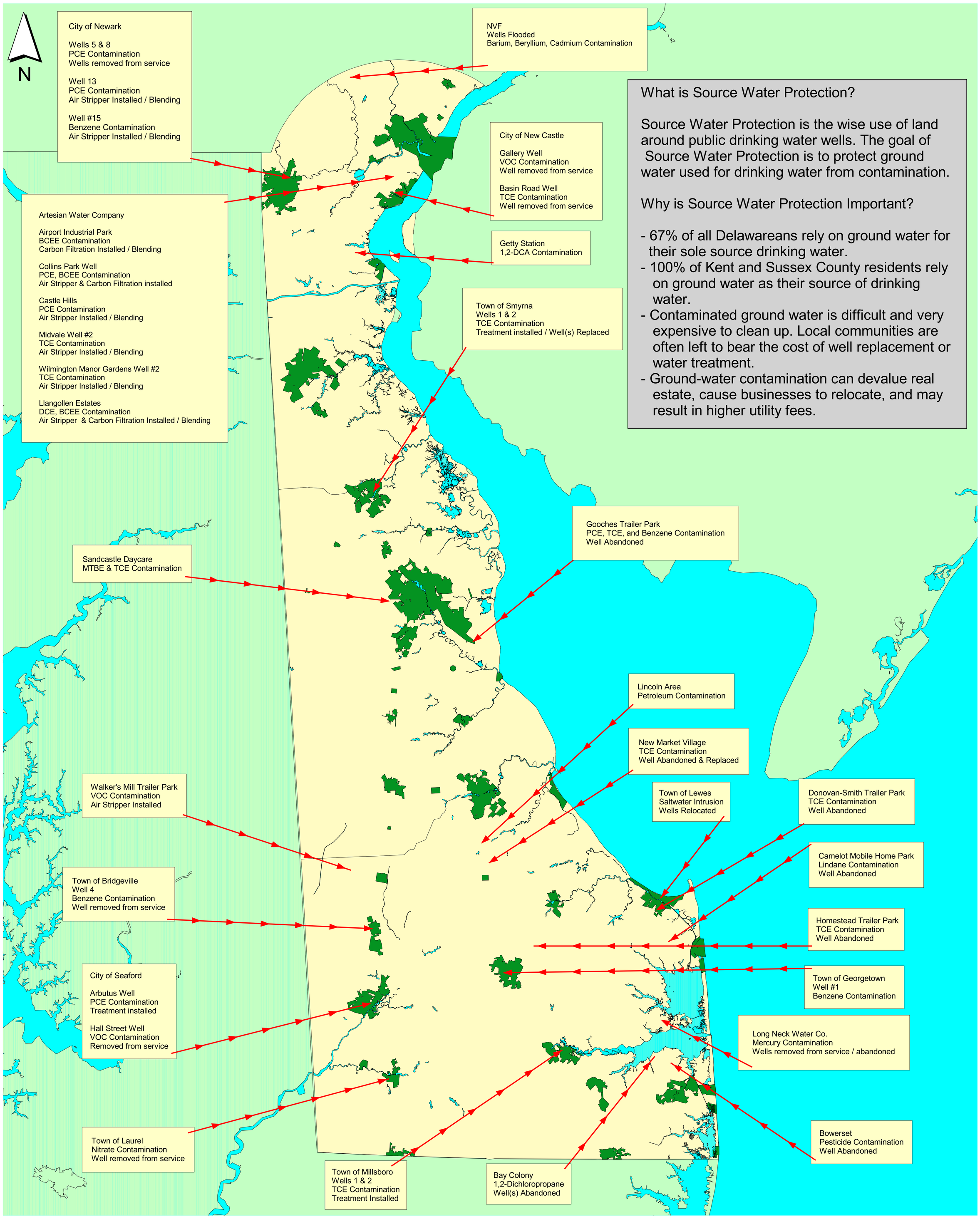
Why Source Water Protection?

These Current and Historic Sites Tell Us Why



What is Source Water Protection?

Source Water Protection is the wise use of land around public drinking water wells. The goal of Source Water Protection is to protect ground water used for drinking water from contamination.

Why is Source Water Protection Important?

- 67% of all Delawareans rely on ground water for their sole source drinking water.
- 100% of Kent and Sussex County residents rely on ground water as their source of drinking water.
- Contaminated ground water is difficult and very expensive to clean up. Local communities are often left to bear the cost of well replacement or water treatment.
- Ground-water contamination can devalue real estate, cause businesses to relocate, and may result in higher utility fees.

Contaminant	BCEE Bis (2-chloroethyl) Ether	BENZENE	DCE 1,1-Dichloroethylene 1,2-Dichloroethylene	1,2-DCP Dichloropropane	Mercury	MTBE Methyl-t-butyl-ether	Nitrate	PCE Perchloroethylene tetrachloroethylene	PESTICIDES	PETROLEUM Total Petroleum Hydrocarbons (TPH)	SALTWATER Sodium (Na)	TCE Trichloroethylene	VOCs Volatile Organic Compounds
Potential Health Effects from Ingestion of Water	Liver tumors in lab mice; potential risk of cancer	Anemia; chromosome damage; decrease in blood platelets; increased risk of cancer; death	Damage to liver, circulatory system, and nervous system; toxic to developing fetus; cancer	Damage to liver, kidney, bladder, gastrointestinal and respiratory tract; increased risk of cancer	Kidney damage, dementia, nerve damage	Turpentine taste to water; cancer in lab animals from inhaling MTBE; unknown risk from low-dose ingestion; cancer risk at high-dose ingestion	Infants below 6 months old: shortness of breath, blue-baby syndrome, death Infant over 6 months old and adults: increased urine production, bleeding of the spleen	Liver and kidney tumors in lab animals; increased risk of cancer	Depends on type of pesticide ingested; nervous system damage; skin and eye irritation; hormone problems; cancer	Throat and stomach irritation; central nervous system depression; difficulty breathing; pneumonia; damage to blood, immune system, liver, spleen, kidneys, developing fetus, and lungs	Salty taste to water; risk of intestinal illnesses from inadequate water supplies; high blood pressure	Liver problems; increased risk of cancer	Eye, nose, throat, and skin irritation; headaches, loss of coordination; nausea; fatigue; dizziness; damage to liver, kidney, and central nervous system; internal bleeding
Sources of Contaminant in Drinking Water	Does not occur naturally; manufactured by humans for use in the production of pesticides and other chemicals	Discharge from factories; leaching from gas storage tanks and landfills	Manufacture of plastic wrap, adhesives, and synthetic fiber	Discharge from industrial chemical factories	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	Fuel additive used to reduce carbon monoxide and ozone levels	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Dry Cleaners	Agriculture; lawn and garden maintenance; runoff	TPH describes a family of several hundred chemical compounds that originally come from crude oil. Examples are motor oil, brake fluid, and kerosene.	Saltwater intrusion into the aquifer from over pumping wells	Discharge from factories and dry cleaners	Paints, paint strippers, and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies; dry-cleaned clothing