

Weather

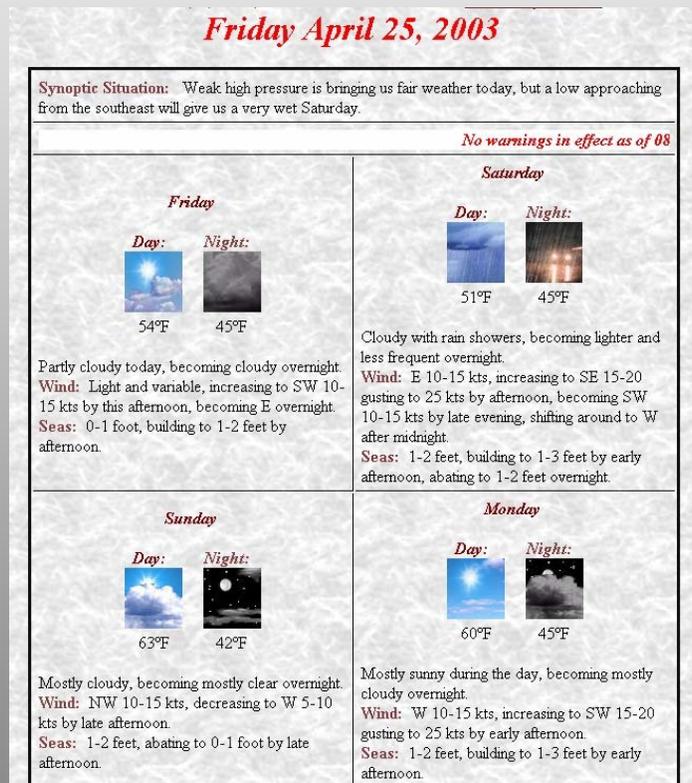
Coasters Harbor Navy Yacht Club

www.nwc.navy.mil/chnyc



Weather Affects

- Precipitation
- Wind
 - Direction
 - Velocity
- Waves
 - Swells
- Temperature
 - Air
 - Water
- Humidity
 - Visibility
 - Fog



Resources

- Newspaper
- TV
- Radio
 - Wx radio
- INTERNET
- Local posting
 - Warnings
 - Watches

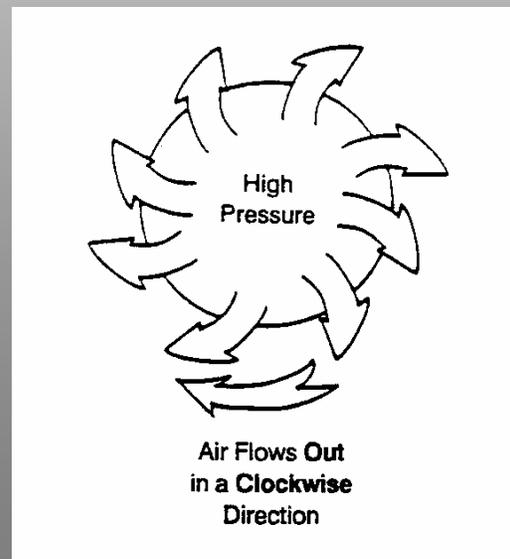
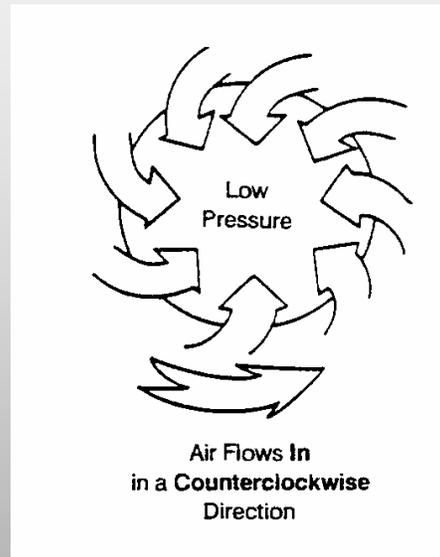


Weather Systems

- **Low**
 - **Relatively**
warm air
 - **Less dense**
air rises
- **Lower**
pressure,
falling
barometer
- **Wind, rain,**
storms
- **High**
 - **Relatively**
cool air
 - **Sinks to**
surface
- **Rising**
barometer
- **Clear**
weather,
good sailing

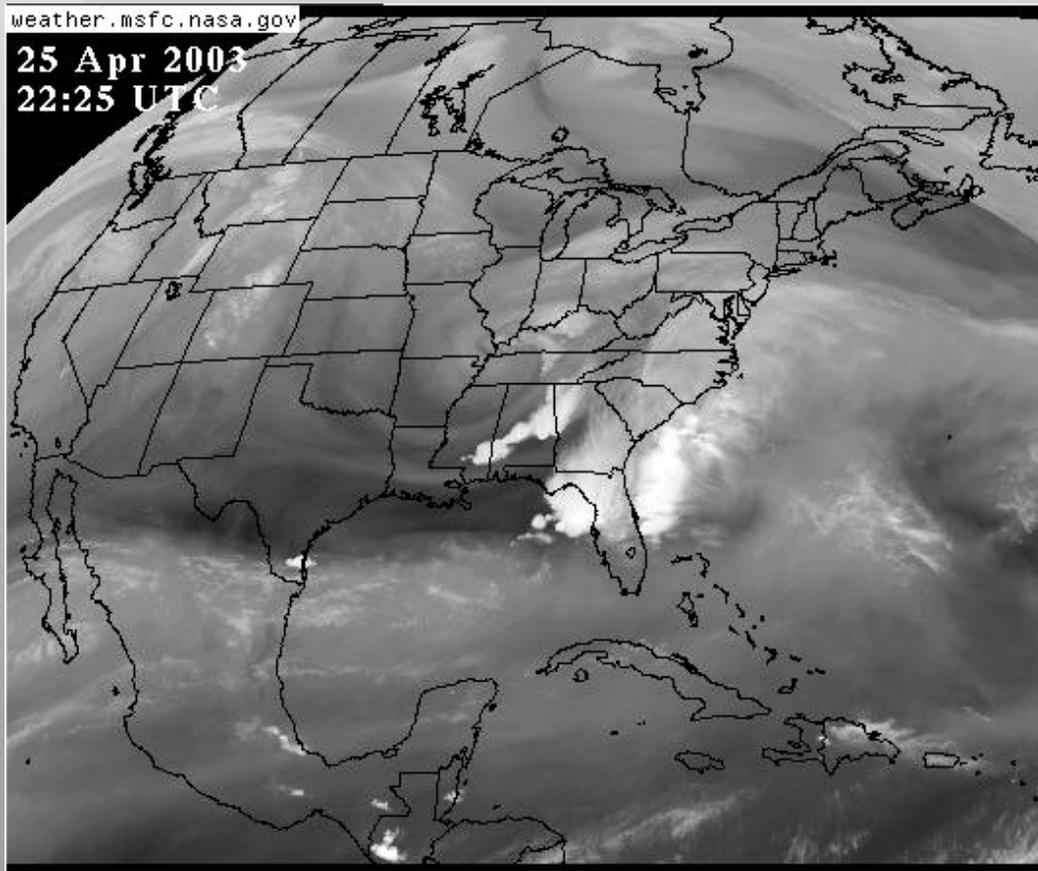
Rotating Air Masses

- **Northern Hemisphere**
 - Around low counterclockwise
 - Cyclonic
 - Around high clockwise
- **Rising and sinking of air in relation to earth rotation**



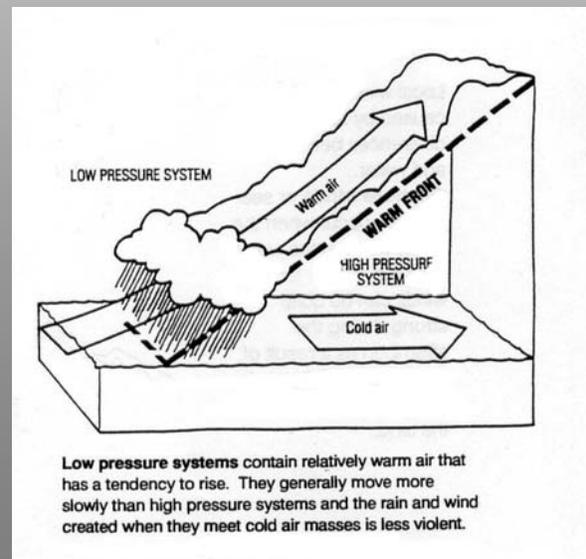
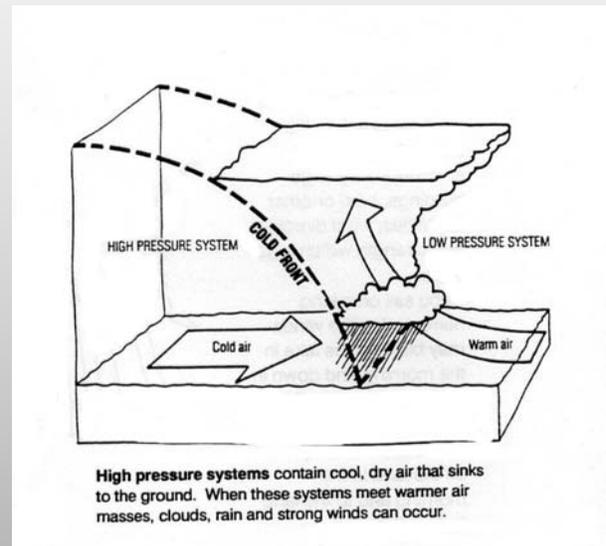
Satellite Photos

- **Show clouds rotating in the same direction as the wind in the air mass.**



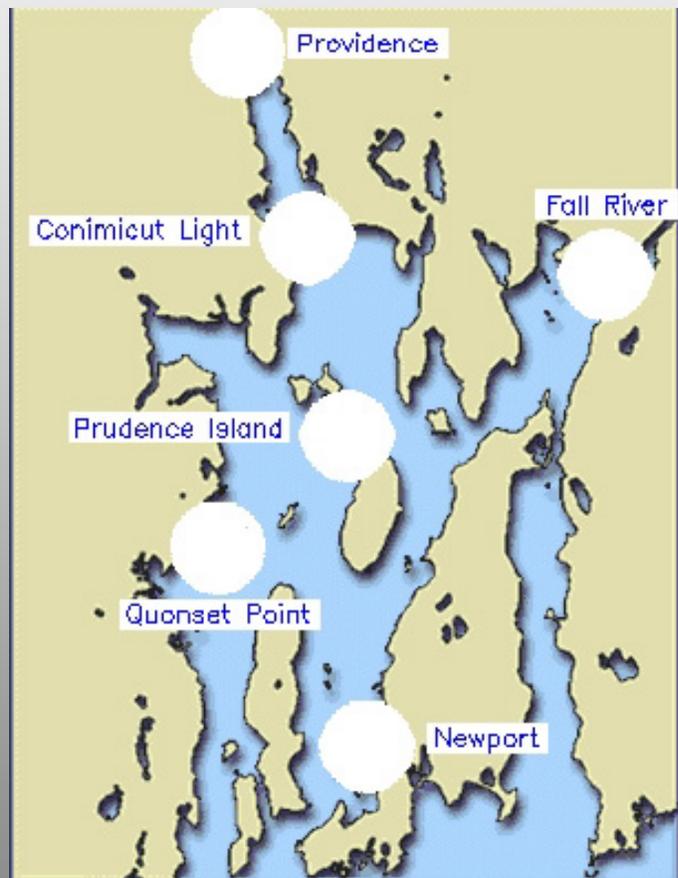
Fronts

- Cold and warm air masses meet
- The border is called a front
 - Cold:
 - Drop in temperature
 - Clockwise shift
 - Heavy rain
 - Warm:
 - Warmer air replaces colder
 - Less violent



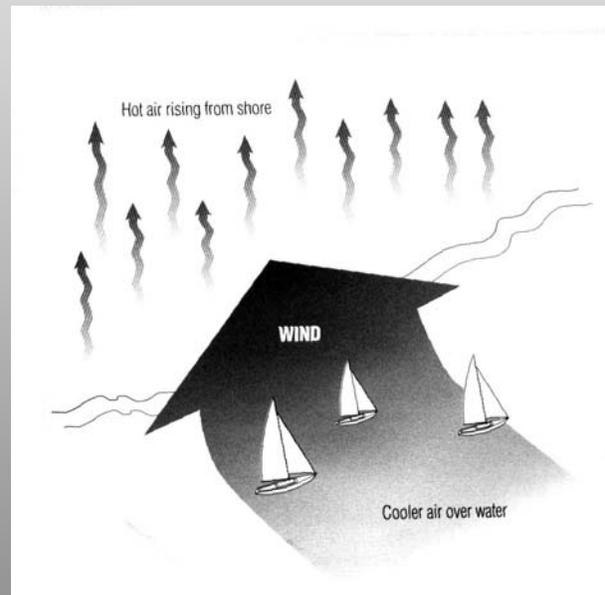
Geographic Affects

- **When water is surrounded by land, hills or obstacles, wind will change often**
 - Direction
 - Velocity
- **Wind will be diverted around islands**
 - Windward shore
 - Leeward shore



Thermal Affects

- **Temperature differences between land and water**
- **Onshore winds blow from the water onto the land**
 - Sea breezes
- **Cooler air is being pulled in by hotter air rising over the land**
- **Narragansett Bay every summer afternoon**
 - 1300
 - 210 degrees



Squalls

- **Dangerous winds and lightning**
 - Increased cloud cover
 - Darkening skies
 - Change in wind direction
 - Increasing or decreasing velocity
 - Approaching wall of heavy rain
- **Put on PFD**
- **Head back to marina**

Fog

- **Reduced visibility**
 - Return when visibility decreases to less than 1 mile
- **Frequent in spring and fall**
 - Temperature difference air and water
- **Remember fog signals**



Weather Summary

- Check the forecast before you sail
- Weather is responsible for about 20% of boating incidents and accidents in RI every year
- Conditions change
- Know your limits