Carefully Check Ice Conditions

Remember you take a risk anytime you go out onto the ice.

- Ice thickness is not consistent. Water currents, particularly around narrow spots, bridges, inlets and outlets, are always suspect for thin ice.
- When ice fishing, it is always a good idea to drill test holes as you progress out onto a lake to help judge the thickness and character of the ice.
- Beware of ice around partially submerged objects, such as trees, logs, brush, or embankments.
- Don't judge ice strictly by appearance.
- Stay away from cracks, seams, pressure ridges, slushy areas and darker areas that signify thinner ice.
- Be aware of ice that forms at the edges of a lake during the fall and melts at the edges first in spring. However, ice generally should be clear at least four to six inches thick to support one person.
- Be aware of ice covered with snow. Sometimes the snow serves as insulation. Other times, it has the opposite effect by insulating the surface from freezing.
- Never go out onto the ice alone. A buddy should be able to rescue you or go for help if you fall through.
- When changing locations on the ice always walk at least 10 yards apart from your buddy. If one person falls through the ice, the other can go for help.
- Before you leave shore, inform someone of your destination and expected time of return.
- Always wear a life jacket or personal flotation device (PFD). Life jackets can provide excellent flotation and protection from hypothermia (loss of body heat).
- Always keep your pet on a leash. If a pet falls through the ice, do not attempt to rescue your pet. Go for help.

Ice Danger and Safety

Each winter, after the ice forms on Colorado's waters, outdoor enthusiasts enjoy ice fishing, ice skating and other fun winter sports. Before going out onto a frozen lake, pond or river, it's important to take safety precautions to reduce the risk of falling through the ice. Knowing how to judge ice conditions will also help you make more informed decisions while enjoying the pearls of winter.

Reach, Throw, Go

Reach: attempt to reach victim with; ladder, stick, pole, rope, battery cables, etc

Throw: attempt to throw victim anything that floats; coolers, spare tire, etc.

Go: call 911 immediately.

A special thanks to William Israel III, who developed parts of this brochure as an Eagle Scout Project. And Littleton Fire Rescue for printing.

Chatfield State Park
11500 N. Roxborough Park Rd • Littleton, CO 80125
(303) 791-7275 • E-mail: chatfield.park@state.co.us
cpw.state.co.us

COLORADO PARKS & WILDLIFE

Ice Safety at Chatfield State Park

cpw.state.co.us

Welcome to Chatfield State Park.

This brochure was developed to help you learn and understand ice safety rules. Even if you follow all the guidelines, never assume the ice is safe. Use the "buddy system" and have a personal floatation device(PFD) available.

WARNING: These are only guidelines, not guarantees, ice thickness varies throughout all bodies of water and are affected by many factors.

1) New ice is stronger than old ice.
2) Multiple factors which affect ice conditions are:
   - underwater currents
   - water level fluctuations
   - weather conditions
3) Weak ice indicators are:
   - ice of different colors
   - water on the surface
   - open water or bubbles
   - cracks on the ice
   - porous look
   - pressure ridges

Five Safety Tips

1) Always have a personal floatation device available.
2) Never go out onto the ice without a partner.
3) Tell someone where you are going and when you will return.
4) Check with park personnel for ice conditions; don't always trust signs.
5) Carry some kind of device so that if you do fall through the ice you can help yourself out. (ice picks, claws, hooks, etc.)

Ice Safety

General rules for what clear, solid ice can support:

- 2 inches - one fisherman on foot.
- 4 inches - ice fishing
- 8 inches - passenger car (2 tons)
- 10 inches - medium truck (3.5 tons)

Six Types of Ice

1) Frazil Ice: The first type of ice to form, frazil ice is composed of disk shaped crystals. They form a thin film 2 - 5 centimeters thick which floats on the water surface. As the temperature drops, frazil disks aggregate together to form a solid sheet.

2) Clear Ice: This is new ice, formed by a long, hard freeze. Generally the strongest type, clear ice can be blue, black or green, the color is due to the water seen through the ice.

3) Snow Ice: Milky looking, this ice is weak. Because it is formed from refrozen melted snow, it is low density and porous.

4) Layered Ice: Formed from many layers of frozen and re-frozen snow, this ice has a striped appearance.

5) Frazil Slush: Soft to the touch, this ice forms in rivers where currents prevent a solid freeze.

6) Pack Ice: This is driven against ice by wind or water current. Pack ice can pile up and freeze together, leaving weak holes.

What to Do If You Fall Through the Ice

If you cannot get out of the cold water by yourself, take the appropriate actions to extend your survival time while waiting to be rescued.

- Stay calm. Do not attempt to swim, swimming will cause your body to lose heat much faster than if you stay as still as possible.
- Use a whistle to attract help.
- Act slowly and deliberately to conserve heat, and move slowly back to where you entered the water. Once there aggressively kick while simultaneously using your elbows/forearms to gain traction on the ice. Make alternating, short pulls by digging elbows/forearms into the ice sheet. If you have ice picks you would not use your elbows to get traction. As you start to come out of the hole you should attempt to get your legs high in the water so that your body is flat with the water surface and pull yourself onto the ice sheet. Expect a progressive decrease in your strength and ability go move. Make the harder moves to attempt to get out in the beginning while you can.
- Once on the ice, try to push yourself forward on your stomach or roll on your side to keep the weight distributed over a greater surface area. Do not stand up until you have moved onto the ground or an area of solid ice.

Cold Water Survival

Hypothermia is the reduction of body core temperature below normal. With the sudden immersion in cold water, acute hypothermia can be quick and often deadly.

Major symptoms of hypothermia are:

- Chills and uncontrolled shivering
- Impairment of speech and thinking
- Weakness/dizziness
- Irrational behavior
- Unconsciousness

Treatment for hypothermia:

- Get victim out of the water immediately
- If the victim is not breathing or has no pulse, begin CPR.
- Remember; the chance of reviving a victim is increased due to the extreme cold temperature of the water.
- Remove all wet clothing and warm victim by:
  - placing a warm blanket or sleeping bag around them
  - place in a heated automobile
  - transport to the nearest medical facility
- Do not rub or massage skin tissue, give alcoholic beverages or allow victim to walk around or expend energy.
- Do not put anything "hot" directly on the victim's skin.