



Portland Winemakers Club

May 2026

“Bob’s Blurb”

2026 Monthly Agendas

- January 17th
Gala – Parrett Mountain Cellars
5:30 – 8:30 pm, clean up 8:30 – 9:00, \$15 per person
- January 21st
#1-Tasting & judging member’s other reds, no Bordeaux varietals or Pinot Noir
- February 18th
Speaker: Winemaker, Ken Wright
- March 18th
Tasting & judging, member’s Bordeaux varietals
- April 15th
Barrel Tasting, judging & discussion / problem solving
- May 20th – Tasting & judging, member’s White, Rose’ & Sparkling
- June 17th. TBD
- July - No meeting
- July 18th, Annual Picnic, \$10 ea. Fee, 1:00 – 5:00
- August 19th
#2-Tasting & judging member’s other reds, no Bordeaux varietals or Pinot Noir
- September 16th
Speaker: TBD
- October 21st
Tasting & judging, member’s Pinot Noir
- November 18th
Crush Talk, Tips & Tricks
- December 9th
Elections, Planning for 2027
- Wine-related tours may be scheduled on non-meeting days.

The club deserves appreciation for arranging our tickets to the Cuvee stroll, held at the Allison Inn in Newberg on April 19. Numerous Pinot varieties and other North Willamette Valley wines were available, along with tasty bites from area restaurants.

While a handful of Pinots made a strong impression, the majority were recently released 2023/2024 vintages that had not yet fully developed their character.

Our next destination was the Astoria Crab Fest during the last weekend of April. Astoria greeted us with beautiful weather! Sunny skies and temperatures around 60 degrees. Several familiar wineries were in attendance: Parrett Mountain, Catman Cellars, Resolu Cellars, Vino Vasai/Potters Vineyard. New discoveries included three Elkton wineries from the Umpqua Valley. Having a diverse wine selection beyond just Pinot was a welcome change :-)

For anyone planning to purchase and eat crab at the festival, bringing quality crab-picking tools is recommended; what the Rotary crab stand provided (a plastic picker and a small wooden mallet) proved insufficient.

Two separate music stages offered seating areas where attendees could enjoy performances while eating and drinking. Due to travel, the May meeting will be missed. Looking forward to June!

Regards, Bob



Upcoming Events / Save the Date

The next PWC meeting is scheduled for Wednesday, May 19th in the basement of the Aloha Grange starting at 7:00 pm. After a short business meeting we will be tasting and judging member produced white wine varietals and white blends, sparkling and Rose'. Put a wine in the lineup by bringing two (2) bottles bottles for tasting. Also, bring 2 wine glasses.

Bring a snack for the potluck table and a bottle of any of your wines for the exchange table.

- Take time to visit the PWC website: portlandwinemakersclub.com where there are Newsletters archived back to 2007.

- Also, visit our public group Facebook page: "Portland Winemakers Club" [facebook.com](https://www.facebook.com/portlandwinemakersclub), give it a look, Join the group and submit some posts of your own.



April Meeting Minutes

Officer Roundtable

Treasurer: 2026 annual dues are \$25. Paid dues and a signed waiver are required to order grapes.

President: May agenda, will send out notice once determined.

Grape Buying Update:

- Vineyard options are consistent with last year, prices are the same for the most part Jamison continue to deliver to Portland, pricing and varietals are still TBD.
- Campbell Lane will sell Pinot Noir this year, looking for people who are willing to work in the vineyard and then get a lower price on grapes
- Two Mountain has lowered their minimum to 33 lbs from 1,000 lbs previously.
- Chehalem Winds is now U Pick, will post Brix and PH by clone so members can determine when to pick.
- Southern Oregon options are still in process, Most vineyards want a 1,000 lbs minimum (possible with a group buy).
- Grape order sheet will be sent out in the next week, with orders due in by end of May (earlier for varietals with limited quantities).
- Group Buy discussion:
- Interest still exists in doing a group buy from a vineyard in Southern Oregon (or one not typically used). Potentially send out a group survey once the grape order sheet is published to determine member interest by varietal.

Speakers / Tours:

- Speaker for September still TBD, could have someone come in and talk about barrels and use of oak.
- Vinovate tour still anticipated – need to line up date.
Members with ideas on speakers or tours should reach out to Paul.

New Business:

- Barb Thomson has an old stemmer / crusher for sale – contact her if interested.
- Rob Marr has used wine bottles from his home wine making – contact him if interested.

Barrel Tasting:

Meeting focus then turned to barrel / carboy samples brought in by members to get feedback.

Varietals included Tempranillo, Pinot Noir, Cabernet Sauvignon, Carmenere and a Fig Wine.



Editor: I have always enjoyed the rich aroma and flavor of white wines from France, particularly those from Burgundy and Provence. My own white wines always seem a little aroma-weak in comparison.

I ran into a procedure for white and rosé wines that aims to enhance the aroma. Not every home winemaker will have the equipment required; however, I think I might give it a try this Fall on a Chardonnay, Sauvignon Blanc, or Riesling. I will report back.

STABULATION

Stabulation is a technique used to bring out aromatics and flavors in white and rosé wines. The process was probably developed in Germany with Riesling grapes, but it has been honed and modernized by rosé winemakers in Provence, France. It has commonalities with both cold soaking and carbonic maceration. When juice is recovered from lees, it often has heightened aromatics. Some of these are lost when the juice is rapidly clarified and removed from the solids. Stabulation macerates the lees into the juice before fermentation, extracting these valuable compounds. The best results will be achieved by using pressed juice from healthy, sound grapes. Successful stabulation will increase levels of esters and thiols and improve the mouthfeel of the wine.

In the process, pressed juice is brought into a settling tank and blanketed with CO₂. The juice is held cold (32–36 °F/0–2 °C) for two or more weeks. To keep the fine lees in contact with the juice, the tank needs to be mixed two times per day. The total volume of the tank must be able to accommodate mixing without loss or splashing over. Because cold juice is more prone to oxidation, the tank must be agitated anaerobically. A preferred method of mixing is “bubbling” CO₂ through the bottom or racking valve of the tank with enough force to appear like it is rapidly boiling on the surface (set the regulator to 15 to 20 psi).

This bubbling should last for 2 to 3 minutes, and the CO₂ used in the process has the additional benefit of aiding with extraction. Alternatively, a pump can be used to mix the tank, which must be followed with a CO₂ sparge to prevent oxidation. To ensure a good mix when using a pump, move about 1/3 of the total volume of the tank per cycle. With bubbling, no additional CO₂ sparging is needed. When the process is deemed complete, stop the mixing process for about two days to allow settling. During the two days, allow the temperature to rise to 46–50 °F (8–10 °C) to prevent oxidation during racking. Once the desired temperature is achieved, the wine can be racked off the sediment, and fermentation can commence.

Many factors can enhance the impact of stabulation. Using a pressing enzyme can aid the extraction of skin components, allow for gentler extraction and pressing, and help control phenolics that are prone to oxidation. “Champagne”-style pressing cycles limit the amount of oxygen contact with the pressing berries. It consists of pressing, holding, and increasing pressure to the next interval. Once the cycle starts, the pressure will not dip back to 0 psi until the next cycle or the press finishes. A complete cycle is finished before the press cake is broken up. By use of continuous pressure, much of the oxygen exposure is eliminated. Use of dry ice in the press and juice pan will also eliminate some oxygen exposure. SO₂ will help prevent microbial growth and will help remove oxygen. It can be added during crush, metered into the press, or applied into the settling tank.

The use of a non-Saccharomyces yeast can be employed in order to help protect the juice during temperature transitions and can enhance characteristics of the wine. Make sure to use a low-temperature-tolerant strain to handle the cold environment of stabulation. A small amount of fining added to the juice during tank mixing or after the start of fermentation can help remove phenolic compounds that are prone to oxidation and contribute to loss of aroma. Calcium bentonite, PVPP, or combinations of PVPP with casein or vegetable protein work great for this. Check to make sure the fining agent of choice has phenolic action.

Selection of a yeast that optimizes thiols or esters can bring out more of the aromatics that were extracted during stabulation. These yeasts can be fed with nutrients that are high in amino acid precursors for esters or thiols to bring out more of the desired aromatics. Yeast nutrients high in glutathione will help prevent oxidation of the flavors and aromatic compounds that have formed in the juice and wine. Glutathione has the added benefit of preventing browning in wine during aging. These added steps are not required, but they work in concert to help reinforce the impact of a stabulation. Because the juice is held cold, expect pH shifts similar to those found in cold soaking.

Preparing for harvest

James Osbourne: OSU Extension

Grape chemistry and pre-fermentation adjustments

As harvest nears each year, there are many things to prepare for before the fruit starts arriving at the winery. One subject on the "to-do" list is grape maturity testing and planning for pre-fermentation adjustments that may be required. The standard grape compositional measurements are pH, titratable acidity (TA) and Brix. Additional parameters such as yeast assimilable nitrogen (YAN) and malic acid may also be measured close to picking or once fruit is in the tank.

Often it is a simple process to use these chemical parameters to determine your pre-fermentation adjustments. However, in some years, fruit composition does not line up with expectations or unexpected changes occur during fermentation that may cause challenging wine chemistries. An increased understanding of these basic grape compositional components can help better predict what pre-fermentation adjustments may be needed and how they may affect wine chemistry parameters.

Sampling matters

Taking a representative sample for analysis is the first critical step when assessing grape composition. When taking grape and juice samples for analysis, the more closely these samples represent the grape and juice in the tank, the better.

When assessing red grapes, I recommend taking the grape samples and crushing them by hand in a resealable plastic bag and letting the juice soak on the skins for a few hours in the fridge. This will give you a more accurate pH value, because the grape skins contain a significant amount of potassium that will soak out during this time. If you analyze the juice immediately after crushing the grapes, you will not account for this potassium. Grape skins also contain some amino acids and dried/shriveled grapes will release more sugar after soaking which will give a better estimation of the Brix and YAN content of the grapes. If conducting a cold soak, sampling at the end of the soak will give the most accurate values on which to base any adjustments.

Sugar and potential ethanol

Brix values are typically used to estimate potential ethanol of the finished wine, but this value is not equal to fermentable sugars (glucose and fructose) which can lead to over- or underestimation of potential ethanol. In some years, Brix may line up perfectly with glucose + fructose but in other years, there may be some variance (often Brix will be lower than combined Glu + Fru measures). Measuring glucose and fructose will give a more accurate ethanol estimate. Calculate this measure using the following formula:

$$(\text{Glucose g/L} + \text{Fructose g/L}) / 16.83 = \text{Potential ethanol (\% v/v)}$$

Other factors that can affect ethanol concentration include the following:

Yeast strain: *Saccharomyces cerevisiae* strains may vary in ethanol yields, and some non-*Saccharomyces* yeasts consume some sugar but do not produce ethanol.

Fermentation temperature: Higher temps can lead to slightly lower ethanol.

Do you need to measure both pH and titratable acidity?

Acidity, as measured by pH and TA, is a critical grape parameter that affects wine microbial stability, sulfur dioxide effectiveness, color, potassium bitartrate stability, and taste.

pH and TA are not the same and measuring both is important to give you a better overall understanding of grape acidity, potential changes that may occur during wine production and adjustments that may be required.

The major acids in grapes are the weak acids — malic and tartaric acid. Small amounts of citric acid may also be present, but this has minimal impact on pH and TA. Both malic and tartaric acid are dicarboxylic acids, meaning they have two carboxylic acid groups. When measuring titratable acidity, you are measuring the total amount of dissociated and undissociated ions in solution. Because both malic and tartaric acid both have two carboxylic acid groups, changes in the ratio of malic to tartaric acid are not reflected in the TA as the contribution of dissociated and undissociated ions from either acid is the same.

On the other hand, changes in malic to tartaric ratio will impact pH. The pH is a measurement of acid strength (concentration of free H⁺ ions in solution) and tartaric acid is a stronger acid than malic acid. This means that you can have grapes or wine that have the same TA but different pH values due to differences in malic and tartaric acid content.

The malic acid concentration of the grapes will also affect how much of a pH shift occurs post malolactic fermentation, as the dicarboxylic malic acid is metabolized to the monocarboxylic lactic acid (a weaker acid). Large pH shifts can occur during malolactic fermentation (MLF) if you have high malic acid content in your grapes/wine. Malic acid concentrations vary from year to year, so measuring malic acid in the grapes will give you a better understanding of how pH may shift during MLF and what pre-fermentation acid adjustments may be necessary.

The impact of potassium on acidity

pH and TA can also be affected by the concentration of the cation potassium (K). K is naturally present in grapes and is an essential nutrient. In the grape, a H ion on tartaric acid can be substituted for a K ion, resulting in the formation of potassium bitartrate (KHT) (Figure 1). This can lead to a raise in the pH, as there is a decrease in the free H ions in solution due to the substitution of a K ion.

In general, higher K concentrations will result in higher pH, but this relationship does not always exist. K has less of an impact on TA, as TA measures both dissociated (free) and dissociated ions while pH measures only free H. In practice, this can lead to TAs and pH values that do not correlate as you would expect. For example, a juice having a higher pH than you would expect given the high TA.

There can also be situations where there is both a high TA and a high pH due to the extent of K substitution and formation of KHT. In the berry K increases during ripening and changes during grape processing and fermentation. Grape skins contain K, so soaking the grapes on the skins will increase K. Pressing also impacts K, with harder pressing resulting in higher K content. During fermentation, there will likely be an initial increase in K due to extraction from the grape skins, but then concentration starts to decrease as KHT forms and begins to precipitate out. This will remove a H ion and result in an increase in pH. The TA will also increase.

K has an impact on the effectiveness of acid additions to juice/grapes and wine. An addition of tartaric acid may initially increase the TA, but if there is high K then the formation of KHT may not result in the expected decrease in pH. Furthermore, as KHT precipitates (during fermentation and cold stabilization) the removal of tartaric acid will then decrease the TA. The impact of tartaric acid on pH is dependent on the juice/wine pH. When tartaric acid is added, it dissociates into three forms:

Tartaric acid (H T)

Bitartrate (HT)

Tartrate (T).

The proportion of each present is determined by the pH of the juice, grapes or wine (Figure 2). At pH < 3.65, a large amount of tartaric acid is present as H T. The formation of KHT (reaction of HT and K) will release an H ion causing a decrease in pH (Figure 2). The precipitation of KHT removes tartaric acid and will therefore result in a decreased TA. Due to the loss of KHT, the equilibrium will be balanced by the dissociation of more H T which will release more H⁺ ions and further decrease pH.

In summary:

At pH <3.65, a tartaric acid addition will decrease pH and decrease TA as KHT precipitates. However, at pH values >3.65, pH and TA react differently to a tartaric acid addition. At pH >3.65 tartaric acid exists predominately as the HT ion. When the HT ion reacts with K ions to form KHT, the tartaric acid is lost due to precipitation (resulting in a decrease in TA). As before, the equilibrium needs to be balanced due to the loss of KHT but at this higher pH, this results in the formation of HT through the reacting of H ions with T . This results in the consumption of a H ion and an increase in pH.

So, in wines at pH >3.65, KHT precipitation results in a decrease in TA and an increase in pH. In practice, if you are starting with a high pH juice/must it can be difficult to reduce your pH later in the process because your tartaric acid additions will not be effective. Acid additions pre-fermentation should be targeted at getting you pH <3.50 so that post-MLF your wine will still likely be below pH 3.65 and responsive to further acid adjustments. While TA values may be initially high, KHT precipitation and cold stabilization will later reduce your TA.

Feeding your yeast for a healthy fermentation

Aside from the basic juice chemistry parameters, it is also important to know the concentration of yeast assimilable nitrogen (YAN) so that suitable adjustments can be made if necessary. YAN is composed of nitrogen from ammonia (inorganic nitrogen) and nitrogen from primary amino acids (organic nitrogen). Once determined, YAN adjustments should be based on a target YAN value. While you want to add enough YAN for a complete and clean fermentation, you do not want to add excessive nutrients, as this can also cause problems such as overly vigorous fermentations and altered aroma compound production by the yeast.

How much yeast assimilable nitrogen do you need?

Well, it depends. The general recommendation is between 150-250 mg/L for a 21-23°Brix must. If you have a higher °Brix must or are using a high nutrient demand yeast strain, then you may want to consider higher YAN levels. These are not hard and fast rules but are YAN levels that have been reported by researchers and yeast manufacturers to result in fermentations with good kinetics.

A balanced approach of both ammonia and complex nutrients works best if you need to significantly increase your yeast assimilable nitrogen levels.

Aside from nitrogen, the other nutrients that are essential factors for yeast growth are the Micronutrients such as the vitamins biotin, pantothenic acid, and thiamin. If you just want to increase YAN, then ammonia (DAP) is an efficient way to do so. However, DAP does not contain any micronutrients, so you also should be sure to use a complex yeast nutrient that contains a blend of organic nitrogen (amino acids, peptides) and micronutrients. A balanced approach of both DAP and complex nutrients works best if you need to significantly increase your YAN levels.

Nutrient additions should be carefully monitored and recorded, as there are legal limits (concentrations) that can be added for DAP (0.96 g/L), thiamin (0.60 mg/L), and pantothenic acid, (0.048 mg/L). For complex yeast nutrients, carefully read the manufacturer's instructions to determine the maximum concentration of the product that can be added.

The timing of nutrient additions is important for successful fermentations. Yeast preferentially uptake DAP before amino acids. Therefore, one large addition of DAP at the beginning of fermentation may delay or inhibit uptake of amino acids and cause problems later in fermentation. For this reason, perform multiple additions of nutrients during the early to mid-fermentation stage. For example, add half the nutrients 12–24 hours after inoculation followed by the remainder of

the nutrients around 1/3 sugar depletion. Adding nutrient supplements all at once can lead to a fast fermentation rate, and an imbalance in uptake and usage of nitrogen compounds. Alternatively, supplements added too late in the fermentation (after 2/3 fermentation) may not be utilized by the yeasts. This is because as the fermentation proceeds, ethanol concentrations reach a point where they impact the yeast membrane and reduce the ability of the yeast to take up nutrients.

Overview

- Representative samples (vineyard or winery) are key to useable data.
- Brix, pH and YAN may change due to soaking on skins.
 - Glucose + Fructose concentrations are the most accurate parameter for estimating potential ethanol.
- pH and TA measure different components of acidity.
- Potassium concentration can impact pH due to formation of potassium bitartrate.
 - pH shifts due to potassium bitartrate precipitation may increase or decrease pH depending on initial pH. (pH < 3.65 = decrease in pH while pH > 3.65 = increase in pH).
- YAN assessment is important to determine appropriate nutrient additions.
 - Balance of DAP and complex yeast nutrients are recommended to provide YAN and micronutrients to the ferment.
- Nutrients added late in fermentation are unlikely to be utilized by yeast.
- Perform additions early and at 1/3 fermentation.

Reference Library

(updated 10-15-2025)

Here is a list of hobby winemaking manuals and other materials in the editor's file. They are available for downloading by e-mail or via an internet transfer service. Some are downloadable from the source such as Scott Lab. All are in PDF format. (*Newly added or updated, 15 Sept. 25)

- *Understanding Wine Fining – Andreea Botezatu – 2.2 MB – 11 pages
- Scott Lab 2025-2026 Winemaking Handbook – 26.8 MB – 144 pages
- Scott Lab 2024 - 2025 Cider Making Handbook – 6.2 MB – 96 pages
- Scott Lab 2018-2019 Sparkling Handbook – 8 MB – 58 pages
- Scott Lab 2022 Craft Distilling Handbook – 5.2 MB – 26 pages
- Anchor 2021 – 2022 Enology Harvest Guide 2.6 MB - 104 pages
- *Barrel Care Procedures - The Beverage People - 227 KB - 7 pages
- Barrel Care Techniques - Pambianchi – 42 KB – 3 pages
- *Enartis Winemaking - 2025 Handbook – 8.8 MB MB - 85 pages
- A Review Of Méthode Champenoise Production - 570 KB – 69 pages
- Sparkling Wine brief instructions - 20 KB - 3 pages
- Sacramento Winemakers Winemaking Manual - 300 KB - 34 pages
- The Home Winemakers Manual - Lum Eisenman - 14 MB – 178 pages
- MoreWine Guide to Red Winemaking - 1 MB - 74 pages
- MoreWine Guide to White Winemaking – 985 KB – 92 pages
- MoreWine Yeast and grape pairing – 258 KB – 9 pages
- Wine Flavors, Faults & Taints – 600 KB, 11 pages
- Daniel Pambianchi wine calculator set – 13.5 MB, 10 calculators



AT A GLANCE:

SKIN VS. SEED VS. STEM TANNINS

- **Skin tannins:** Riper, softer, and most desirable; contribute structure and color stability
- **Seed tannins:** More bitter and aggressive; best kept in check during fermentation
- **Stem tannins:** Harsh and potassium rich; generally avoided unless stems are fully lignified

Practical Takeaway: Maximize skin contact while limiting mechanical actions that fracture seeds or extract stem material.

TANNIN INTEGRATION OVER TIME

Newly added or freshly extracted tannins often appear harsher than they will after a period of integration.

Over time, tannins polymerize into larger, less reactive molecules that feel smoother and less aggressive on the palate. This process is influenced by oxygen exposure, temperature, alcohol level, and pH. Wines aged in bulk or barrel typically show more rapid tannin integration than wines bottled early, where oxygen exposure is limited. For this reason, sensory evaluation immediately after tannin addition can be misleading. Always allow sufficient integration time – often several weeks – before reassessing balance or making further adjustments.



Should I be concerned about plastic carboys?

Daniel Pambianchi

I get asked this question quite frequently, as of lately, particularly in light of recent studies linking bisphenol-A (BPA)—the plastic used to line beverage containers and tin food cans—to cancer. The latest research from the Université de Sherbrooke in Québec, Canada and published in *Toxicology and Applied Pharmacology* reports that BPA can adversely affect development of the fetus in pregnant women.

Until fairly recently, glass carboys were really the only practical containers for fermenting and storing wine available to home winemakers. However, glass carboys are heavy, slippery when wet, and fragile—much wine has been spilled and many people have been injured as the result of accidental breakage.

Light-weight, colorless, clear, durable PET fermentation carboys were introduced at the turn of the century and are replacing glass carboys, which are no longer manufactured in North America. PET plastics (also known as PETE plastics) are copolymers of polymerized polyethylene tere-phthalate and have a recycle number 1. PET belongs to the polyester family of plastics and should not be confused with toxic ortho-phthalate plasticizers such as di(2-ethylhexyl) phthalate, DEHP, and dibutyl phthalate (DBP), which are added to other types of plastics to make them flexible. It is also important to underscore that bisphenol-A (BPA), a notorious endocrine disruptor used to make polycarbonate plastics that have a recycle number of 7, has absolutely nothing to do with the manufacture of PET. Furthermore, rumors that PET containers leach toxins if they are re-used have been scientifically disproved. PET is FDA-approved and considered safe and non-toxic for food and beverage applications.

In sharp contrast to other types of plastic carboys, PET fermentation carboys do not *scalp* (release, pick up, or transfer) flavors into wines; are specially manufactured to have negligibly low oxygen permeability; are hydrophobic, making them easier to wash than glass; and are not damaged or stained by the washing and sanitizing agents commonly used in winemaking.

So, there you go: If you want to switch to PET carboys in your winemaking, you need not worry about bisphenol-A contamination.



Portland Winemakers Club Leadership Team – 2026

President: **Bob Hatt**

bobhatt2000@yahoo.com

- Establish the leadership team.
- Assure that objectives for the year are met.
- Set up agenda and run the meetings.

Treasurer: **Barb Thomson**

bt.grapevine@frontier.com

- Collect dues and fees, and update the membership list with the secretary.
- Pay bills.

Secretary: **Bob Thoenen**

pwc_secretary@outlook.com

- Communicate regularly about club activities, amateur competitions & other club issues.
- Keep an updated list of members' email, name tags, and other club information.

Chair of Education / Speakers **Paul Natale**

paulnatale6@gmail.com

- Arrange for speakers & educational content for our meetings.

Chairs for Tastings: **Mike Sicard / Steve Fine**

msicard@willamettehvac.com

- Conduct club tastings.
- Review and improve club tasting procedures.

steve.fine@comcast.net

Chair of Winery / Vineyard Tours: **Paul Natale**

paulnatale6@gmail.com

- Arrange & manage tours.
- Select Wineries, Vineyards, etc. to visit.
- Cover logistics (food and money).

Chairs of Group Grape Purchases: **Mark Hernandez / Hank Armstrong**

Arrange for member group grape purchases. Distribute information to the membership. Manage arrangements to purchase, collect and distribute. Provide written rules.

mark_hernandez14@comcast.net

HANKARM@gmail.com

Chair of Group Supplies Purchases (consumables).

Brian Bowles

- TBD

bowles97229@gmail.com

Chairs for Social Events:

Jolie & Brian Bowles / Barb Thomson

- Gala /Picnic/parties

jolie97229@yahoo.com

bt.grapevine@frontier.com

Web Design Editor: **Barb Thomson**

bt.grapevine@frontier.com

<http://portlandwinemakersclub.com/>

Newsletter: **Ken Stinger**

kbstinger@frontier.com or kbstinger2@gmail.com