

# Winter Commuting Workshop Curriculum

## I. Introductions

A. What folks want out of the class

B. What are the reasons why people DON'T want to ride in the winter?

- It's cold
- Their bike will get dirty
- It's slippery in the snow/ice
- It's dark early
- It's windy

C. What are the advantages to riding in the winter?

- Never have engine trouble
- Can ride even if roads are not cleaned
- You keep yourself warm rather than wasting gas to run the heater
- Ready to go right away - no scraping making you late for work
- Enjoy the beautiful snow instead of cursing it
- The multi-use paths are often plowed before the roads
- I've never had to dig my bike out of a snowbank or driveway

## II. Things to watch out for physiologically

A. Frostbite

B. Hypothermia

C. Others?

We should be at 20 minutes at this point.

## III. Gear

- Winter cycling gear technology has come a long way in the past decade or two, and with the more people riding bikes, and more in winter, the better it's getting. For now, if you can't find cycling specific gear for riding in the winter, try looking for ski, snowboard, or other winter sports gear that may work while you're on a bike. Cyclocross gear is also getting good and is cycling specific.

A. Yourself

## 1. Clothing

- wind/water proof layer is key
- it's very difficult to stay warm if you're wet and it's usually pretty uncomfortable
- good to have several layers because even if it's very cold you will warm up after the first 10 minutes on the bike
- Pit zips and other zippers strategically placed allow for opening to regulate body temperature and avoid overheating or sweating.

## 2. Eye protection

- Protection from sun, rocks (in the winter these collect along the roads from snow melt and get kicked up even more than in the summer), bugs, precipitation, cold and wind
- Especially when there's snow on the ground, the Colorado sun will do a number on your eyes.
- Cold wind on your face will dry out your eyes pretty quickly
- Snow and rain may make it a little harder to see through your glasses, but it's not that hard to wipe them of every once in a while and it's a whole lot better than riding with your eyes closed
- If you're covering your nose, sun glasses often get fogged up. Snow goggles are often better in the winter because they are less likely to fog up when you have your face covered and they provide more coverage from wind and cold.

## 3. Shoes, Socks, Boots

- Normal cycling shoes usually have mesh over the toes which will freeze you in the winter from the wind.
- Using clipless pedals is usually colder because there's a hole in the sole of the shoe that puts a very cold piece of metal very close to your foot so the pedal and crank just sucks the heat out of your foot.
- No matter how good your fenders are, you will always get some spray up from a wet road, so it's best to have waterproof boots, socks or overshoes. Neoprene socks are available, check the kayaking or canyoneering section of sporting goods stores.

- Cycling creates unique pressure points in the foot that make it harder to keep warm even when your core is very warm. If your feet start to fall asleep or freeze up, usually taking a quick minute or two off the bike will help get the circulation back into the toes
- Really bulky boots that are tall can make it difficult to pedal and hard to feel the bike.
- Big boots often don't fit into normal pedal cages, but you can take a giant rubber overboot and cut out the back and mount that to some pedals as a pair of waterproof windproof toe cages
- Keep the pulse point warm at the base of the shin/top of the ankle, and the foot will stay warm

#### 4. Gloves

- Again, staying dry is key here.
- If you can operate your brakes and shifters with mittens, they are much warmer
- Moose mitts are for the extreme cold/nasty/long term weather, but are very comfy and warm and dry
- Keep the pulse point warm at the base of the thumb/top of the wrist, and the hand will stay warm
- Some gloves have a zipper pocket for chemical hand warmers

#### B. Bikes

1. Road
2. Mtn
3. Cyclocross
4. Fully enclosed recumbent trike
5. Balloon-tire two-wheel drive iditabike

#### C. Bike Accessories

1. Normal Commuting Stuff
2. Tires
3. Lights
4. Panniers, Racks, Bags
  - a. Keeping things dry
5. Fenders

- a. Low Clearance Bad
- b. High Clearance Good
- c. DIY Cheap

We should be at 1 hour 10 minutes at this point.

#### IV. Behavior

##### A. How Riding Changes in the:

###### 1. Wet

- A wet rider is a cold rider. Avoidance is the best defense against moisture or wetness. This can be via clothing, route choice, or timing.
- Slow down
- Braking time/distance is increased, so plan ahead, and brake early. Your vision should be focused farther ahead than normal, to avoid potential hazards. Better to slowly approach an intersection and have to pedal up to it than go too fast into one and not be able to stop.
- Hydroplaning is impossible on a bike.
- Avoid puddles, as the bottoms are not visible, and they indicate low spots/potholes/debris
- Wet leaves=crash.
- Wet metal, train tracks, sewer grates, manhole covers=crash
- Lane lines can be very slick when wet. Avoid these.
- Braking--keep the brakes "running" lightly to keep the pads and rims dry. Disc or drum brakes don't need this.
- Visibility in the rain is horrible.
  - Use as many lights and reflectors and visibility enhancements as you're comfortable with.
  - Use caution when approaching intersections, or making moves in front of motorists, etc.
    - If you haven't made eye contact with them, and gotten a visual confirmation of their intent, assume they haven't seen you or won't yield to you.

- Cover your seat with a grocery bag, when you park it will be dry when you're ready to leave.

- Cover your seat post with something, to keep water out of bottom bracket.

## 2. Cold

- If it's dry and cold, you just need the appropriate layers.
- Very important to keep from sweating by adjusting your layers and your exertion.
- Better to stay a little on the cool side than on the warm side
- Clothes with pit zips or other zippers to help regulate temperature
- Suspension components behave differently in the cold due to changes in the viscosity

## 3. Snow

- Fresh snow is best for riding in.
- Slushy Boulder snow the day after is ok, but watch out for ice, and avoid other bicycle tracks if possible as these may be frozen or icy
- Snow which has partially melted and refrozen is dangerous. Avoid or use snow tires.
- Visibility is sometimes better than in the rain, but drivers are:
  - Not looking for you because who rides in the snow?!
  - Focused on their own traffic condition worries
  - on the phone, shaving, eating
- After the snow, watch for extra debris leftover from snowplows

## 4. Ice

- Snow/studded tires are a must
- Cars are dangerous on ice
- Keeping traction with the front wheel is a must.
- Back wheel is allowed some skidding
- If you realize there's a patch of ice which you cannot avoid, roll over it. Do not steer, do not brake, do not twitch.
- Riding on ice is not for the squeamish. It takes practice and guts.

## 5. Bridges

- Bridges have cold air circulating underneath them, and may freeze.
- Boulder's multi-use paths have several wooden bridges over creeks etc.
  - These can get iced over very easily
  - Not visibly so
  - Go slow, straight, and carefully over them

#### 6. Underpasses

- Underpasses have cold windy air circulating through them. The curves or inclines leading into underpasses frequently ice over.
- Be vigilant when entering and exiting underpasses on multi-use paths

#### 6. Skidding

- It's going to happen if you ride in the snow/ice.
- Keep the front wheel rolling
- Turn your handlebars into the direction your back wheel is skidding
- Try not to overcorrect
- keep your weight over the front wheel/handlebars
- It helps to practice this when there is little or no danger of falling
- DON'T PANIC

### B. Reporting Dangerous Conditions to the City of Boulder

#### 1. Online

- [www.bouldercolorado.gov](http://www.bouldercolorado.gov)
  - Departments
    - Transportation
      - Report a maintenance problem

#### 2. Telephone

Transportation Maintenance Issues: 303-413-7177.

Select 4 to report a bikeway problem.

Close Call Report: 303-441-4272.

Report all car/bike accidents

If an injury takes place, call 9-1-1. Otherwise call 303-441-3333.

#### 3. Reporting Drivers

- a. From a cell phone, "Star CSP" (\*277)

b. From a land line, 303-239-4501

c. print out <http://bicyclecolo.org/page.cfm?pageId=731>

### C. Bike Maintenance and cleaning in the cold/wet/snow

- Road Salt, chemicals, and exhaust and tire/brake dust are not bike or clothing friendly
- Rinse off bicycle, clothing as soon as possible after riding.
- Don't use a high pressure washer near grease
- A simple hose down with a rag or soft brush is good
- If you're riding in the extreme cold, some thicker grease on most bearings is preferable.
- Lube your chain as often as possible. Once per ride if that's possible.
  - It needs it, and you need your chain.

### D. Planning your ride

#### 1. Preparation

- Give yourself plenty of time.
- Better to be a lot early and safe than a little late and rushed and injured
- Know your route, know the hazards (bridges, underpasses, potholes)
- Bad or extreme weather conditions is not a great time for finding shortcuts
- Stash a set of fresh clothes at your destination or carry with you

#### 2. Backup

- Make sure someone knows where you're going, the route you're taking, and when you'll be there.
- Check in once you're there.
- Have an alternate way to get where you're going in case of mechanical failure, injury, roadway blockage, or worsening of conditions.
- Cell phone
- Bus money
  - Buses aren't always reliable or available in the worst conditions
- Credit/debt card or \$20 for cab

## E. Nutrition

### 1. Hydration

- Drink more often than you are thirsty
- It's very easy to overlook dehydration in the cold

### 2. Calories

#### a. Candy

#### b. Energy Bars

#### I. DIY Energy Bars

##### A. Recipe

## F. Parking your bike

- Your bike will have lots of water dripping off of it, with loads of road dust, salt, chemicals.
- Put down a towel or waterproof floor covering
- Be sure to rinse your bike before storing it
- If it's in freezing conditions, try to dry it off before storing it wet.
- If possible, always store your bike indoors in an unheated garage
  - Extreme changes in temperatures back and forth can wear out components
- If not indoors, try to keep it covered

## G. Route Finding

## H. Mode Sharing

### Multi mode transportation

Learn the bus system

Have bus money at work/home/on your bike.

## I. Changing gears for conditions

### 1. Changing for winter involves gearing your bike *down*.

This is easiest done by changing the cassette to one with lower/larger gears, or just shift down without changing the cassette.

At a bike shop by a bike mechanic or at CC by YOU.

Make sure the wear on the cassette matches that on the chain



We should be at 2 hours 20 minutes at this point.

#### IV. How To Make Snow Tires

#### V. Further reading

A. Bikeforums.net

B. Icebike.com

Strange layout but some of the best online info on riding in the winter

C. <http://amateurearthling.org/2010/11/08/winterbike-workshop/>

hand warmers--use them, put in a plastic bag to seal off the air, in the freezer, then use them after work.