



MBBC

More Bicycling = Better Community!

Mount Baker Bicycle Club Newsletter, Vol 25 No 10, Dec 2016/Jan 2017

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This month's contributors:


Hilary Higgins, Jim Kruse,
Patti Mullin, Antoine Pethers,
Mark Wheatley. Thanks All!



the club online:

mtbakerbikeclub.org
chuckanutclassic.org
and our social sites:

 [facebook.com/
mountbakerbicycleclub](https://facebook.com/mountbakerbicycleclub)

 [facebook.com/
chuckanutclassic](https://facebook.com/chuckanutclassic)

 twitter.com/mtbakerbike

 [flickr.com/
mtbakerbikeclub/](https://flickr.com/mtbakerbikeclub/)



CELEBRATE!

Lighted Neighborhoods Ride: Wednesday, December 14

Let's spread some cheer together on two wheels, listen to holiday tunes and view some great yard lights in some of Bellingham's neighborhoods. read more on p. 2

New Year's Day Ride: Sunday, January 1, 2017

Pedal in the new year, Sunday January 1st 2017. Meet 10am, depart before 10:30am from Fairhaven Park for the Old Edison Inn for lunch. read more on p. 3

MBBC Annual Members' Reception: Sunday, January 22

Join your MBBC Board for the annual *start-the-new-year* members' meeting and reception on Sunday, January 22 from 5-8 pm. read more on p. 7

Take the Online MBBC Members' Survey

Help the MBBC board plan club activities. read more on p. 3



WEEKLY AND GROUP RIDES: WINTER EDITION

Sunday Edison Social Ride starts from Edison Elementary School parking lot. 30-40 miles, 10-14 mph, route varies. 10 am start time. For additional info: Alfred Arkley arkley@comcast.net or 360-527-8638

Sunday Rabbit Ride: 32mi road ride, south on Chuckanut, back via Colony and Lake Samish. All welcome; come prepared to push yourself. Pace varies by individual. Small similarly-paced groups leave from Fairhaven Bike. Those who ride slower than 16 mph, be ready to ride by 8:00 am (winter start time) Faster groups leave every 5 minutes thereafter, johnh@fairhavenbike.com 733-4433 fairhavenbike.com/about/sunday-rabbit-ride-pg355.htm



Tuesday Ferndale Social Ride: starts from Pioneer Park in Ferndale, 30-40 miles, 13-16 mph route varies. Start time 10am. To check time and other info: Bob Parker rmp-4724@hotmail.com or 360-671-6910

Wednesday Group Trail Ride: Meet 5:45pm, leave 6pm from parking lot across from Boundary Bay Brewery on Railroad Ave. Beginning in October, this is the yearly overwinter trail ride with lights. Bring a trail-ready bike and light it up! This is a vigorous ride around our local trails and runs every week overwinter, rain or snow or cold! Info: t.ryan.2009@gmail.com *Ride will switch back to evening road ride in April 2017.*

Thursday South Social Ride starts from Edison Elementary School parking lot. 30-40 miles, 10-14 mph, route varies. 10 am start Info: arkley@comcast.net, 360-527-8638

Saturday Donut Ride: 24 – 45 miles, race pace, departs from Kulshan Cycles, 7am summer-season start time. Goes to Ferndale and return, or if you wish continue to Birch Bay and return. Every week of the year!!

Saturday Recumbent Ride: Second Saturday of the month at 10 am. 14 mile intown course begins at Kulshan Cycles. Weather-dependent. Robert Parker at rmp-4724@hotmail.com or 360-671-6910

Lighted Neighborhoods Ride: Wednesday December 14, 6pm

Let's spread some cheer together on two wheels, listen to holiday tunes and view some great decorative yard lights in some of Bellingham's neighborhoods.

Put some lights on, decorate yourself and your bike (battery-powered festive lights are available at Big Lots among other places), and be jolly with the MBBC!



We'll meet on Wednesday, December 14 at the Depot Market parking lot on Railroad at 5:45 pm and leave at 6pm. Patti Mullin is again creating a route for us to casually pedal down quiet streets and view the best lights (perhaps we'll again see last year's lighted flying pig, and weather permitting, check out James Street Estates).

Gather after the ride for dinner somewhere downtown at approx 7:30 pm. Questions? Patti Mullin: patti.mullin@gmail.com

TAKE THE MBBC MEMBERS' SURVEY

Help your MBBC board plan next year's activities by sharing your opinion in our survey:

The link on Survey Monkey: <https://www.surveymonkey.com/r/P23QH7X>

or type in the shortcut: <http://tinyurl.com/MBBC-Survey>

New Year's Day Ride: Sunday January 1 2017, 10am



Pedal in the new year, Sunday January 1st 2017. Meet 10am, depart before 10:30am from Fairhaven Park for the Old Edison Inn where owners John and Lynn will be expecting us. We can park our bicycles in the beer garden and enjoy the warmth inside. Friends and family are also invited to join us at the Old Edison Inn for lunch at about 11:30am, even if they don't ride. theoldedison.com/

No one will be left behind on this group ride.

We pedal 13.8 miles along Chuckanut Drive. Return the same way or via Colony Road and Lake Samish, or even Bow Hill Road to start your year off steep!

Each year this ride attracts a large group of participants, regardless of the weather. Start your year off with the MBBC. Questions? MarkWheatley@msn.com

Cycle Moles 8-week sessions, beginning on dates:

January 2, 2017 - aerobic base & strength building

February 27 - build and interval training

April 24 - aerobic/anaerobic interval training

cyclemoles.com, 360-733-5050 to sign up or ask questions.

REI Classes at Bellingham Store:

January 22, 2017 - Hands-On Wheel Truing, 9:30am
rei.com/stores/bellingham.html

Don't just ride, ride with a plan!

Cycle Moles coaches create the program to bring the right intensity at the right time.

Includes periodized training plan and heart rate & power threshold assessment.

Ride with watts on our Keiser bikes or BYOBike.

Cycle Moles Tues & Thur 8-Week Sessions

- start 1/3, 2/28, 4/24 -

Level 1: 7:00 - 8:00am

Level 2: 6:45 - 8:15pm (incl 15 min Core & Stretch)

Can't commit? Try our Drop-in Cycling

Mon 6:30pm Tu/Th 5:45am Fri 7:00am Sat 8:00am

\$18/class -or- \$150/15 classes

Call us now!

800 McKenzie Ave. Bellingham, WA 98225



MBBC's Signature Ride coming again in 2017!

August 27, 2017

chuckanutclassic.org

Supported road rides
plus a guided family-fun route.

Mark your Calendar!



**CASCADE
CROSS
SERIES**
BELLINGHAM, WA



Cyclocross End-of-Season Races

cascadecross.com

December 10-11 State Champs

January 17, 2017 - Bandit Cross

Engineering thoughts to ponder

YOU MAY NOT BE GAINING AS MUCH ELEVATION AS YOU THINK

by Jim Kruse



How do our tracking apps work?

Now, how do ride tracking apps like Strava handle elevation? Interestingly, Strava throws elevation data away for devices without a barometric altimeter. Since it knows the route you rode (from the other GPS readings), and since it has access to the United States Geological Survey (USGS) elevation maps, Strava chooses to discard the elevation readings from your smart phone and instead to look up the elevation at every point.

As a side note, even the cartographers for the Pacific Crest Trail discard the on-site elevation readings. And that's after using expensive, survey-quality GPS units to map the entire trail to 1 meter accuracy. I guess their users are about as sensitive to ups and downs as anyone.

The USGS Grid

Let's take a minute to talk about this process. The USGS elevation data covers all of the US in a grid of points 1/3 of an arc second apart, or about 33 ft. In some areas they have a much finer resolution (about 10 ft), but it's not clear whether services like Strava and RideWithGPS use the new data.

In any case, think about what this means the next time you're riding down Chuckanut Drive. Some of the elevation points Strava uses are going to be off to the side of the road, and since Chuckanut is cut through the side of a mountain, the measured points may be either way up a steep hill on the inside of the road, or down a cliff on the outside.

Even if Chuckanut was a flat road, because it is on the side of a mountain the elevation numbers jump around a lot.

The Bridge Problem

Another source of errors (and the errors always seem to be inflating your total elevation gain, not reducing it) is what I call the bridge problem. I looked at the Chuckanut Classic's 100 mile route (in RideWithGPS) and did some analysis. I went through and looked for places where the reported grade was suspiciously steep. A number of these anomalies could be explained when I zoomed in on the problem areas in Google Maps. They were cases where the road crosses a bridge over a river or train tracks. (See image below:)

continued on p.5

Those elevation numbers we cyclists like to brag about, well, take them with a large grain of salt. There's a lot of confusion, a lot of noise, and a number of sources of inaccuracy when computing the total elevation gain of a ride or a hike. Before you brag *too* much about climbing 10,000 ft on the Bill's Hills ride or 8900 ft on the Passport to Pain, let's look into what the errors are and where they come from.

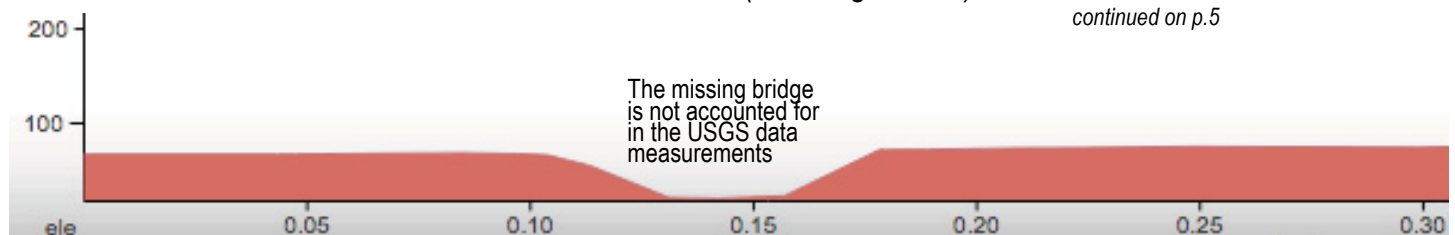
How is elevation measured?

Let's start with GPS units, since these are pretty common and are perceived to be fairly accurate. We've become used to the impressive X-Y location results we can see on our smart phones, which can often be as accurate as 10 or 15 ft. With special equipment, this can drop to even fewer feet. However, GPS is much less accurate in the vertical direction, and can occasionally be off as much as hundreds of feet.

Some of this has to do with trigonometry and the number of satellites above the horizon. Another source of error is that GPS returns not your elevation above sea level, but rather your distance from what's known as the *reference ellipsoid* – a theoretical model of the shape of the earth.

Correcting for this introduces additional errors.

What about barometric altimeters? These have their place, but need calibration and will drift with changing atmospheric pressure.



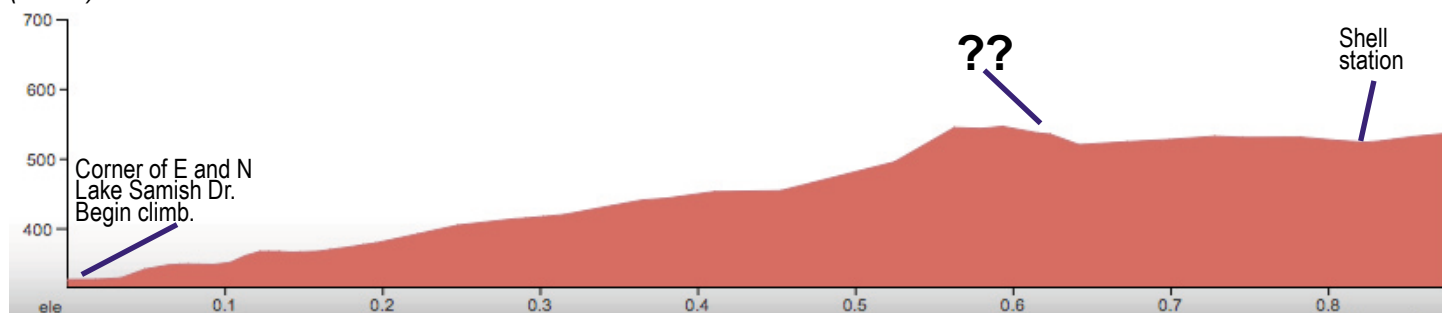
ELEVATION?

continued from p.4

Since Strava ignores what your elevation reading on your phone is telling it, and instead looks up the elevation via GPS of the surrounding terrain, it thinks you and your bike went sailing down the hill and back up the other side, instead of coasting easily over the bridge. I suspect this problem accounts for lots of the false reported elevation gain.

USGS Errors

Finally, there's a category of error I don't even have a good explanation for, but crops up when the USGS data is used. Picture this if you can. You've ridden from Bellingham to Lake Samish, riding around the lake. Now you're about to climb up from the lake to the Shell station. I've ridden this many times, and it's all uphill. There are no breaks in the climb, though the grade eases a bit. Yet here is the profile (below) that RideWithGPS shows for that climb:



references:

Strava uses USGS elevation data. <https://support.strava.com/hc/en-us/articles/216917087-Elevation-Gain>

Elevation Gain on the Pacific Crest Trail: <https://www.pctmap.net/2014/03/elevation-gain-on-the-pacific-crest-trail/>

submitted by Jim Kruse:
the computer geek bike rider
who everyone likes to draft behind



THANK YOU TO OUR MAJOR SPONSORS/PARTNERS IN 2016!



MBBC ADMINISTRATION

Mount Baker Bicycle Club Board of Directors and Officers:

Hilary Higgins - President
John Okan - Vice President
Jennifer Longstaff - Secretary/Membership
Dina Soda -Treasurer
Eric Stromerson - Rides Coordinator
Bill McCourt, Greg Rehm, Tim Ryan, Joe Wiederhold
- at large

Project leaders:

Chuckanut Classic: John Okan and committee
Ride Leader Coordinator: Greg Rehm
New Year's Day Ride: Mark Wheatley
Newsletter-Bagel Procurer: Cathie Gerlicher
Graphic Design: Tim Ryan
Website: Michael Richard
Bike to Work Day Stations: Pam Fonda, Mary Cole



Club Bike Jerseys

The official MBBC bike jersey is available in two styles: a colorful (1) short-sleeved 3/4 zip, available in men's and women's club cut sizes (2) long-sleeved full zip thermal in men's and women's race cut. Jerseys may be ordered directly from Voler.com. voler.com/browse/collections/details/li/MtBakerBicycleClub. MBBC members: check your email for discount code.

Contacts:

Information-- bikebeham@gmail.com
Chuckanut Classic -- chuckanut@mtbakerbikeclub.org
Newsletter -- news@mtbakerbikeclub.org

Contribute to the MBBC newsletter submission guidelines:

Articles, editorials, photographs, and artwork are welcome for inclusion in the newsletter. Anything related to bicycling will be considered; please discuss ideas with the editor (news@mtbakerbikeclub.org) in advance to reserve newsletter space or if you have questions. Final materials are due the last Friday before the last full week of every month, though earlier submissions are appreciated. Text can be submitted in any common format, for example: plain text, HTML, MS Word, PDF. Please use JPG, PNG, or TIFF format for photos, and ensure they are at least 250 ppi. Articles may be edited for grammar, spelling, and space considerations.

Please notify the MBBC of upcoming cycling events for inclusion in the events list/calendar. Provide details plus contact information.

Classified ads are a MBBC member privilege and are printed as space is available.

individual and corporate membership forms may be downloaded at: mtbakerbikeclub.org/join-the-club/
join the club online: ccnbikes.com/#!/events/mount-baker-bicycle-club

MBBC Membership Form for 2017

☐ New Member ☐ Renewing Member ☐ This is a change of address

Last name: _____ First name: _____

Address: _____

City: _____ State: _____ Postal Code: _____

E-mail: _____

Contact telephone number: _____

Associate member: _____

(An associate member is any person living at the same address as the individual member)

I would like to receive my newsletter via (choose one): ☐ on-line or ☐ printed & mailed

Would you like to help? Volunteers are our most valuable resource.

Please check any of the boxes that appeal to you and we will be in touch:

- | | | |
|--|--|-------------------------------------|
| <input type="checkbox"/> Board Member | <input type="checkbox"/> Ride Leader | <input type="checkbox"/> Newsletter |
| <input type="checkbox"/> Chuckanut Classic | <input type="checkbox"/> Bike to Work and School Day | |
| <input type="checkbox"/> Special Events | <input type="checkbox"/> Website Calendar | <input type="checkbox"/> Education |

Membership type:

Individual: \$20 _____
Family/Associate: \$30 _____
Additional Donation: _____
(donations support community bicycling programs)
Total enclosed: \$ _____

Please enclose a check payable to:
Mt. Baker Bicycle Club

Mail to: Mount.Baker Bicycle Club
attention: membership
Post Office Box 2702
Bellingham, Washington 98227

MBBC memberships are valid January-December of each year. Renewals due every January.

Our annual January club meeting:

MBBC ANNUAL MEMBERS' RECEPTION

Sunday, January 22, 2017; 5-8pm; 709 Orchard Pl, Bellingham (Orchard Drive Jeckyl & Hyde restaurant)

Join your MBBC Board for the annual *start-the-new-year* members' meeting and reception, **Sunday January 22**. This year's reception will again be held at the Jeckyl & Hyde restaurant at 709 Orchard Pl (jhdeli.com, corner of Orchard Drive, off Meridian). Arrive between 5 and 7 pm for food, beverages, and to meet other club members.

Members' Reception activities include:

- **Membership renewal party:** MBBC memberships are calendar-year based, so everyone's renewals are due in January. (If you joined the club after September 2016, your membership is good through 2017.) Some have renewed already. For others, a reminder email will go out in December. Your first drink of the evening is complimentary with your new membership card - renew, pick up your card, and with it your drink ticket!
- **Pizza Dinner** compliments of the MBBC.
- **Bike Gear & Clothing Swap:** Bring your extra bottle cages, components, saddles, jerseys, and other miscellanea that's cluttering up your bike closet, put it on the hand-me-down table for others who can use it. Left over gear will be donated to Sterling Bike Works or The Hub.
- **New Members Invitation:** Know anyone who's thinking of joining the club? Invite them to the reception where they'll meet our fun and friendly members, can hear about plans for 2017, and can sign up and start the year as a MBBC member.



Welcome new members

Bill Gunter

Mark Korenkiewicz

Nancy Korenkiewicz

Pete Matronic III

Pete Reissmann

Philip Stephenson

Tom Voegeli

Scott Wood

We're glad to have you in the MBBC!

BELLINGHAM SOCKS FOR SALE!

Have you noticed cyclists around town wearing neon-green "Bellingham" cycling socks with trees decorating the cuff? These are socks that we designed for the Northwest Tandem Rally attendees when they were in Bellingham in July 2015. The MBBC bought the extra socks from the Tandem Rally for cost, so we can sell them to our MBBC members while supplies last!



These are DeFeet *Aireator* socks, made of 60% nylon, 39% Coolmax, and 1% lycra. They retail for \$11 plus tax, and we're offering them to MBBC members for \$5/pair, tax-inclusive. We have 3 sizes: S (women 6-8 or men 4.5-6.5 or euro 36-39.5), M (women 8.5-10.5 or men 7-9 or euro 40-42.5) and L (women 11-13 or men 9.5-12 or euro 43-46). We only have a few of the smaller sizes left. Socks will be available for sale on December 14th at dinner (after the Lighted Neighborhoods Ride, see p. 2) as well as at the annual reception on January 22.

If you'd like to buy some socks to give as holiday gifts but you won't be at the December 14th post-ride dinner, drop an email to Hilary (bikebehram@gmail.com) and we'll make arrangements to get socks to you!

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
				December 1 Edison Social Ride	2	3 Donut Ride
4 Rabbit Ride Edison Social Ride	5	6 Ferndale social ride	7 Wed Trails Ride	8 Edison Social Ride	9	10 Donut Ride Recumbent Ride Cyclocross State
11 Rabbit Ride Edison Social Ride	12	13 Ferndale social ride	14 Wed Trails Ride Lighted Night Ride	15 Edison Social Ride	16	17 Donut Ride
18 Rabbit Ride Edison Social Ride	19	20 Ferndale social ride	21 Wed Trails Ride	22 Edison Social Ride	23	24 Donut Ride <i>Hanukkah begins</i>
25 <i>Christmas</i>	26	27 Ferndale social ride	28 Wed Trails Ride	29 Edison Social Ride	30	31 Donut Ride
January 1 <i>New Year's Day Ride</i>	2 Cycle Moles begins	3 Ferndale social ride	4 Wed Trails Ride	5 Edison Social Ride	6	7 Donut Ride
8 Rabbit Ride Edison Social Ride	9	10 Ferndale social ride	11 Wed Trails Ride	12 Edison Social Ride	13	14 Donut Ride Recumbent Ride
15 Rabbit Ride Edison Social Ride	16 <i>MLK Day</i>	17 Ferndale social ride	18 Wed Trails Ride	19 Edison Social Ride	20 MBBC Feb Newsletter Deadline	21 Donut Ride Cyclocross: Bandit X
22 Rabbit Ride Edison Social Ride MBBC Reception	23	24 Ferndale social ride	25 Wed Trails Ride	26 Edison Social Ride	27	28 Donut Ride
29 Rabbit Ride Edison Social Ride	30	31 Ferndale social ride	February 1 Wed Trails Ride	2 Edison Social Ride	3	4 Donut Ride



Mount Baker Bicycle Club

Post Office Box 2702
Bellingham, Washington 98227



Welcome to Bellingham
Now Get on Your Bike!
www.mtbakerbikeclub.org

If you are a club member and wish to receive a printed version of the newsletter rather than online, please inform news@mtbakerbikeclub.org. Club members are entitled to a printed/mailed version sent to a US address..