbs.
4. Replace halogen lamps in torchieres with compact fluorescent torchieres. They use about 70 percent less energy and produce more light.
5. Use motion detectors to turn on outdoor lights rather than leaving them on all night.
6. Close your fireplace damper when there's no fire. Leaving it open is like having a 48-inch-square hole in your house.
7. Close off and don't heat unoccupied rooms.
8. Take showers with low-flow showerheads (they use 50 percent less hot water) instead of baths.
9. Set your water heater at 115 degrees (F), which is comfortable for most uses. Turn your water heater off when you go on vacation.
10. Wrap your water heater in R11 insulated wrap but don't cover the thermostat.
11. Run only full loads in your dishwashers and clothes washers - and wash in warm or cold water.
12. Wash and dry clothes on week-ends when energy use isn't as high.
13. Air dry your dishes. In nicer weather or in a warm basement, air dry your clothes.
14. Clean your furnace and heat pump filters to keep them operating efficiently.
15. Limit use of kitchen and bathroom fans since they pull heat out of the house.
16. Open south-facing drapes and blinds during the day to let heat in.
17. Cover all windows at night in winter.
18. Weather strip around your doors and windows and anywhere you feel a draft.
19. Set your refrigerator between 37 and 40 degrees (F).
20. Keep your refrigerator well stocked. It takes more energy to cool an empty fridge.
21. Clean lint out of refrigerator coils and out of dryers.
22. Use a microwave or toaster oven for cooking and heating small portions.
23. Check ceilings and crawl spaces to ensure there's adequate insulation.
24. Seal or fix broken basement windows.
25. Fix broken ducts and replace cracked or peeling tape on ducts. Use tape with the UL (Underwriters Laboratories) logo.
26. For long-term savings, choose and use energy-efficient appliances. Compare energy rating labels before you buy.

Important Safety Tips

CALL BEFORE YOU DIG

- ☐ Underground line locations - If you are doing any excavation, you will need to locate underground wires before you dig. Those lines will be located free of charge during normal working hours. Two working days notice is required for this service. Call 772-4430 x 36.

TREE TRIMMING

- ☐ Tree Trimming reduces trees' contact with power wires. PMP&L hires highly trained and qualified line clearance professionals to perform required work. Never attempt to prune trees near power lines yourself. If there is any question, call PMPL at 772-4203.

TREE HOUSES

- ☐ Never build tree houses in trees growing near power lines. Your child's life may depend on it!

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