

Setting a Straight Course RCA Weather Protocol

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WIND

WAVES

WEATHER &

WOWING

RCA Weather Protocol

- written by Rob Millikin
- approved 2005
- RCA goal is for all sanctioned regattas to comply with protocol

RCA Weather Protocol

Today's Objective

- explain the protocol
- demonstrate elements of the protocol
- access and interpret weather locally
- to determine if atmospheric conditions are safe for the continued operation of a regatta

RCA Weather Protocol

Primarily for RCA Umpires at national championship regattas sanctioned by RCA

Useful for

- Organizers
- Umpires
- Coaches
- Rowers

RCA Weather Protocol

- Establish procedures at RCA sanctioned national regattas that will lead to standards for weather monitoring and management at all sanctioned regattas
- Access weather technology and weather information on a real time, local basis through Environment Canada and the internet

RCA Weather Protocol

- Meteorologists are scientists who study the atmosphere to see how it affects the environment and to predict the weather and climate trends
- They use the fastest, most powerful computers in the world to predict the weather
- Because of sensitive dependence on initial conditions, meteorologists cannot forecast accurately beyond five days

RCA Weather Protocol

tries to help you forecast WHEN

- the storm will arrive
- no further boats will be launched
- the last race, prior to the storm, should commence and be completed
- all crews and regatta personnel should be sheltered and equipment tied down
- the storm will continue
- the storm will end
- the Control Commission can commence calling the crews to launch
- racing can re-commence
- global warming will finally raise the level of Burnaby Lake

RCA Weather Protocol

- The head umpire must balance safety-based weather delays with finishing the regatta (at all or on time)
- When in doubt, don't go out...

RCA Weather Protocol

- Weather preparations prior to the regatta
 - Setting up Regatta Weather Central
 - Determining regatta close down and restart times
 - Weather coding system
 - Monitoring pre-regatta weather
- During the regatta
 - Monitoring the weather
 - Stopping the regatta

RCA Weather Protocol

Regatta Weather Central

- a specific weather station set up at the regatta site
- where the weather official is stationed

RCA Weather Protocol

Setting up Regatta Weather Central

- Furniture – desk and chairs
- Radio to Control Commission, Starter and Finish Tower
- Telephone contact with local weather office
- computer and high speed internet access to Environment Canada –
www.weatheroffice.ec.gc.ca

RCA Weather Protocol

Setting up Regatta Weather Central

- Recommended optional equipment
 - barometer
 - thermometer
 - wind direction indicator
 - wind speed indicator
 - humidity indicator
 - http://www.davisnet.com/home_flash.asp
 - luxuries, as available

RCA Weather Protocol Equipment Comparison

Weather Service (per the sanction documents):

- lightning detectors
- computer with internet access
- thermometer
- barometer
- anemometer (Wind speed & direction)
optional

RCA Weather Protocol

Determining regatta close down and restart times

- BEFORE the regatta
 - establish lead time to clear lake
 - determine how long it will take to clear course
 - establish safe exit points
- an average storm travels 25-40 kph
 - a storm 6 km away may only be 10 minutes from the course

RCA Weather Protocol

Weather coding system

To make it "easy" to talk on the radio

- **CODE RED** seek shelter
- **CODE GREY** clear course
- **CODE ORANGE** stop launches, finish races
- **CODE YELLOW** pay attention to weather
- **CODE BLUE** general alert
- **CODE GREEN** all clear
- whatever coding is chosen should be posted and discussed

RCA Weather Protocol

Monitoring pre-regatta weather

- Five days ahead monitor local weather and weather 'upstream'
- Look for pressure and temperature highs and lows
- As appropriate, monitor marine forecasts

- [Text Forecasts](#)
- [Marine weather](#)
- [Aviation weather](#)
- [Seasonal forecasts](#)
- [Radar Imagery](#)
- [Satellite Imagery](#)
- [Lightning](#)
- [Weather Maps](#)
- [Hurricane Information](#)
- [Sea Ice Information](#)
- [Air Quality Forecasts](#)
- [Past Weather](#)
- [Business Services](#)
- [Skywatchers](#)
- [MSC Careers](#)
- [Frequently Asked Questions](#)
- [Links/Partners](#)

Victoria

Currently

Observed at: Victoria Int'l Airport 25 February 2006 12:00 AM PST



Partly Cloudy

Temperature	-3 °C
Pressure/Tendency	102.6 kPa ↓
Visibility	48 km
Humidity	87 %
Dewpoint	-4 °C
Wind	W 5 km/h

Yesterday

Max Temp.	5.7 °C
Min Temp.	-4.0 °C
Precip Total	0.0 mm

Regional Normals

Max Temp.	9 °C
Min Temp.	2 °C
Record Values	

Today

Sunrise	7:03
Sunset	17:50
Moonrise	6:18
Moonset	14:45

5 Day Forecast from Environment Canada

Friday night	Saturday	Saturday night
Low -4 °C	High 6 °C	Low 3 °C
A few clouds	Increasing clouds	Periods of rain
Sunday	Monday	Tuesday
High 9 °C	High 9 °C Low 5 °C	High 7 °C Low 2 °C POP 60%
Periods of rain	Rain	Chance of showers

[These icons are a summary. See complete text below](#)

- [Imperial Units](#)
- [Past 24 Hour Conditions](#)
- [24 Hour Trends Graph](#)
- [Another Forecast ?](#)

Text Forecast from Environment Canada

Victoria: Issued 4.00 PM PST Friday 24 February 2006

Tonight	A few clouds. Low minus 4.
Saturday	Sunny with cloudy periods. Becoming cloudy early in the afternoon. High 6.
Saturday night	Cloudy. Periods of rain beginning in the evening. Low plus 3.
Sunday	Periods of rain. High 9.
Monday	Rain. Low plus 5. High 9.
Tuesday	Cloudy with 60 percent chance of showers. Low plus 2. High 7.

Marine weather, Provided by EC - Microsoft Internet Explorer

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Back Forward Stop Refresh Home Search Favorites Print

Address http://www.weatheroffice.ec.gc.ca/marine/marine_e.html?c-jfs Go Links

Google environment canada Search 17 blocked

Environment Canada Weather Forecast

Marine Forecast issued for Juan de Fuca strait.
Issued: 9:30 PM PST Friday 24 February 2006 for the period ending 9:30 PM Saturday with an outlook for the following 24 hours.

Synopsis:
A ridge of high pressure will remain over northern bc. An intensifying low will move toward the Explorer region. This will result in winds strengthening to east to northeast gales to storms ahead of the low over the offshore waters.
Meanwhile over northern waters moderate easterlies will strengthen to moderate to strong north to northeast overnight with gales developing Saturday west of the inner waters.
Over southern waters light to moderate variable winds will strengthen to moderate to strong east to northeast with the approach of the low. Gales will develop west of Vancouver Island on Saturday.

Forecast:
Winds east to northeast 20 knots. Winds rising to southeast 15 To 25 near the west entrance Saturday morning and to eastern Sections in the afternoon. Winds rising to east 25 to 30 near the west entrance Saturday afternoon.
Cloudy periods. Becoming cloudy Saturday with scattered showers or flurries developing.
Outlook. Winds strong to gale force easterly.

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Internet

RCA Weather Protocol

Monitoring regatta day weather

- Monitor through environment canada, local radio, observation (at start, 1000 and finish)
- Initiate before first crews boat in
- If unfamiliar with area, consider using google maps as well <http://maps.google.ca>
- Provide a weather briefing each day of the regatta

RCA Weather Protocol

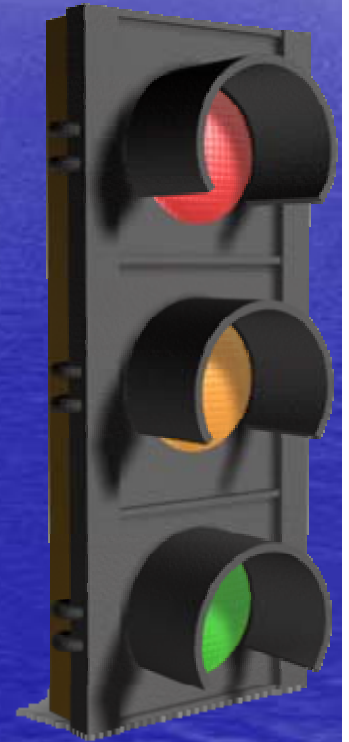
Monitoring regatta day weather

- Severe storm advisories
- Radar imagery
- Satellite imagery
- Weather analysis maps
- Review daily
 - Local forecast
 - Cloud formations
 - Radar imagery

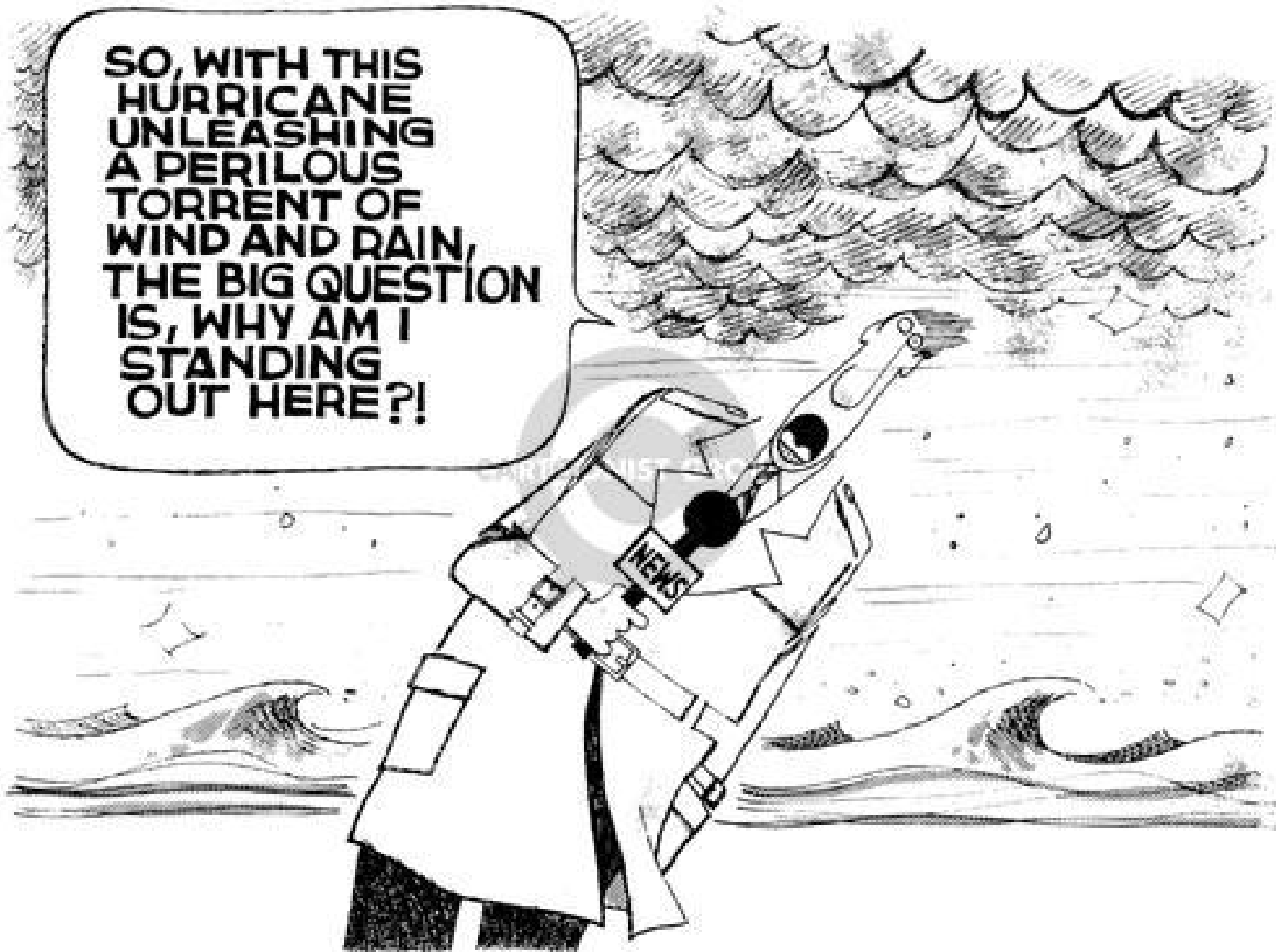
RCA Weather Protocol

Stopping the regatta

- Identify adverse weather - classify
- Alert head official
- Provide status reports
- Consider regatta action plan
 - what if regatta suspended
 - what if all clear sooner than expected
 - what is the best way to manage



SO, WITH THIS
HURRICANE
UNLEASHING
A PERILOUS
TORRENT OF
WIND AND RAIN,
THE BIG QUESTION
IS, WHY AM I
STANDING
OUT HERE?!



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RCA Weather Protocol

Appendix 1

- Suggested data
 - barometric pressure
 - temperature
 - wind speed and direction
 - humidity
 - dewpoint
 - rain fall and rate
 - heat index
 - wind chill
 - date and time
 - moon phase
 - forecast
 - evapotranspiration
 - solar radiation intensity
 - apparent temperature
 - UV index
 - UV dose
- Appendix 2 covers the use of Environment Canada weather radar

RCA Weather Protocol

Appendix 3 - Resources

- http://vcrc.bc.ca/club_contacts.htm
- <http://vcrc.bc.ca/weather.htm>
- <http://vcrc.bc.ca/weather/Current.htm>
- <http://www.weatheroffice.ec.gc.ca>
- http://www.davisnet.com/home_flash.asp

RCA Weather Protocol

Appendix 3 - Resources

- <http://www.davisnet.com/weather/products/stations.asp>
- http://www.rowingcanada.org/en/news/news_mar23-2005.html
- http://www.rowingcanada.org/files/policies/weather_05.pdf
- **Meteorology Self Instructions**
- http://www.msc-smc.ec.gc.ca/education/msi/index_e.cfm
- **Project Atmosphere Canada – Teacher’s Guide**
- http://www.msc-smc.ec.gc.ca/education/teachers_guides/index_e.html

RCA Weather Protocol

Weather related risk summary

- wind, weather and wave problems...
 - swamping, sinking, capsizing
 - hypothermia and drowning
 - lightning strikes – burns and electrocution
 - hyperthermia – heat stroke, heat exhaustion, dehydration
 - equipment failures
- **WHEN IN DOUBT, DON'T GO OUT**

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11-26

"Sorry, folks — just clearing out inventory."