

Healthy Mussels = Healthy Water

Pocketbook mussel



Mussels can make water cleaner. Mussels pull, or inhale, water into their soft body through a siphon. The gills filter oxygen and suspended food particles. During this

process, the mussel also filters particles of bacteria, silt, ***detritus*** and chemicals. Detritus is small bits of decaying plant and animal material. The mussel then expels, or exhales, all water and any wastes through another siphon.

This process makes the water cleaner than it was before the mussel filtered it. One of the chemicals that a mussel filters from the water is calcium carbonate. This chemical is used to form the mussel's shell.

Mussels may absorb some chemical pollutants in their bodies and shells. These chemicals can build up over time. This process is called ***bioaccumulation***.

If these mussels are collected and then studied in a laboratory, scientists can identify the contaminants to determine the water quality conditions that have existed in the mussel's aquatic ***habitat***.

Pollutants in the soft, fleshy interior parts of the mussel can indicate recent or current exposure. Pollutants in the shell can indicate past chemical exposure.

Mussels are filter-feeders. They absorb filtered food through their mouths for nutrients. Gills absorb oxygen for the mussels to breathe. The foot of the mussel is a muscle used to move across the bottom of rivers and streams. Mussels have an inhalant siphon and an exhalant siphon. The inhalant siphon is used to draw water into the mussel's body and the exhalant siphon is used to expel water and wastes.

