

## Simulation 2: Water Quality Cards



Copy one set/group, cut into individual cards.

## Site 2. Winter



Three Lakes Park  
Temp: 11° C  
Dissolved Oxygen (DO): 8 mg/l  
pH: 6.7

## Site 1. Spring



Math Science Center Pond  
Temp: 14° C  
Dissolved Oxygen (DO): 7-8 mg/l  
pH: 6.0

## Site 3. Winter



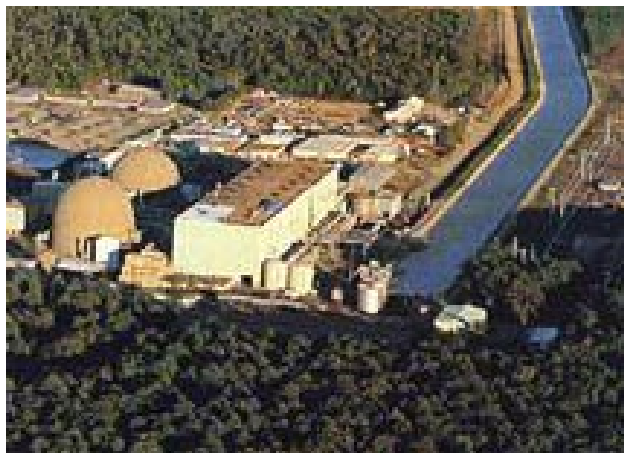
James River-Pony Pasture  
Temp: 7° C  
Dissolved Oxygen (DO): 10 mg/l  
pH: 6.5

### Site 4. Winter



Swift Creek  
 Temp: 11° C  
 Dissolved Oxygen (DO): 9.98 mg/l  
 pH: 6.35  
 Secchi disk reading: 102 cm

### Site 6. Fall



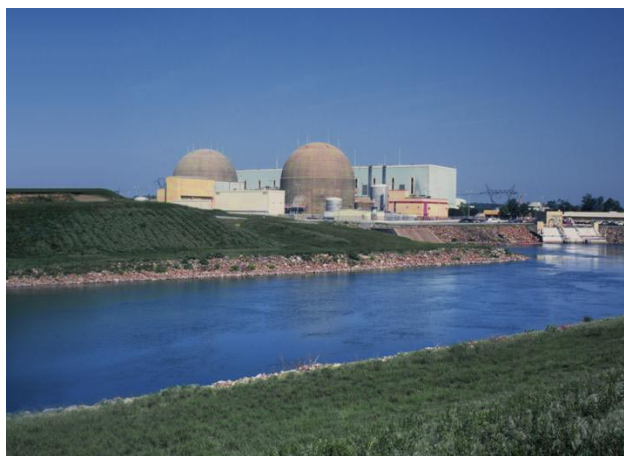
James River-Surry  
 Temp: 17° C  
 Dissolved Oxygen (DO): 6.5 mg/l  
 pH: 8  
 Brackish water

### Site 5. Summer



Rappahannock River-Port Royal  
 Temp: 25° C  
 Dissolved Oxygen (DO): 4 mg/l  
 pH: 7-8  
 Tidal River

### Site 7. Winter



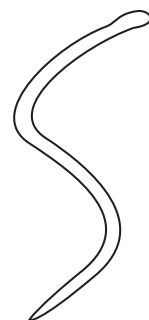
Lake Anna  
 Temp: 18° C  
 Dissolved Oxygen (DO): 6.3 mg/l  
 pH: 6.5-7.0

## Site 8. Spring



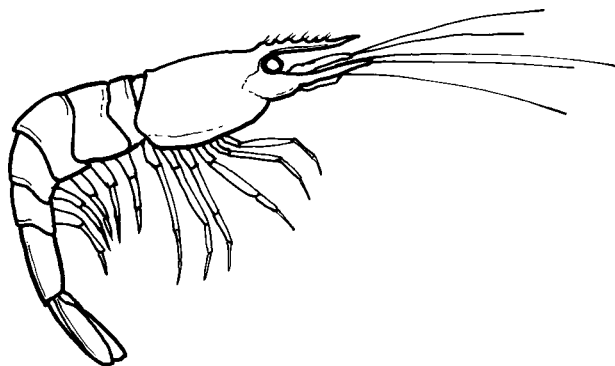
Tuckahoe Creek  
 Temp: 20° C  
 Dissolved Oxygen (DO): 4  
 pH: 6.0

## Organism



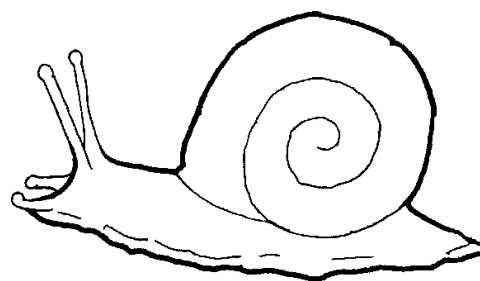
Macroinvertebrate  
 Worm-nematode  
 Temp: 5-25° C  
 DO:  $\geq 4.0$  mg/l  
 pH:  $\geq 5$

## Organism

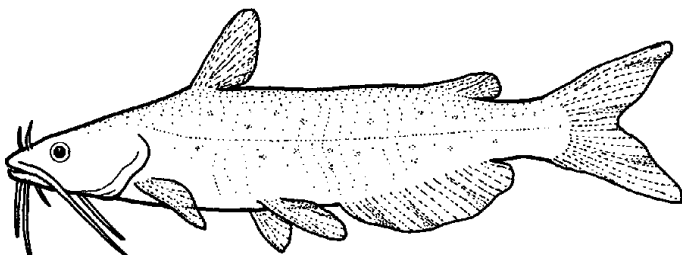


Macroinvertebrate  
 Freshwater shrimp  
 Temp: 15-25° C  
 DO:  $\geq 6.5$  mg/l  
 pH:  $\geq 6.5 - 8.2$

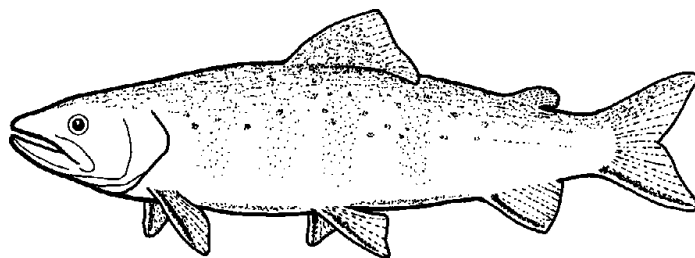
## Organism



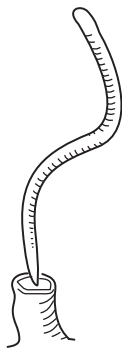
Macroinvertebrate  
 Snails  
 Temp: 10-25° C  
 DO:  $\geq 4.0$  mg/l  
 pH:  $\geq 5$

**Organism**

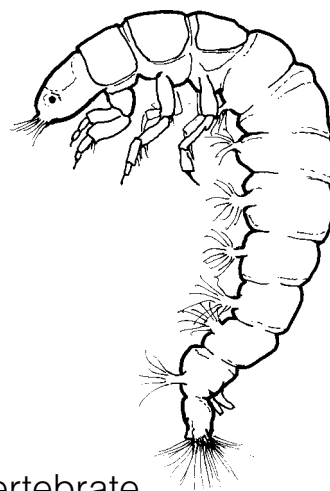
Vertebrate  
 Channel Catfish  
 Temp: 10-25° C  
 DO: 7.0-11.3 mg/l  
 pH: 7-9

**Organism**

Vertebrate  
 Fresh Water Trout  
 Temp: 5-20° C  
 DO: 8.4-11.3 mg/l  
 pH: 6.7-8

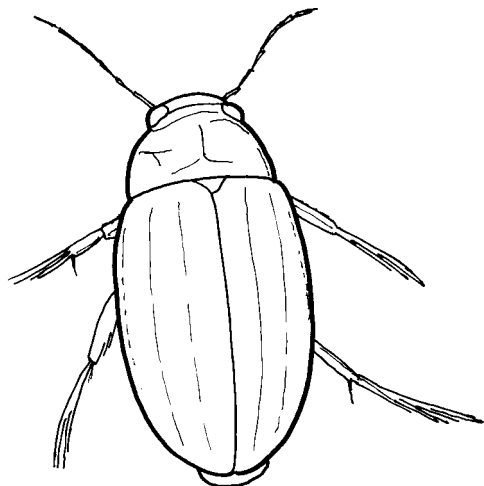
**Organism**

Macroinvertebrate  
 Tubifex worm  
 Temp: 5-25° C  
 DO: 1.0-12 mg/l  
 pH:  $\geq 5$

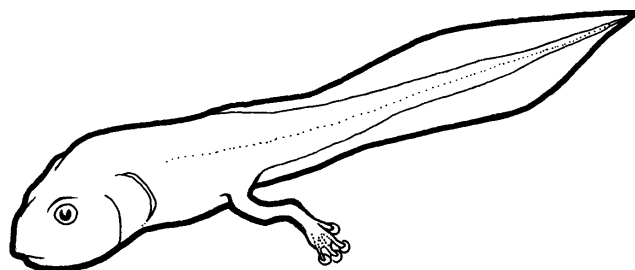
**Organism**

Macroinvertebrate  
 Caddisfly larvae  
 Temp: 10-18° C  
 DO:  $\geq 4.0$  mg/l  
 pH:  $\geq 5.0$   
 Not in brackish water

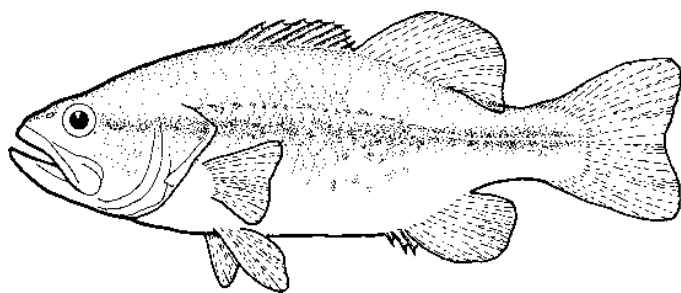


**Organism**

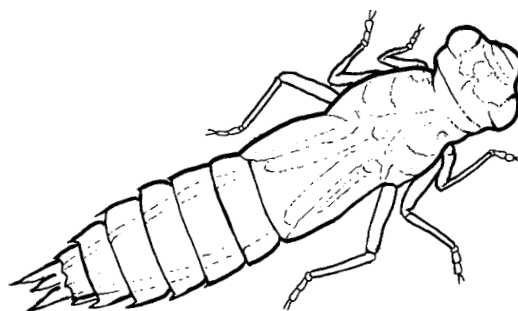
Macroinvertebrate  
 Diving beetle  
 Temp:  $\geq 10-25^{\circ}\text{C}$   
 DO:  $\geq 7.0\text{ mg/l}$   
 pH:  $\geq 5.5$

**Organism**

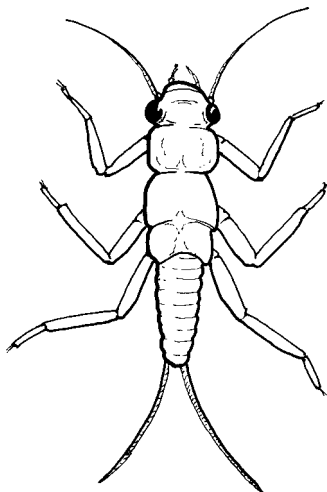
Vertebrate  
 Tadpole  
 Temp:  $10-25^{\circ}\text{C}$   
 DO:  $\geq 6\text{ mg/l}$   
 pH:  $\geq 6.0$

**Organism**

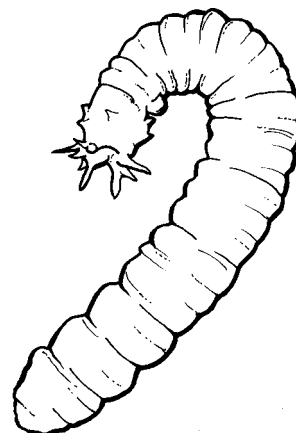
Vertebrate  
 Largemouth Bass  
 Temp:  $10-32^{\circ}\text{C}$   
 DO:  $7.3-11.3\text{ mg/l}$   
 pH: 7-9

**Organism**

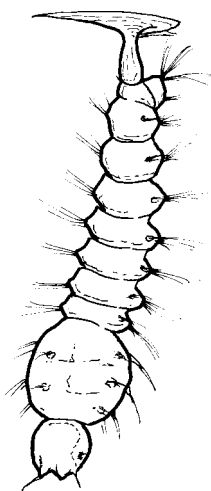
Macroinvertebrate  
 Dragonfly nymph  
 Temp:  $10-18^{\circ}\text{C}$   
 DO:  $\geq 6.0\text{ mg/l}$   
 pH:  $\geq 5.0$

**Organism**

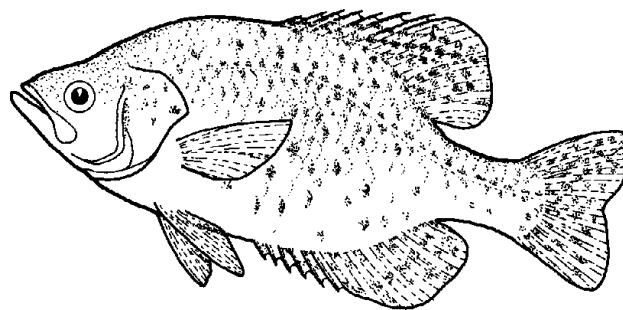
Macroinvertebrate  
 Stonefly nymph  
 Temp: 10-18° C  
 DO:  $\geq 8.0$  mg/l  
 pH:  $\geq 5.0$   
 Not in brackish water

**Organism**

Macroinvertebrate  
 Crane fly larva  
 Temp: 10-25° C  
 DO:  $\geq 5$  mg/l  
 pH:  $\geq 6.0$

**Organism**

Macroinvertebrate  
 Mosquito larvae  
 Temp:  $\geq 10-25^{\circ}$  C  
 DO:  $\geq 1$  mg/l  
 pH:  $\geq 5.5$

**Organism**

Vertebrate  
 Crappie  
 Temp: 1-30° C  
 DO:  $\geq 2$  mg/l  
 pH:  $\geq 5$