

FOG DISPENSER



ASHRAE
Golden Gate
Chapter

MAY 2011 DINNER MEETING

Main Program:

Product Show & Awards Night

Speakers:

BAY AREA SCIENCE FAIR STUDENT WINNERS

Eric Thor Andresen and

Golden Gate Scholarships' Recipients

Presentation Summary:



Be a part of the special evening including the pre-meeting product show. After dinner we will hear from future science and engineering students that have won Bay Area Science Fair judging, Chapter Scholarship Recipients, as well as industry colleagues winning 2010/2011 ASHRAE Technology Awards.

Thursday, May 12, 2011

(4:30 pm to 9:00 pm)

PG&E Pacific Energy Center
San Francisco

AGENDA:

4:30 -6:30 pm

Product Show

4:30 pm

Registration

Begins, Bar Opens and
Product Show

6:30 pm

Dinner, Announcements and
Introductions

7:30 pm

Main Program

9:00 pm

Adjourn

COST:

GG/Redwood Empire ASHRAE
and SF-ASPE Members,
but please register

Before 3pm, Fri. 5/6 \$40.

After 3pm, Fri. 5/6 \$50.

Non-Members,
but please register

Before 3pm, Fri. 5/6 \$50.

After 3pm, Fri. 5/6 \$55

Students/Voucher Holder

Free, but please register

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GOLDEN GATE ASHRAE
FOG DISPENSER
VOLUME XLVIV-NUMBER 6,
MAY 2011 COVER

Dear Golden Gate ASHRAE Members and Guests,

I hope all who were able to attend enjoyed the "Two-Fer" last month. Touring the cutting edge Laney College Lab followed by lunch chapter meeting at Scotts was our Program Chair, Kristin DeMartini's inspiration.

I had to miss this because, I kid you not; I was infected by a skin-eating bacteria which attacked my hands and was moving to the knees when Mr. Penicillin kicked in.... thank you modern medicine. After a month I have almost all new epidermis on my hands whoopee! Now if this can just help me shoot golfs better, I might do some serious damage at the joint Golden Gate/San Jose ASHRAE Golf tournament scheduled for this July at Crystal Springs.

This episode reminded me of our October 2009 chapter meeting speaker, Marlene Linders. Her topic was hospital construction QC to prevent spread of diseases. She discussed "indoor



environmental pollutants such as E. coli, norovirus, staph infections (staphylococcus aureus), and Methicillin Resistant Staphylococcus Aureus (MRSA) are increasingly being encountered in our environment and causing significant health problems. One of every 20 people who go into a US hospital picks up a staph infection. Outbreaks of illness from these types of bacteria have been commonplace in the hospital setting; more recently, however, there have been outbreaks in non hospital-related environments such as hotels, sports facilities, prisons, and cruise ships" ... me thinks I was infected in an El Cheapo Atlasta Motel I stayed in last month.

For whatever it is worth, I spent a bit of time tilting at windmills over the last month or so, dealing with political issues with Society stemming from Reno CRC 2010. One good thing about tilting at windmills is that you usually only hurt yourself, your horse or maybe your spear; but it clears the mind, and while I have lingering angst I think my tilting days are behind me.

Your BofG is considering moving chapter meetings from our usual 1st Thursday of the month. The problem is that the first week of the month follows holidays, ASHRAE winter meeting and presents logistical problems in dealing with the nuts and bolts of scheduling the Fog Dispenser and chapter meetings. Please let I or any member of the BofG knows your feelings in this regard.

I look forward to the May program and I hope you do to. The combination product show (jointly held with SF ASPE this year), CTTC awards and virtual tours, scholarship and science fair winners make for a fun and enjoyable evening outside our usual fare. I have been a judge for the Bay Area Science Fair on numerous occasions in the past ... makes me yearn for fun facts to know and tell outside the normal work-a-day environment.

A year ago, the Icelandic volcano Eyjafjallajökull erupted. Although relatively small for volcanic eruptions, its location under the jet stream caused enormous disruption to air travel across western and northern Europe over an initial period of six days in April 2010. My godson was trying to come visit from the UK over school break and he could not get here from there. From the U.S. Geological Survey website I find that volcanoes can impact climate change. During major explosive eruptions

2011 EVENT CALENDAR:

►THURSDAY, MAY 12

5:30 pm - 9:00 pm

LOCATION: PG&E Pacific Energy Center,
San Francisco

TOPIC: Showcase/Tech Awards/
Student Science Fair

SPEAKERS: Vendors and Award Recipients

►THURSDAY, JUNE 9

5:30 pm - 9:00 pm

LOCATION: Scott's Seafood, Oakland

TOPIC: What is a Smart Building?

SPEAKER: Jim Sinopoli, Smart Buildings

►FRIDAY, JULY 29

10:00 pm - 6:00 pm

LOCATION: Crystal Springs Golf Course

EVENT: Annual Golf Tournament – Joint
Event with San Jose Chapter

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Tim Goeppner for more information:
tgoeppner@calhydro.com

huge amounts of volcanic gas, aerosol droplets, and ash are injected into the stratosphere. Injected ash falls rapidly from the stratosphere -- most of it is removed within several days to weeks -- and has little impact on climate change. But volcanic gases like sulfur dioxide can cause global cooling, while volcanic carbon dioxide, a greenhouse gas, has the potential to promote global warming.

The most significant climate impacts from volcanic injections into the stratosphere come from the conversion of sulfur dioxide to sulfuric acid, which condenses rapidly in the stratosphere to form fine sulfate aerosols. The aerosols increase the reflection of radiation from the Sun back into space, cooling the Earth's lower atmosphere or troposphere. While sulfur dioxide released in contemporary volcanic eruptions has occasionally caused detectable global cooling of the lower atmosphere, the carbon dioxide released in contemporary volcanic eruptions has never caused detectable global warming of the atmosphere. This is probably because the amounts of carbon dioxide released in contemporary volcanic eruptions have not been of sufficient magnitude to produce detectable global temperature increase.

For example, all studies to date of global volcanic carbon dioxide emissions indicate that present-day sub aerial and submarine volcanoes release less than a percent of the carbon dioxide released currently by human activities. Human activities, responsible for some 36,300 million metric tons of CO₂ emissions in 2008, release at least a hundred times more CO₂ annually than the entire world's degassing sub aerial and submarine volcanoes. The half dozen or so published estimates of the global CO₂ emission rate for all degassing sub aerial and submarine volcanoes lie in a range from 132 million (minimum) to 378 million (maximum) metric tons per year. The current anthropogenic CO₂ emission rate of some 36,300-million metric tons of CO₂ per year is about 100 to 300 times larger than these estimated ranges for global volcanic CO₂ emissions.

I welcome your comments at gharbison@calhydro.com.

Best Regards,

Gary Harbison,

Golden Gate ASHRAE President, 2010-2011

"May – 2011 **"ASHRAE watches History" make that** **"ASHRAE makes History"**

Tom Gilbertson, Chapter Historian

"What is the word that perhaps characterizes what has happened to our "environment" in the past 70 years?....the choice of the word "environment"....in this case.....is chosen to mean far more than the just the now popular "climate, weather, air quality.....", and the other words that we associate with the use of the word "environment".....

What I think has changed....for ASHRAE Members....in the last 70 years....is that "ASHRAE members".....and that is a distinct class of people.....(more on that later)....have seen the details of the engineering subjects that are presented in the ASHRAE Handbook Series be applied, and come to universal use.....and this has resulted in an "abundance"...now that is the word that I think has changed so much in the last 70 years...."abundance".....

Okay....okay....first some clarifications....and some observations....as I see them....(I acknowledge that some of my "observations" may not be politically correct....)

70 years ago we were not exactly ASHRAE Members

ASHARE didn't exactly exist until the 1950's when our society merged.....and the name was born

ASHRAE members are almost certain have a technical education, and a behavior pattern that generally leads to some form of action

ASHRAE members are generally very pragmatic

ASHRAE members are generally enthusiastic about their employment

ASHRAE members are generally understanding of cost accounting, and the concept of marginal utility

ASHRAE members are generally quite financially successful

ASHRAE members are generally very clear thinkers

So...what is the significance of the above?....It is my observation is that....it is the enactment of the technology that is so carefully described in the ASHRAE Handbook series.....(most generally by practicing-ASHRAE members).....that has resulted in the enablement of what the World in the last 70 years has come to experience in the level of abundance that, almost for certain ...ASHRAE members....and the fortunate others... enjoy.....

My simplistic mind has leveled the playing field to two classes...ASHRAE Members....and everyone else.....



Standing in Safeway...and gazing back through the produce department and to the enormously well-stocked shelves I was struck by just how much we have.... and how virtually everything in sight was enabled by ASHRAE technology and ASHRAE members.....ASHRAE has "taught" the economy just how to do most everything... and we did it economically so that firms could make a profit, and further expand their performance...with the result that "abundance" is experienced, and/or certainly available to the vast majority of people in the United States....

Let me share some examples of what ASHRAE-technology...economically placed in front of the public..... at a most affordable price.....as seen through the eyes of one standing in a Safeway store...

...applied ASHRAE technology and ASHRAE-activity

- *cooled the produce in the field*
- *refrigerated the produce as it was shipped*
- *refrigerated the produce in storage*
- *refrigerated the produce on display*
- *cooked the prepared foods that are canned*



- heated the foods for safety reasons
- froze the foods in the freezers
- filtered the air that allowed the bakery to operate
- cooled the work places
- exhausted the delicatessen cook line
- pasteurized the dairy products
- provided the environment for brewing the beer
- refrigerated the vintner's must as they produced the wine
- ASHRAE wrote the standards for testing the refrigerated display cases



- ASHRAE technology allowed the computerized accounting system have the solid-state components to be produced
- ASHRAE technology provided the environment in the weaving rooms that produced the cloths on display
- ASHRAE technology allowed the cement kilns that made the cement for the concrete floor to produce the cement itself
- ASHRAE technology enabled the production of the building's glue-lam beams
- ASHRAE technology allowed the window glass, as well as the glass containers to be manufactured

What is astounding is that with the ASHRAE Handbook series ...(and a couple of enthusiastic ASHRAE members)...you have the guidelines, and the technical where-with-all to make virtually everything that we have..... in such an affordable-abundance.....and you never have to leave the supermarket to be reminded!



Tyler Bradshaw, ASHRAE Golden Gate CTT Committee Chair

2011 Technology Results

CATEGORY I - COMMERCIAL BUILDINGS – EXISTING

1st Place – Walden Center, Jeffrey Blaevoet, Guttman & Blaevoet Consulting Engineers

CATEGORY I - COMMERCIAL BUILDINGS – NEW

1st Place – Watsonville Wastewater Recycling Center, Curtis Cady, ACCO Engineered Systems

CATEGORY II - INSTITUTIONAL BUILDINGS – EXISTING

1st Place – UC Davis VAV Lab Hood Alteration, Scott Wayland, ATI Architects & Engineers

CATEGORY II - INSTITUTIONAL BUILDINGS – NEW

1st Place Tie – Tanimura & Antle Family Memorial Library, Jeffrey Blaevoet, Guttman & Blaevoet Consulting Engineers

1st Place Tie – Mills College Graduate School of Business, Peter Rumsey, Integral Group

CATEGORY III – HEALTH CARE FACILITIES – NEW

1st Place – Health & Wellness Center, Steve Guttman, Guttman & Blaevoet Consulting Engineers

CATEGORY VI – RESIDENTIAL

1st Place – House on the Bay, Farmer's Residence, Jeffrey Blaevoet, Guttman & Blaevoet Consulting Engineers

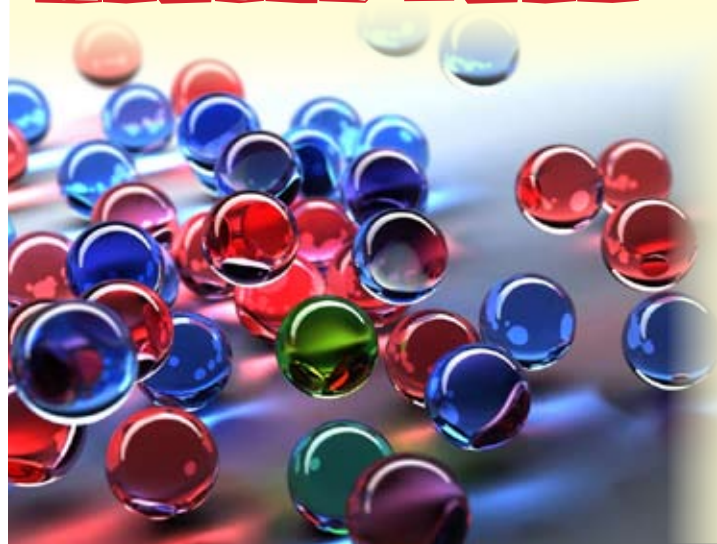


It's not too early to start thinking about the 2012 Competition!!! Come talk to me at the meeting or email me if you missed the deadline and have a project that you'd like to submit for next year.

Join the CTTC Committee

If you like to assist the chapter and get involved with ASHRAE, the Chapter Technology Transfer Committee is one of the best places and we could use your help. Talk to a board member or contact Tyler Bradshaw at tbradshaw@integralgroup.com.

MARBLE DRAW



Ross Farris

Marble draw is back for the month of May! There will be some excellent prizes along with the grand prize for a one-in-eight chance at \$500. Make sure to bring your luck! Remember that the money donated during the raffle helps to fund our ASHRAE research.

As always, we are in need of sponsors for each meeting. If your company donates prizes, its logo will display on a slideshow during the non-speaker portions of the meeting.

*Please contact Ross Farris for more details:
RFarris@glumac.com - 415.398.7667.*

2011 PRODUCT SHOW – GOLDEN GATE CHAPTER, ASHRAE

By Hans Kaufmann, Product Show Chair

The annual Golden Gate Chapter ASHRAE Product Show will be held on Thursday, May 12th, 2011 at the PG&E Pacific Energy Center in San Francisco. This annual event is a main fund raiser for the chapters' contribution to ASHRAE Society Research projects. If you are a GG ASHRAE member the price for a 3'x5' table is \$150, with dinner costs in addition to the table charge (non-member cost is \$200.00). We have had very good response so far with a number of vendors already signed up.

This year we have invited our brothers and sisters of San Francisco ASPE to join us. SF ASPE will be hosting technical sessions at the Pacific Energy Center during the day and joining us for the product show, social hour and hopefully our dinner meeting in the evening. This joint venture should prove of interest as the many San Francisco engineering firms that support ASHRAE also have plumbing divisions. This will also provide some new faces for our vendors to talk with during the product show. Please consider participating in the product show. We would love to see you there.

Contact Hans Kaufmann at hkaufmann@calhydro.com or phone: 510-266-7885 to get an application form.
To register go to: <http://extension.berkeley.edu/cat/course2546.html>

***Do you have a TECHNICAL ARTICLE
you would like to share in an
upcoming Fog Dispenser? We'll
give you a free business card
advertisement for the month!***

***Contact Annie Foster at
annie.foster@wspfk.com
for more details.***

MEMBERSHIP PROMOTION

Erica Stewart

To be a member of the Golden Gate Chapter, you first must be a member at Society level (www.ashrae.org/members/page/589). As of last July dues are now \$180 and still \$20 for students. You can renew your Chapter membership at the same time for \$50 a year, \$40 a year for students. Note that dinner meetings for full-time students are free! Visit our website to find out more: <http://www.ggashrae.org/faq.htm>.

Please congratulate the following Chapter members who have advanced to **FULL MEMBER STATUS**:

Mr. John Arent
Ms. Sherry Chaumpluke
Ms. Michelle Dionello
Mr. Ross Farris
Mr. Hormoz Janssens
Mr. Joseph Pipitone
Mr. Andrew Rhodes
Mr. Andrew Seto
Ms. Erica Stewart
Mr. Min Chien Tsai

And welcome our new Chapter members:

MEMBERS:

Mr. Bruce Dandie
Mr. Eric Dupuis
Mr. Leslie J Moore
Mr. Stephen A. Oyafemi
Mr. Tom Rodagers
Mr. William Schwartz

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Mr. Henry Laughlin
Mr. Gary Lee
Ms. Christina Liebner
Ms. Maya Salabasheva

CHAPTER RESEARCH COMMITTEE

Jeff Violet, ASHRAE Golden Gate Research Committee Chair

ASHRAE Research Report

*This year the ASHRAE Research campaign is starting off very well!
A special thank you to contributors who gave on the honor level or above:*

Research Associates (\$2,500+)

• Bay Area SMACNA

Major Donors (\$1,000+)

• Golden Gate ASHRAE Chapter • WSP Flack + Kurtz
• Redwood Empire ASHRAE Chapter • Glenn Friedman

Major Donors (\$500+)

• Richard Charles • James MacDonald • Taylor Engineering

Major Donors (\$250+)

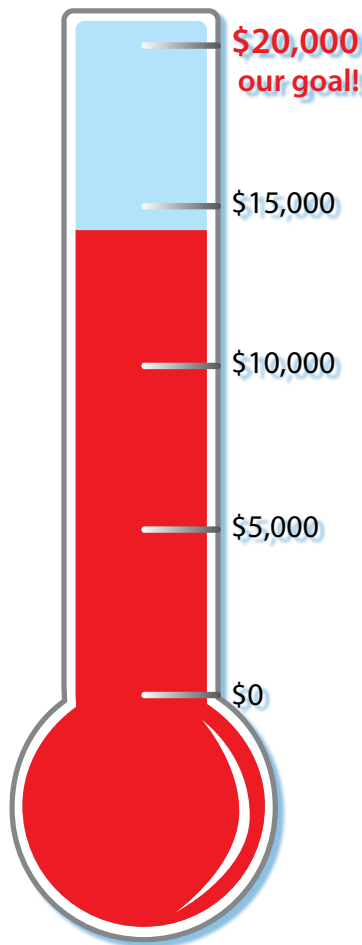
• Edward Arenes • Max Sherman • Nazzaro and Associates
• Steve Taylor • Acutherm

Individual Honor Roll (\$100+)

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Gerald Yaffe	Wasil Popow
Jim Nemechek	Edgar DeGuzman
Shlomo Rosenfeld	Petersen Mechanical
Dick Friedman	Joo Young Kim
Thomas Weaver	Kristin DeMartini
Isabelle Lavedrine	Gary Harbison
Erik Kolderup	Annie Foster Courtney
Scott Wayland	Jeff Violet

Donations are tax deductible, by check, credit card or online at www.ashrae.org.
To make contributions please contact Jeff Violet, jcviolet@yahoo.com, 415-724-1214

Our research goal for the 2010-2011 year is \$20,000. We are currently at \$14,164.



ASHRAE 2011 GOLF TOURNAMENT

Golden Gate and San Jose Chapters

FRIDAY, JULY 29, 2011 • NOON SHOTGUN START

Crystal Springs Golf Course

www.playcrystalsprings.com

6640 Golf Course Dr. Burlingame, California 94010

Registration begins at 10:00 am

Awards Dinner • Scramble Tournament • Prize Raffle

- Men & Women's "Longest Drive" Contests
- Two "Closest to the Pin" Contests
- Putting Contest Begins at 11:00 am

PRICING:

(all packages include dinner and golf goodies):

Gold Sponsor..... \$2,300.00

(4 foursomes, 2 tee sponsorships)

Silver Sponsor..... \$1,750.00

(3 foursomes, 1 tee sponsorship)

Bronze Sponsor..... \$1,200.00

(2 foursomes)

Basic Team..... \$640.00

(1 foursome)

Single Player..... \$165.00

Contest Sponsors, Tee Sponsors, and Prize Donations are graciously requested

Please RSVP before July 15th

All proceeds benefit ASHRAE Research

For more information and registration,
please contact Tim or Jay

email: tgoeppner@calhydro.com

phone: 510.266.7894

email: jay.blatchford@trane.com

phone: 408.481.3696



LANEY COLLEGE TOUR RECAP

For those of you who weren't able to make it to the April tours, you really missed out! We visited Laney College (in Oakland), where they have developed a very impressive Environmental Control Technology program. Here's a brochure with more details: <http://laney.peralta.edu/Projects/30151/ECTbrochure.pdf>.

The lab space was really incredible. They have all types of mechanical equipment (boilers, pumps, fans, AC units, even a cooling tower) for the students to work on. There is a computer lab for controls programming.

When you first look up into the open ceiling, you wonder what in the world the mechanical designer was thinking. There are fan coils, heat pumps, single duct VAV units, dual duct VAV units; bad zoning, good zoning. The VAV boxes and diffusers are installed with different types of fittings, with varying levels of installation quality. But it's not bad design - it's all there for the students to learn and practice on.

Most of the students in the program are employed building engineers and maintenance personnel who come to class 5:30pm-10pm four nights a week. The dedication of these men and women is very impressive.

If you know any:

Potential students

Engineers interested in making some extra money teaching classes

Contractors, etc. that could offer internships

Please feel free to pass along the contact information: LaneyECT@gmail.com

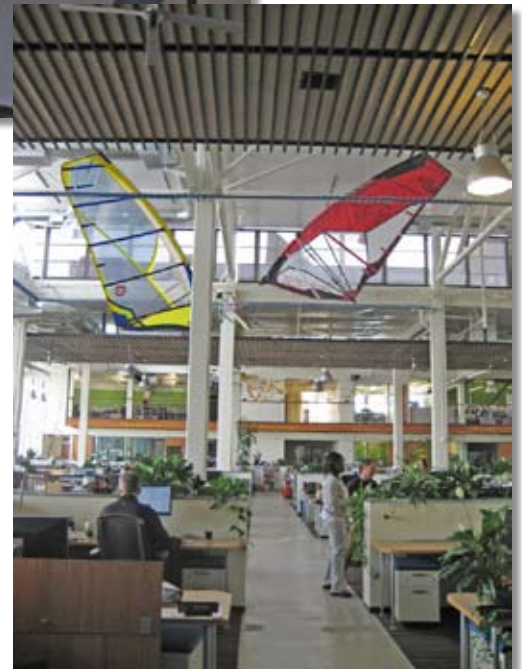
The next few pages include some photos from our tour.



LANEY COLLEGE TOUR PHOTOS



Our second tour of April was to the Clif Bar Headquarters in Emeryville.



DPR completed the 115,000 sq. ft. headquarters tenant improvement for Clif Bar, an energy food company, in August 2010. The project is a reflection of Clif Bar's culture and innovation in sustainability. The company relocated to a retrofitted warehouse and features the latest in solar technology. The building has the largest smart rooftop solar array on a communal building in North America, generating almost all of the electricity for Clif Bar's new headquarters and aiming for the highest possible energy efficiency rating for its office.

The nearly 2,000 sleek solar panels are expected to generate six to eight percent more power than standard array. These solar panels heat 70 percent of the building's hot water.

Approximately 75% of the materials were repurposed; the wood panels were made of shipping containers. These were some of the many green features that were implemented.

APRIL LUNCH MEETING PHOTOS



FUN PAGE!

Risotto with asparagus, vermouth and lemon

Ingredients:

- 2/3lb rice for risotto
- 1 to 2lbs of asparagus (if you want a lot of asparagus in your risotto, use 2lbs – otherwise, use 1lb)
- 1 organic lemon
- 3 shallots
- 2/3 cup of dry vermouth (preferably Noilly Prat)
- 5 cups of vegetable stock
- 2.5 oz of butter
- 3 oz of grated parmesan
- salt, pepper



Directions:

1. Use a vegetable peeler to get the zest from the lemon in ribbons. Soak quickly in boiling water and chop finely. Remove the hard part of the asparagus (you can snap it off), and cut them in about 1 long segments. Reserve the tips. Peel and chop finely the shallots.
2. Using 1/3 of the butter, melt the shallots for 3mins without letting them brown. Add the rice, stir for 3mins (a white dot should appear in the middle of each grain of rice). Add the vermouth and stir until all absorbed. Add the chopped asparagus (not the tips) and the lemon zest, then just cover with stock.
3. Cook on medium heat for about 20mins, stirring constantly, adding stock ladle by ladle, never letting the rice going dry. The risotto should appear very creamy. Add the asparagus tips 5mins before the end.
4. When the rice is cooked, remove off the heat, add the rest of the butter and the parmesan. Wait for 1min and then stir vigorously. Taste and add salt and/or pepper according to taste.

This dish will make a very nice appetizer, or a fine main course. Drink (in moderation!) with a dry white wine.

Enjoy!

Isabelle Lavedrine

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- One time rate: \$25
- 4-month rate: \$90 (\$20/mo.)
- Yearly Rate: \$150 (\$17/mo.)

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If you are interested in advertising in the Fog, please contact Annie Foster Courtney at annie.foster@wspfk.com.



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