Scientists wonder how flame retarding chemicals get into bird eggs around the Great Lakes.

For three decades, scientists in Canada have studied the eggs of herring gulls in the Great Lakes to look for different types of chemical contamination. They do this to get an idea of what chemicals might be affecting Great Lakes wildlife. They’re finding high levels of chemicals known as PBDEs.

Chip Weseloh is the head of wildlife toxicology for the Ontario region of the Canadian Wildlife Service. He says most chemical compounds in the bird eggs have been going down. For example, he says DDT and PCBs have been in decline since the mid-1970s. But one family of chemicals is on the rise. They’re the polybrominated diphenyl ethers -- the PBDEs.

“PBDEs are the only compound I can point to right now and say that it’s definitely increasing. The levels today are much greater than they were 20 years ago. For all the other compounds, even including the dioxins, it’s exactly the reverse. Levels today are much, much less than what they were 20 years ago. So PBDEs are certainly the black sheep of the chemical world, you might say.”

The chemicals are widely used as flame retardants in plastics and textiles. For example, they’re in televisions, computers, furniture and carpets. But Weseloh says it’s unclear how they escape from these products.

“They’re probably getting into the birds from the food the birds eat -- from the fish. Now how they’re getting into the fish and how they’re getting into the Great Lakes is a little bit more difficult. Somehow then -- from those products or from the manufacture of them -- they’re getting into the lakes and they work their way up the food chain, going from algae to zooplankton to small fish to big fish and then the birds eat them.”

PBDEs are not just a concern to wildlife scientists. Public health experts have also found them in some of our food.