



## When things are out of balance . .



## Blue Green Algae

- ◆ Specific group of algae
- ◆ Some can produce toxins
  - ◆ Microcystin – Liver Toxin
  - ◆ Anatoxin – Nerve toxin



**Anabaena – “Annie”**



**Aphanizomenon - “Fannie”**



**Microcystis – “Mike”**

## Why are we concerned?

- ◆ Toxins can affect human and pet health
- ◆ Health symptoms include:
  - Skin irritation/hives
  - Diarrhea
  - Nausea/vomiting
  - Eye, ear, and throat irritation
  - Headaches/fever
  - Labored breathing
  - Muscle paralysis
  - Death (extreme cases mostly pets)

Seek immediate medical attention from doctor or vet if symptoms occur after exposure.

## How can we be exposed?

- ◆ Drinking or Ingestion
- ◆ Swimming/Playing
- ◆ Boating/Proximity to Scum
- ◆ Eating Fish?



## Drinking/Ingestion

- ◆ Exposure Risk: Highest
- ◆ Pets
  - ◆ They like it
  - ◆ Can lick from fur
- ◆ Household water from the lake
  - ◆ Never recommended
  - ◆ Treatment insufficient
- ◆ Well water?



## Swimming/Playing

- ◆ Exposure Risk: High
- ◆ Accidental Ingestion
  - ◆ Children
- ◆ Direct Contact
  - ◆ Skin irritation
  - ◆ Should wash



## Boating/Proximity to Scum

- ◆ Exposure Risk: Lower
- ◆ Avoid scum areas
- ◆ Possible to breathe in toxins



## Eating Fish?

- ◆ Exposure Risk: Unclear
- ◆ Toxins may be stored in fish
  - ◆ More in organs (discard)
  - ◆ Some in muscle
- ◆ Health risk unclear
- ◆ More study underway



# Lake Howard Results

Test Date	Microcystin parts per billion	Above Standard
8/15/2011	< 6	NO
9/30/2011	12.1	YES
10/6/2011	56.3	YES
10/12/2011	0.56	NO
10/18/2011	0.73	NO
10/24/2011	1.55	NO
11/1/2011	0.97	NO
11/8/2011	<0.01	NO
11/15/2011	2.37	NO



[www.lakes.surfacewater.info](http://www.lakes.surfacewater.info)

## CAUTION

**TOXIC ALGAE MAY BE PRESENT**  
Lake may be unsafe for people and pets

Until further notice:

- **Do not swim or water ski in areas of scum.**  
No nadar ni riesgo al esquí en áreas de la espuma
- **Do not drink lake water.**  
No beber el agua del lago
- **Keep pets and livestock away.**  
Antes de salir y cuando de la substancia lejos
- **Clean fish well and discard guts.**  
Limpie los pescados bien y deseché la tripa
- **Avoid areas of scum when boating.**  
Evite las áreas de la espuma cuando canoteje

Call your doctor or veterinarian if you or your animals have  
sudden or unexplained sickness or signs of poisoning.

360-407-6000

For more information: [www.chh.wa.gov/health/algae](http://www.chh.wa.gov/health/algae)  
[www.wa.gov/department/agriculture/algae.htm](http://www.wa.gov/department/agriculture/algae.htm)

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## When in Doubt – Stay Out

## Important Contact Information

- ◆ **Washington State Department of Health**

- ◆ Report health problems
- ◆ Ask health questions
- ◆ 360-236-2251 (Joan Hardy)

- ◆ **Snohomish Health District**

- ◆ Household water from lake - questions
- ◆ 425-339-5250