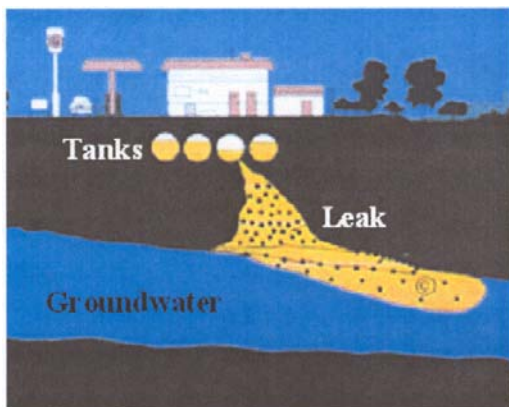


EXPOSURE PATHWAYS

WHAT IS EXPOSURE?

Exposure occurs when you come in contact with a material and that material enters your body.



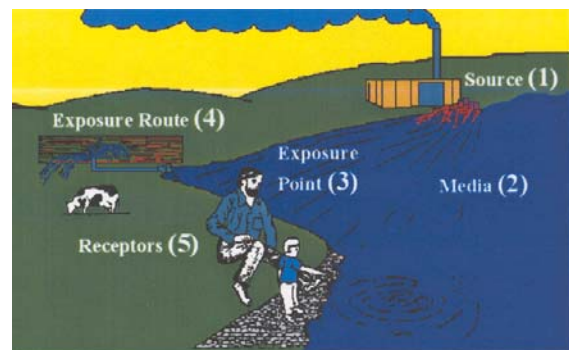
WHAT IS A PATHWAY?

A path or pathway is the course along which a material in the environment moves from its source to a new location. For example, if oil in tanks were to spill or leak onto the ground and then move through the soil into the groundwater (water flowing under the ground) that people may drink.

An exposure pathway is the way in which a person may come in contact with a material.

5 Elements of an Exposure Pathway

1. Source – How the material gets in the environment.
2. Media – Soil, water, or air in which a material moves from its source.
3. Exposure Point – Where people contact the media.
4. Exposure Route – How the material enters the body. (ex: eating, drinking, breathing)
5. Receptor Population – People who are exposed or potentially exposed.



ELEMENTS OF AN EXPOSURE PATHWAY

EXAMPLES

Source

- Landfill
- Tank
- Pond
- Drum
- Creek
- Factory
- Incinerator

Source

Media

- Soil
- Groundwater
- Sediment
- Surface water
- Animals/
plants
- Air

Exposure Point

- Residence
- Playground
- Business
- Campground
- Residential yard
- Waterway

Exposure Route

- Breathing air that contains the material
- Eating or drinking something with the material in it
- Getting it on your skin or touching something that has the material in it or on it

Receptor/Population

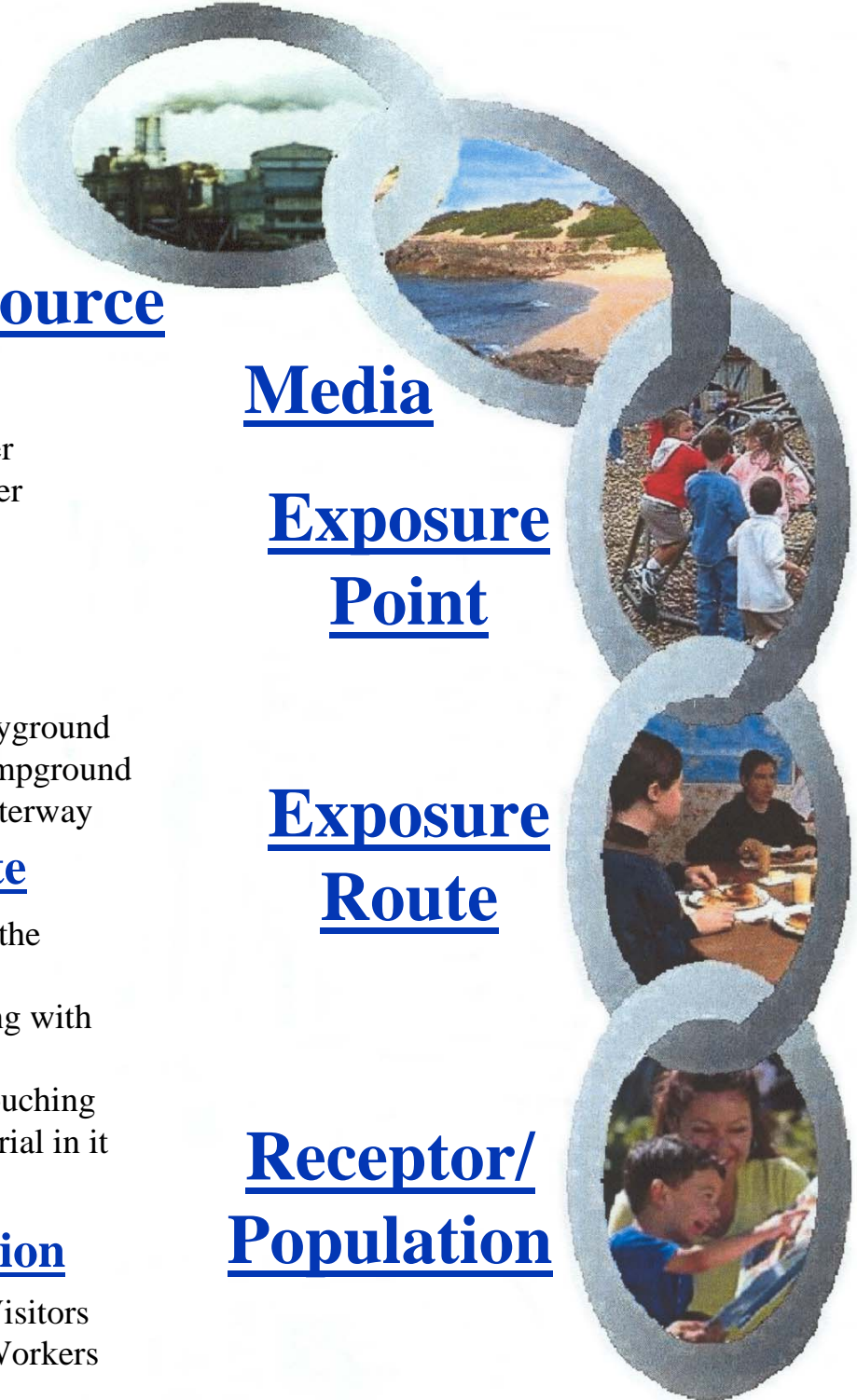
- Residents
- Visitors
- Hunters/Fishermen
- Workers
- Recreational populations

Media

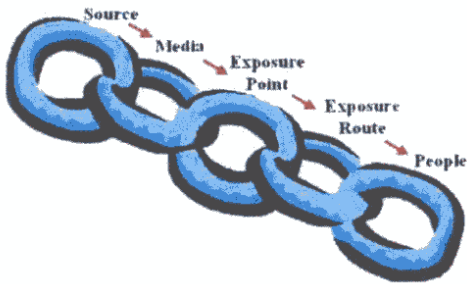
Exposure Point

Exposure Route

Receptor/Population



COMPLETED PATHWAYS

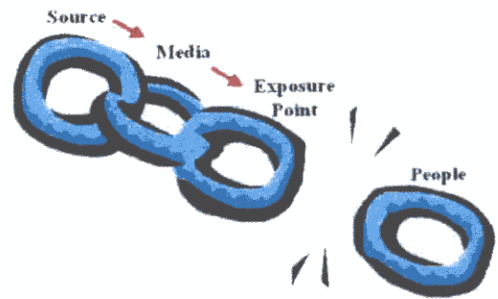


What is a completed pathway?

A pathway of exposure is considered completed when all five elements are present. A completed pathway connects the source of the material to people.

Why is a completed pathway of exposure important?

A pathway must be completed for an exposure to occur. All five elements must be present. If one element is missing the pathway is incomplete and there is no exposure.



***A Completed Pathway will result in exposure and possible health effects.
An Incomplete Pathway results in no exposure and no health effects.***

Will exposure from a completed pathway effect my health?

Whether or not a person experiences health effects from exposure to materials in the environment depends on a combination of several site-specific factors including:

- Kind of material released
- Amount of material available at the exposure point
- Physical and chemical form of the material
- Environmental conditions
- Length of exposure time

Site-specific information about completed exposure pathways is used in both risk assessments and Public Health Assessments to determine if a site is safe for humans or the plants or animals found on the site.