1. What were you thinking about as you read this, specifically as it relates to your work? For example, I was thinking  “wow, there is so much I don’t know”, and also how easy it would be to use this type of information to poke holes in models I’ve built using VBGFs.

* There is a lot I don’t know about growth.
* Oyster growth is not necessarily that I am researching.
* ~ 63% lost since the 1800s, we can see this with LC
* 1950s outbreaks of MSX and Dermo, which are parasitic disease for oysters, reduced their populations

1. What are some of the things that influence overall growth (change in size over time)?

* Temperature (f(t))
* Salinity (f(S))
* Suspended solids (f(TSS))

1. What are some things that growth could influence (not covered as much in this chapter, but you are free to think about it anyway)?

* Higher salinity predicts higher filtration
* More growth leads to more filtration
* Very high and very low total suspended solids decrease filtration
* Higher temperatures increase filtration ( in all models)
* Low salinity decreases filtration

1. What are some things about oyster growth that might make them different or special compared to other growing things?

* Very dependent on environment
* Many other lifeforms depend on them for shelter, and filtration services
* Strong oyster shells can help rise a terrain, weak oyster shells break easily

1. How could/does somatic oyster growth have relevance to your work?

* Oysters impact the water quality

**Models**

**Cero and Noel (2005)** is a bioenergetics oyster model describes changes in oyster biomass with time.

POC= particulate organic carbon is the amount of organic carbon oysters consumer and incorporates a filtration rate that describes the rate oysters uptake water.

Estimates the change in oyster biomass in relation to environmental variables that affect the bioenergetics of the oyster population.

MAIN DIFFERENCE- is a focus on carbon exchange and oyster growth in terms of total oyster carbon biomass in a square meter, rather than the individual organism.

**The Fulford model (2007)** objective is specifically targeted at understanding the effect of oysters on phytoplankton removal, rather than changes in biomass of oyster per unit area. Particle uptake is oyster size and particle size dependent.

Only if oysters are the perfect sieve

Also include a size dependence max

**Powell model (1992)** is a size-based bivalve population model specifically applied to oysters. Models the change in standing stock of oysters, based on caloric units, and is equals to the net production within the3 size class.

DO not a factor

General bivalve population model where the changes in size classes are the desired output.

Filtration rate is modeled on an individual basis rather than in units of carbon per sq mt.