

WINTER BIKING

AN ESSENTIAL GUIDE TO ALL OF THE GEAR, SKILLS, AND PREPAREDNESS FOR SAFE AND HAPPY WINTER CYCLING

Why cycle in the winter? Winters in Maine can feel long, dark, and cold, but staying active is a great way to beat the winter blues. Keeping active on your commute is convenient because you have to get out anyway (to go to work, the store, etc.) so why not make the most of it! Compared to commuting on foot, cycling in the winter can be a faster, warmer mode of transportation. Portland roads provide consistent winter maintenance including increased salt application, promoting year-round bicycle safety. Both bicyclists and motorists must recognize shared road rights and follow common traffic laws for safe travel year round.



There are **three major considerations** to be made when cycling in the winter:

Lighting Conditions,

Preparing Your Bike for the Weather, and

Preparing Yourself for the Weather!



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COALITION
OF MAINE**

portlandbikeped



PORTLAND BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE

PORTLAND, ME // DECEMBER 2023

LIGHTING CONDITIONS

VISIBILITY

- Always ride in or near a travel lane; stay visible by riding where drivers are looking.
- Do not pass on the right; motorists are not looking for other vehicles there.
- Add bright or reflective pieces to the moving parts of your body (feet, ankles, legs) or to your bicycle (wheels, spokes, cranks, tires).



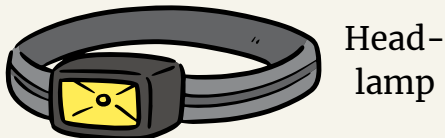
Reflective workwear is affordable and can accommodate bulkier underlayers

Sew reflective material onto existing clothes

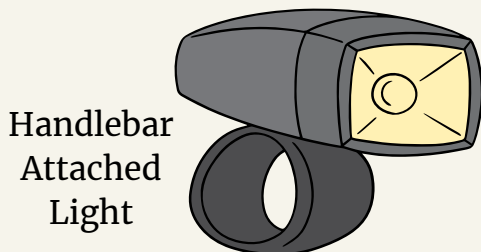
Place retro-reflective tape where headlights point, like helmets and spokes

LIGHTS

[Maine State Law](#) requires bicyclists to use a white **headlight** visible for 200 feet, a red or amber **rear light or reflector**, and **reflectors** on their pedals or feet.



Head-lamp



Handlebar Attached Light



- Rear-facing lights should be mounted in a visible location, ideally on the bike frame, and be bright, but not blinding, to those behind you.
- It's a good idea to have two rear-facing lights, so that if one runs out of batteries others on the road can still see you from behind.
- Great low-maintenance lighting options include:
 - Reflectors,
 - Dynamo hub lights, powered by a generator hub on the front wheel, and
 - Battery-powered or USB rechargeable front lights.
- Bicyclists should opt for 500 lumens (a range of light bright enough to read text clearly, but not cause eye strain) and should angle down the light slightly to avoid blinding drivers while illuminating the road in front.

PREPARING YOUR BIKE



STUDS/STUDED TIRES

Studded bike tires improve control and traction in icy conditions because metal studs are embedded into the tread of the tire. Adding studded bicycle tires (or studs) to your current bike can provide a lot of extra stability on slippery roads and can make winter trail use easier.

It is important to note that studded tires will also add rotational weight, dramatically slowing down a bike and requiring more effort to pedal. If you are a new rider or have mobility constraints, studded tires might not be the best option.

A WINTER BIKE

If you don't need or want studded tires every day for winter bicycling, consider purchasing a used utility, gravel, or mountain bike to put the studs on. This will save you the trouble of switching tires and increase the longevity of the studs.

Other winter bike options include:

- Fat-tire bikes - Great for winter commuting and trail riding with a substantial tire clearance; fat bikes are built for snowy, icy, or mucky conditions. The tire size adds traction and allows you to roll at a very low tire pressure. Studded tires can be added to fat-tire bikes.
- E-bikes with gravel or mountain tires - E-bikes can be used year-round, but require extra care and maintenance. Studded tires can be added to e-bikes.

TIPS FOR STORING YOUR BICYCLE

Do store your bicycle in a dry, ventilated, cool space like a basement or garage.

Don't store your bicycle in a hot place. The shifting temperatures from warm to cold will make the snow/slush stick to your fenders, and unnecessary or increased heat can impact your tires.

Beware that e-bike batteries are especially susceptible to damage from extreme cold and will be expensive to replace.

A winter bike can also help to preserve your nice fair(er) weather commuter bicycle. Winter salts, sand, and slush are hard on a bike's frame, wheels, and more, but with care and cleaning at the end of the season it can last several years.

PREPARING YOURSELF



Dressing for the cold is personal and every bicyclist has different tolerances and preferences. **One rule of thumb is you should never be warm at the start of your ride because you are likely to overheat sometime during it.**

Conventional wisdom also recommends layers. Layering is typically better than just a single jacket; however, finding the right one for winter conditions might take a few rides to determine. Layers can be carried with you in a pannier, backpack, basket, or messenger bag. If you get too hot, you can remove one layer at a time.

It can be helpful to make a checklist of what layers work best for what temperatures, so that leaving in the morning has little guesswork involved.

Dressing for Riding an Electric Bike:

Due to the higher speeds and reduced exertion of riding an e-bike, staying warm can be a challenge. Insulation is important, but layers that will protect you from the wind are crucial. A 30-degree day can quickly turn into a ride in the teens when riding at higher speeds. A helpful tool to get an idea of what to expect on your ride is plugging the temperatures and wind speed/top e-bike speed into a [wind chill calculator](#).

When considering e-bike clothing, think skiing. Insulated ski jacket shells, wind/snow pants, balaclavas, and ski goggles are very effective at blocking wind and keeping you warm. In addition, pogies and neoprene overshoes will protect your extremities. Depending on how cold you run, a full-face motorcycle helmet may not be a bad idea to keep you warm and safe.

RECOMMENDATIONS BASED ON TEMPERATURE

50 Degrees:

- Tights or leg warmers
- Heavy long-sleeve shirt (or jersey) with sleeveless or short-sleeve wicking undershirt or lightweight long-sleeve shirt with long-sleeve undershirt

40 Degrees:

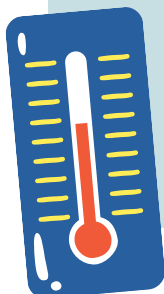
- Tights or leg warmers
- Long-sleeve heavy turtleneck and lined jacket
- Medium-weight gloves
- Headband covering ears
- Winter boots or cycling shoes
- Wool socks

30 Degrees:

- Heavyweight tights
- Long-sleeve heavy turtleneck and heavy jacket
- Heavy-weight gloves
- Lined skullcap
- Winter boots or cycling shoes
- Wool socks

20 Degrees and below:

- Winter tights
- Long-sleeve heavy turtleneck
- Long-sleeve shirt and lined jacket
- Insulated gloves lobster claw gloves
- Balaclava
- Winter boots or cycling shoes
- Wool socks



HEAD AND NECK

Short-brim hats (like cycling caps) **with earflaps** can be a great choice for protecting yourself from windchill and freezing temperatures!



Try to avoid full-sized visors (like a baseball cap) which can impede your vision.

Some type of **eye protection** such as glasses with wind protection can be incorporated to protect your eyes from the cold, glare from the sun, and cut down on wind and snow obscuring your vision.



It should be noted, ski goggles don't offer peripheral vision and should be avoided for winter biking.

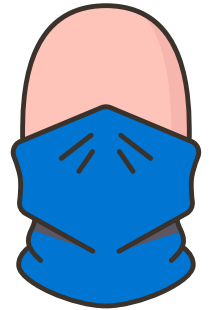


Ski or motorbike **helmets** also have built-in insulation and ear protection.

A **balaclava** fitted under a helmet is great for cold weather!



A **buff or neck gaiter**, ideally a fleece or wool one, also adds warmth and comfort to any outfit.



HANDS

For temperatures closer to 40 to 50 degrees, a light pair of gloves might be enough; for colder temperatures, a heavier pair of insulated gloves is recommended paired with hand warmers inside.

Overall, you want to make sure to look for gloves that give you dexterity, are waterproof, and provide warmth.

Conversion gloves can provide both warmth and manual dexterity.



"Lobster gloves", a compromise between gloves and mittens that place some of your fingers together.



One option is **"pogies"** (also known as "bar-mitts") are insulated covers for your hands and work well with flat handlebars. These mittens provide excellent warmth while allowing you to wear thin or no gloves underneath, providing extra warmth and dexterity for things like locking up your bike.



LEGS AND FEET

Wearing plain/regular pants can keep bicyclists warm to around 50 to 40 degrees, after that your legs will start getting cold and potentially frostbitten. A pair of tights, leg warmers, thermal long underwear under winter biking

or ski pants are a great combination. Gaiters for snow-shoeing or cross-country skiing are also helpful for keeping snow out of your shoes or boots and can have reflectors sewn on the back. Additional thick wool items can aid in warmth.



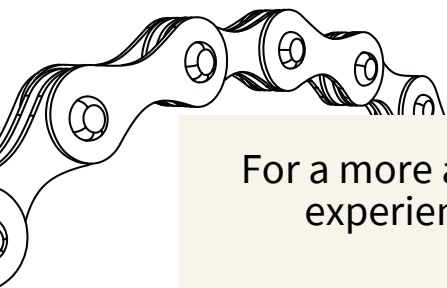
Boot gaiters

If you use regular (flat) pedals, insulated winter or work boots can be worn. Wool socks are ideal for keeping feet warm and dry, as cotton isn't insulative enough.

If you use clipless pedals, insulated shoes or **neoprene**

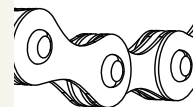
bike shoes are an excellent option, but can be expensive.





For a more accessible, connected, and comfortable winter biking experience, bicyclists year-round should utilize the City of Portland's Complete Streets.

What are Complete Streets? These are low-traffic, lower-stress streets equipped with dedicated bike facilities, offering the safest and most inviting routes for commuting to your desired destination. For residents seeking guidance on selecting winter riding paths, the [City of Portland's Bikeway Network Map](#) serves as a valuable resource. Bicyclists can easily identify streets that accommodate their needs, ensuring safer and more enjoyable winter biking.



- **Take the lane:** Snow and debris can accumulate along the curb, taking over the bike lane. Bicyclists can share the road with motorists and are encouraged to ride in the middle of the lane to be more visible and ensure no one can pass without changing lanes.
- **Adjust your braking:** Similar to when driving, you don't want to slam on the brakes while biking on icy roads. Brake slowly, to prevent spinouts, and give yourself extra time.
- **Adjust your turning:** If you need to make a turn, lead by steering, staying as upright as possible, and make sure to use hand signals when possible. Go wide and slow.
- **Watch for ice:** Watch out for areas with melted snow as it could have refrozen overnight forming black ice - a dangerous type of ice that forms on roads and is so thin that it cannot be seen. If you end up rolling over an icy or slippery patch, then try to coast across it without braking, pedaling, or steering.

In short, make sure you are visible, safe, warm and ride slower than usual. Remember to accelerate, brake, and steer more gradually than usual.

With special thanks to artist Jenny Ibsen (jennyibsen.com), Cassandra Leopold, cycling experts from Bicycle Coalition of Maine, Cycling Savvy, Portland Bicycle and Pedestrian Advisory Committee, and more.

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