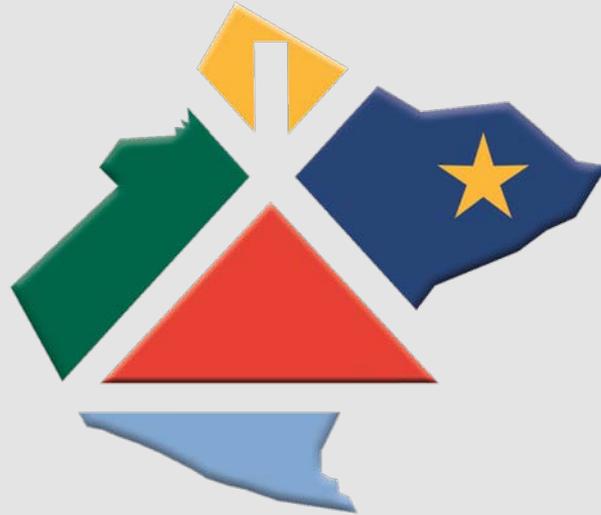


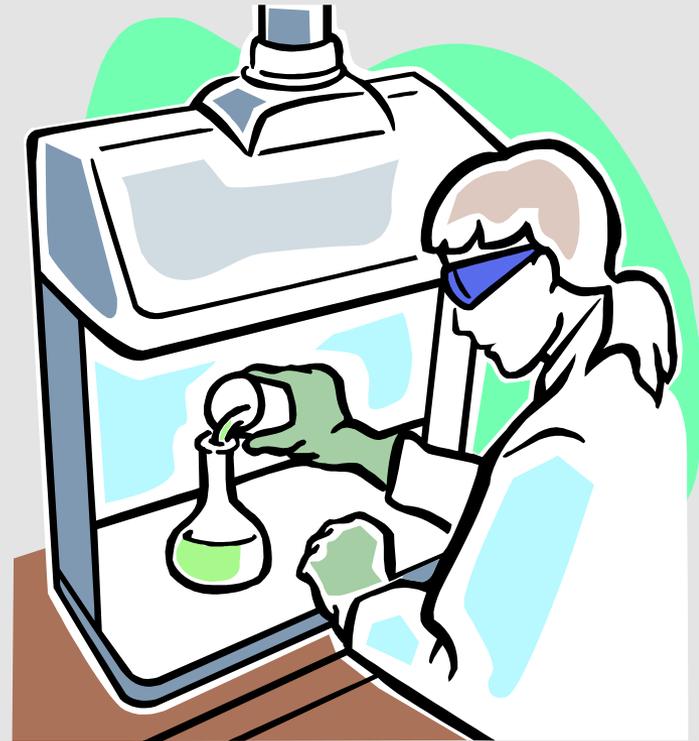
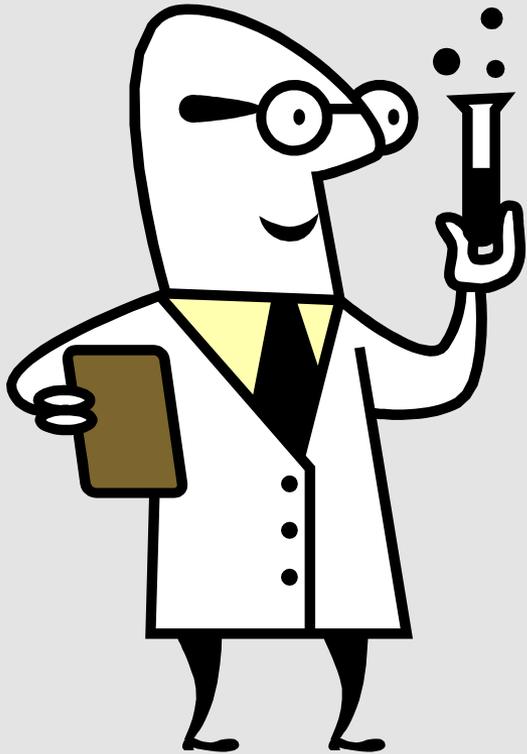
# Regulating the use of water – the role of monitoring



Kathleen Racher, Technical Director

Wek'èezhìi Land and Water Board

# Introduction to me...







# The Wek'èezhìi Land and Water Board is one of four boards in the Mackenzie Valley



# What do the Land and Water Boards do?

The Boards regulate the use of land and water and deposit of waste into water.

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graph TD; A[Regulate: to control or direct by a rule, principle or method] --> B[Land Use Permits]; A --> C[Water Licences];
```

**Regulate: to control or direct by a rule, principle or method**

Land Use Permits

Water Licences

# When do you need a Water Licence?



# Regulating Water Use

A licence is required if the amounts you take may affect the environment and downstream users.

The Licence :

- tells the user how much water they can use and from which water source
- requires the user to monitor water quantities or flow and report them to the Board

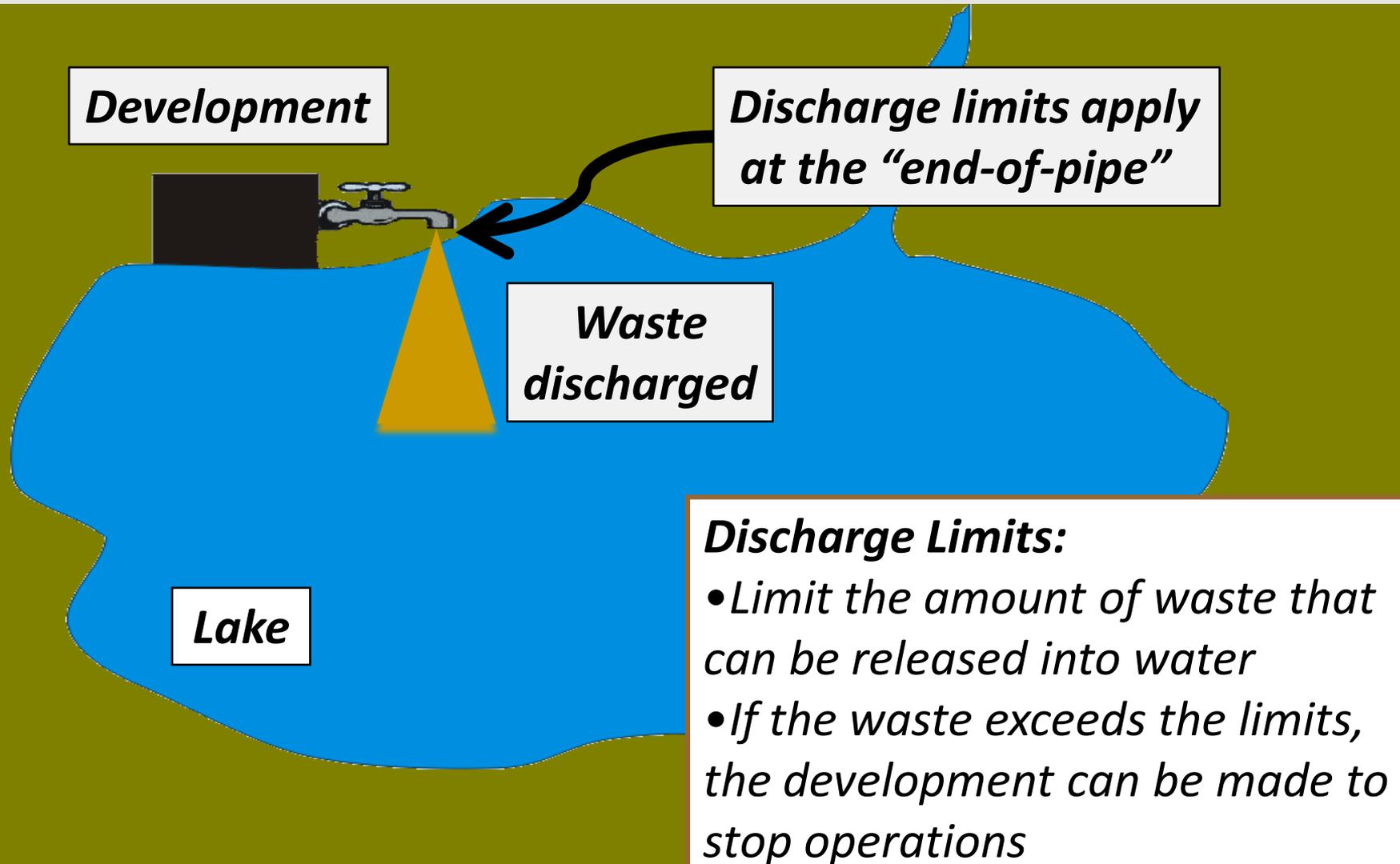
# Regulating the Deposit of Waste into Water

Waste is defined as:

“any substance, that if added to water, would degrade or alter or form part of a process of degradation or alteration of the quality of the water to an extent that is detrimental to its use by people or by any animal, fish or plant...”

- *NWT Water Act*

# Water Licences contain rules for controlling waste and its release to the environment



# Discharge Limits in a Water Licence

All Discharges to Lake X shall meet the following limits:

Substance	Maximum Amount Allowed
Ammonia	2 mg/L
Arsenic	0.05 mg/L
Etc....	...

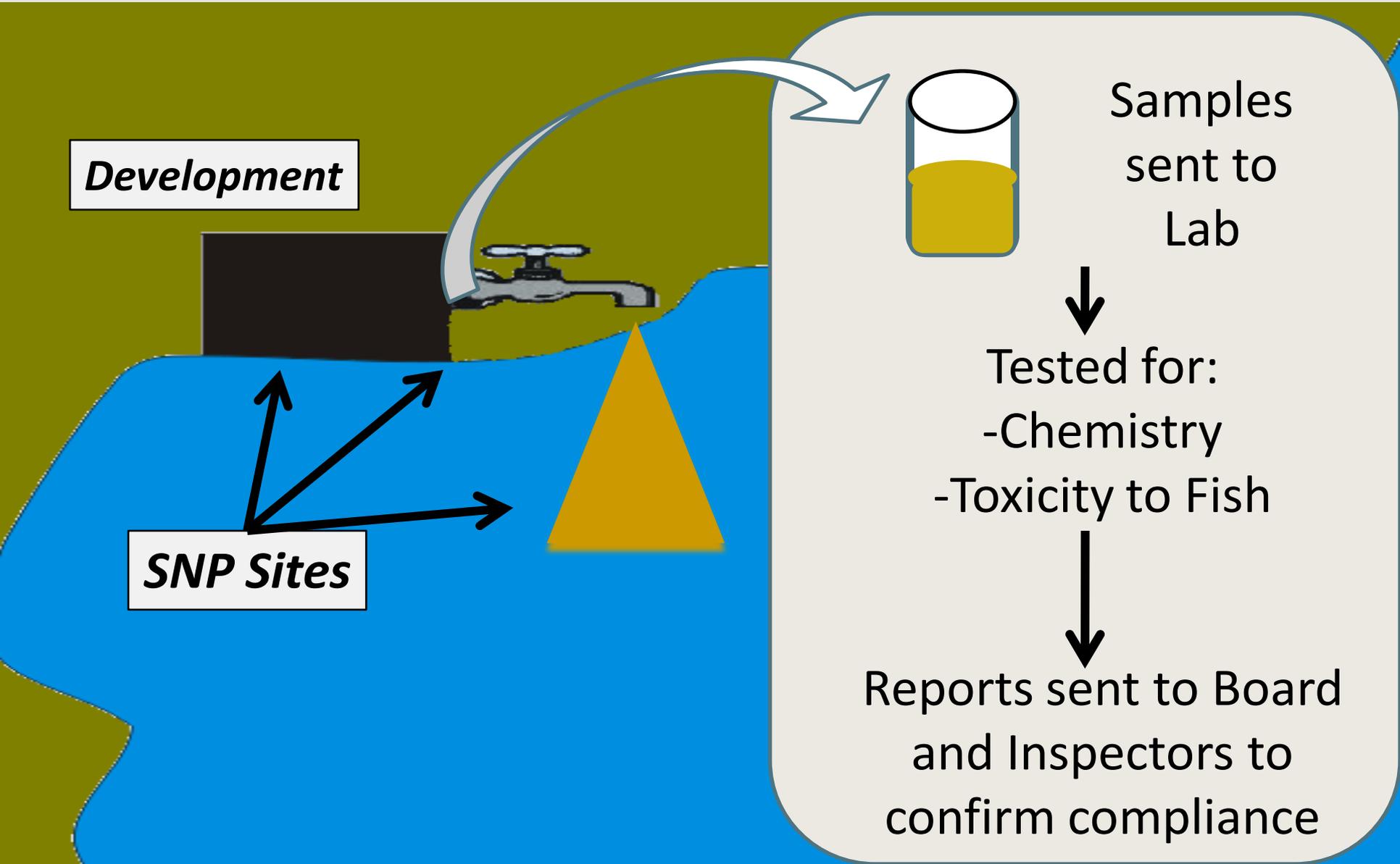
*But how do we know our rules are being followed?*

# The role of monitoring

**Monitor:** to watch closely for the purposes of control; to keep track of; observe.

The Boards use monitoring data to make sure that the water licence being adhered to and that it is effective in protecting the environment.

# Compliance Monitoring – Surveillance Network Program (SNP)



# Discharge Limits in a Water Licence

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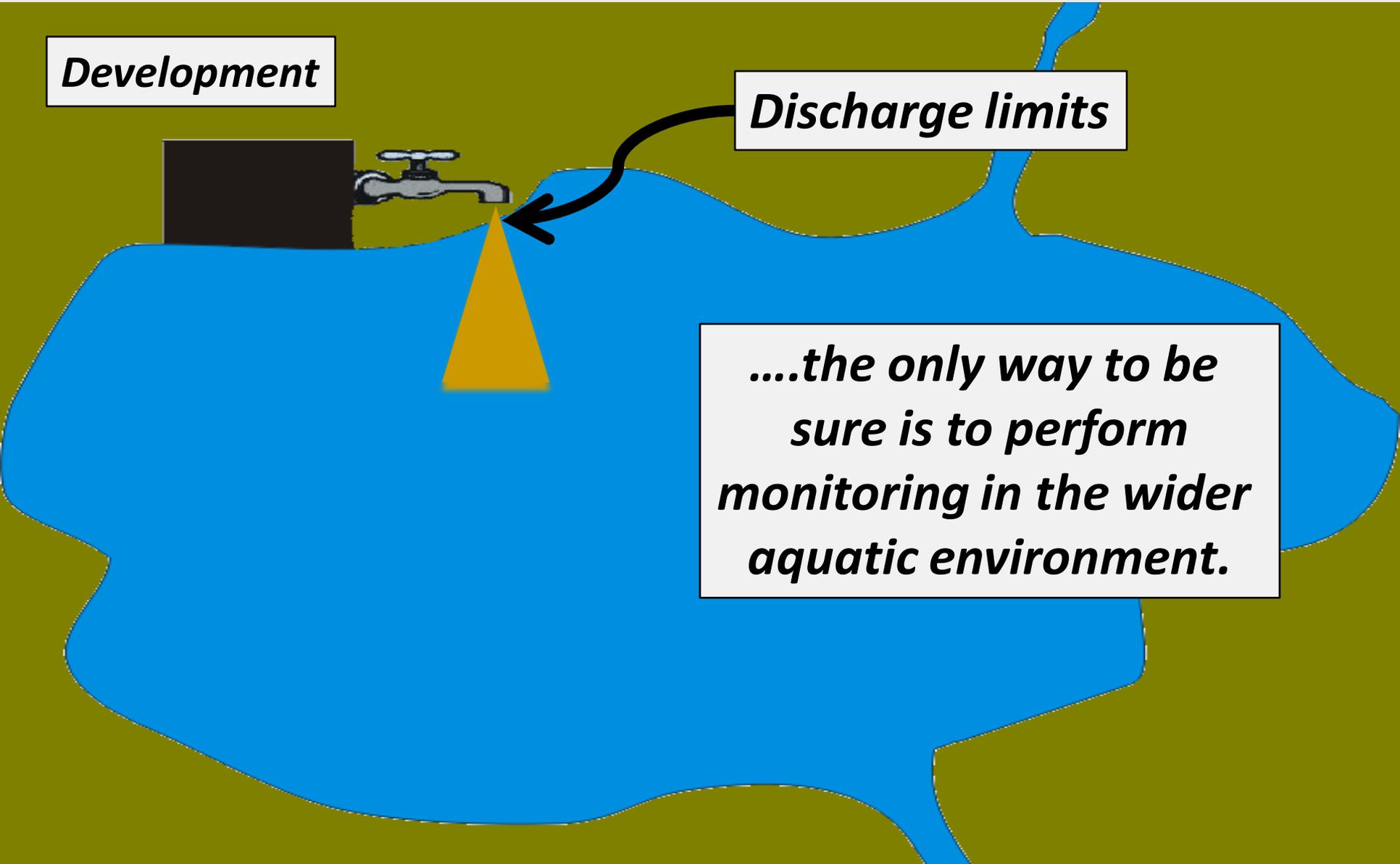
*But how do we know we made the right rules?*

But how do we know that the discharge limits we set will protect the aquatic environment?

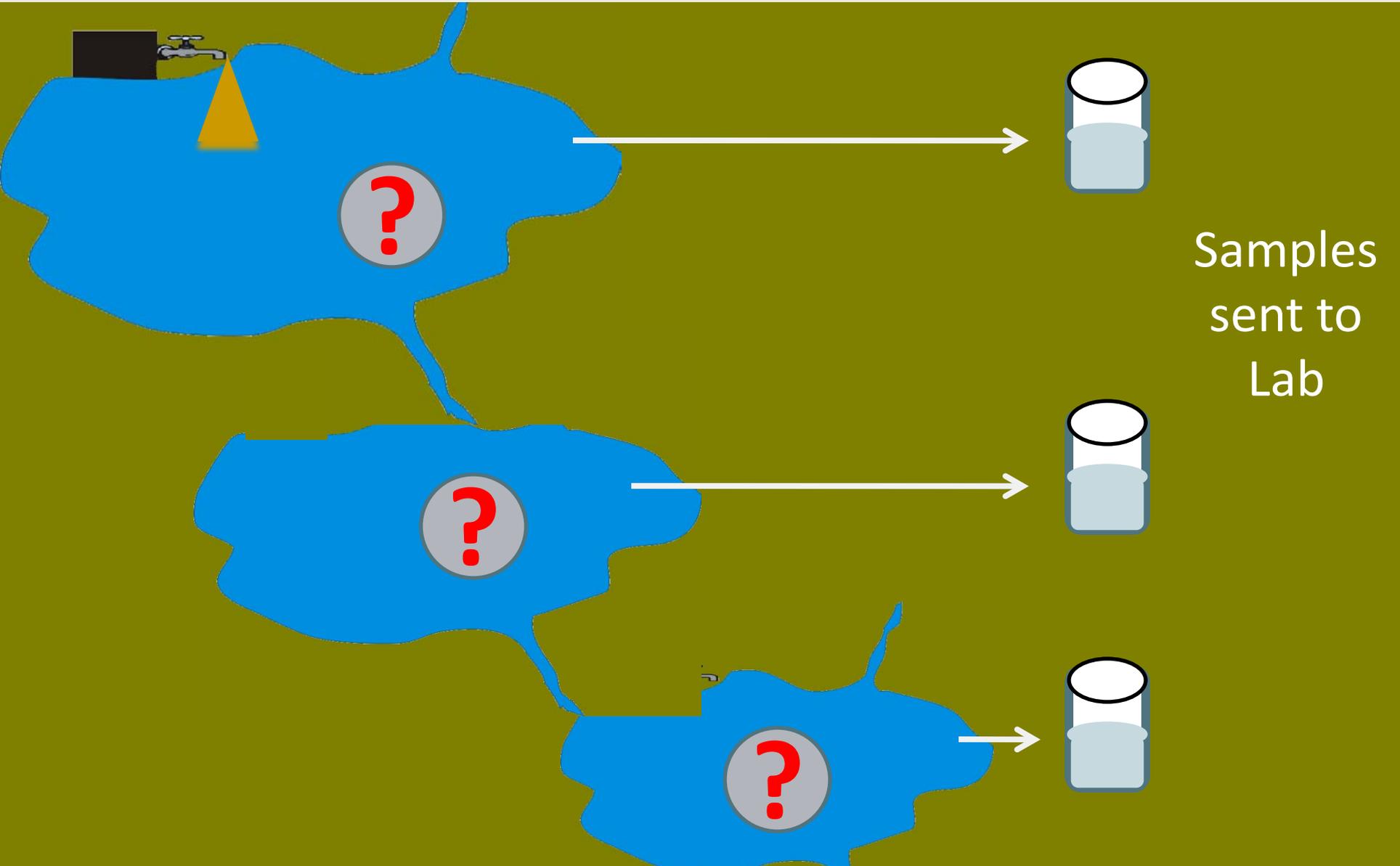
***Development***

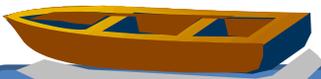
***Discharge limits***

***...the only way to be sure is to perform monitoring in the wider aquatic environment.***



# Aquatic Effects Monitoring Programs





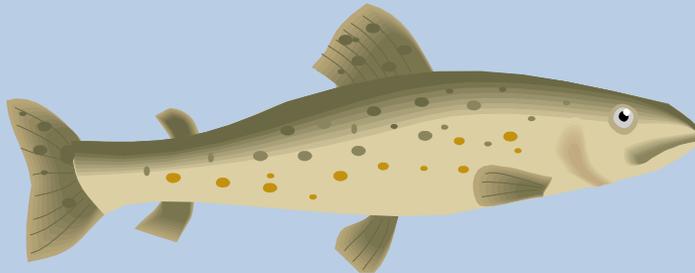
## PHYTOPLANKTON



← Organisms are monitored for:

- health
- abundance
- diversity
- accumulation of metals or other substances

## TROUT



## SLIMY SCULPIN

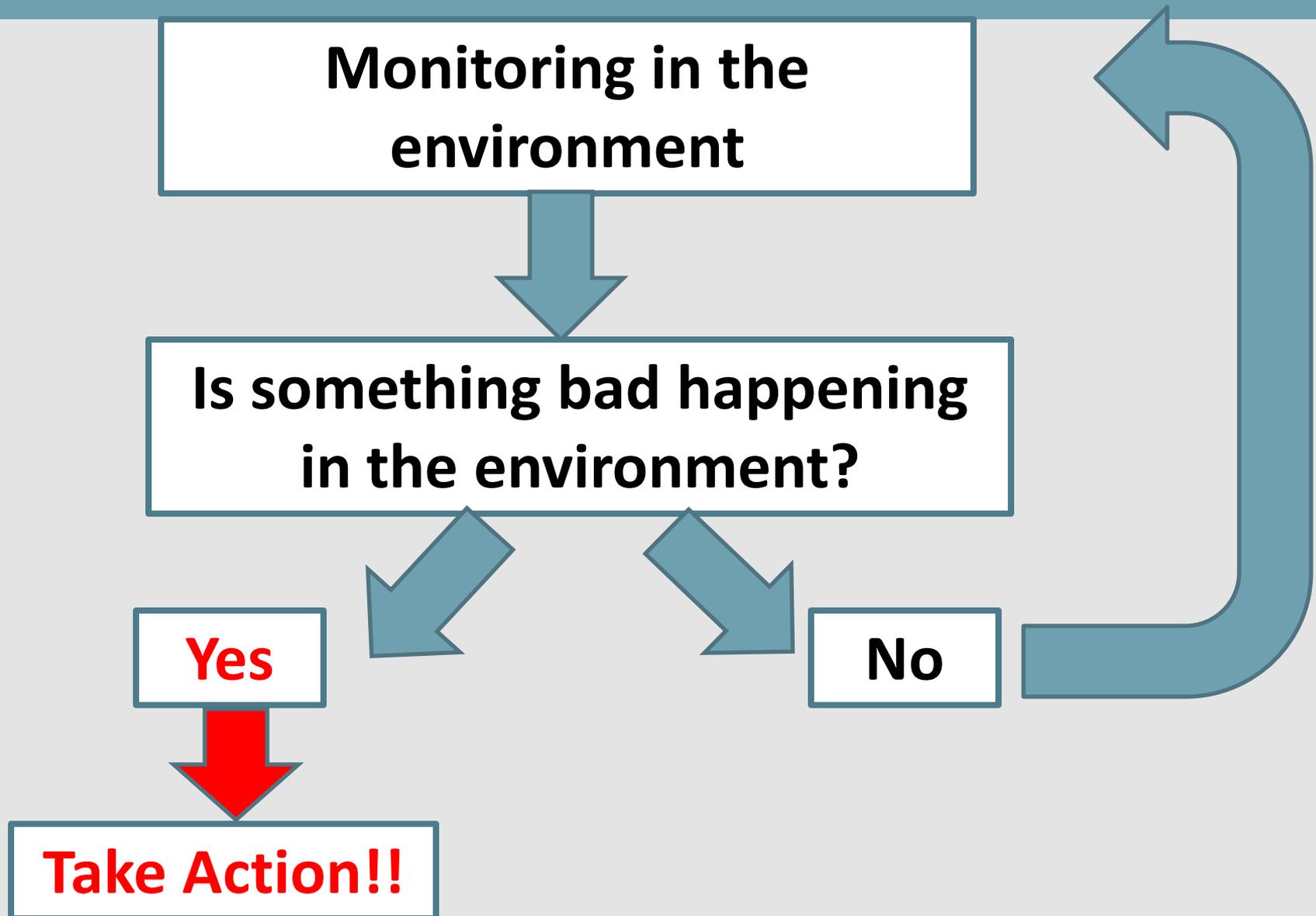
## ZOOPLANKTON

## BENTHOS

## SEDIMENT



# Responding to the results of monitoring



# Purpose of Monitoring for the Boards

- To ensure compliance with the licence (SNP monitoring)
- To check and see how well the licence is protecting the environment (Aquatic Effects Monitoring Programs)

Overall, monitoring gives us the opportunity to “do better”.

