National Tribal Toxics Council

400 D Street, Suite 200
Anchorage, AK 99501
907-277-2111 Office
1-877-335-6780 Fax
www.tribaltoxics.org
@tribaltoxics

May 26, 2020

Ross Geredien
Risk Assessment Division
Office of Pollution Prevention and Toxics
Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington, DC 20460-0001

RE: Draft Scopes of the Risk Evaluations to be Conducted for 13 Chemical Substances Under the Toxic Substances Control Act;

These comments are being submitted to the general docket that EPA has established for comments on its draft scopes, Docket ID EPA-HQ-OPPT-2019-0131. The comments pertain to the first 13 draft scopes that EPA has released. The specific dockets for these 13 chemicals are:

1. EPA–HQ–OPPT–2018–0451 (1,3-Butadiene);
2. EPA–HQ–OPPT–2018–0426 (1,1-Dichloroethane);
3. EPA–HQ–OPPT–2018–0427 (1,2-Dichloroethane);
4. EPA–HQ–OPPT–2018–0428 (1,2-Dichloropropane);
5. EPA–HQ–OPPT–2018–0488 (Ethylene dibromide (Ethane, 1,2-dibromo-));
6. EPA–HQ–OPPT–2018–0430 (1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta [g]-2-benzopyran (HHCB));
7. EPA–HQ–OPPT–2018–0462 (4,4'-(1-Methylethylidene)bis[2, 6-dibromophenol] (TBBPA));
8. EPA–HQ–OPPT–2018–0444 (o-Dichlorobenzene (Benzene, 1,2-dichloro-));
9. EPA–HQ–OPPT–2018–0446 (p-Dichlorobenzene (Benzene, 1,4-dichloro-));
10. EPA–HQ–OPPT–2018–0458 (Phosphoric acid, triphenyl ester (TPP));
11. EPA–HQ–OPPT–2018–0465 (trans-1,2- Dichloroethylene (Ethene, 1,2-dichloro-, (1E)-));
12. EPA–HQ–OPPT–2018–0421 (1,1,2-Trichloroethane);
13. EPA–HQ–OPPT–2018–0476 (Tris(2-chloroethyl) phosphate (TCEP) (Ethanol, 2-chloro-, 1,1',1"-phosphate));

The National Tribal Toxics Council (NTTC) appreciates the opportunity to provide comments on the draft scopes of the next 13 high priority chemicals to be evaluated under the Toxic Substances Control Act (TSCA), as amended by the Frank R. Lautenberg Chemical Safety for the 21st Century Act. NTTC is an EPA Tribal Partnership Group (TPG), supported by the EPA Office of Pollution Prevention and Toxics (OPPT), that works to provide Tribes with information on issues and rulemakings related to toxic chemicals and pollution prevention. On behalf of Tribes, the NTTC works to ensure that tribal risks are accurately characterized and evaluated in EPA's risk assessment process by informing and educating the EPA on tribal lifeways, exposures, and risks.

On April 9, 2020 EPA published the draft scopes of the risk evaluations for 13 of 20 chemical substances designated as high priority for risk evaluation under TSCA. Through their risk evaluation process, EPA will determine whether the chemical substances present an unreasonable risk of injury to health or the environment under the conditions of use, in accordance with section 6(b)(4) of TSCA. NTTC welcomes this opportunity to again provide comments to EPA on exposure pathways for tribal people in the U.S. These pathways differ from those of the general population and may result in tribal members experiencing higher exposures to toxic chemicals released into the natural environment.

On November 21, 2019, the NTTC provided comments to EPA OPPT during the high priority designation phase for all 20 chemicals, and urged EPA to identify tribes as potentially exposed or susceptible subpopulations (PESS) and use tribal lifeways for potential exposure pathways and routes to human receptors for chemicals released into the environment. The draft scopes do not identify which subpopulations will be evaluated as PESS in the risk evaluations beyond children, women of childbearing age, workers, and consumers in the general population. These broad categories do not represent an adequate attempt at identifying subpopulations who might experience higher exposures, such as tribal populations. As noted in NTTC's high-priority designation comments, lifeways of tribal members clearly make them PESS under TSCA, yet the scoping documents are implicitly treating exposures to tribal members as part of an undifferentiated general population scenario.

Based on our review of these 13 scoping documents, NTTC is concerned that EPA has once again left out tribal populations' exposures to toxic chemicals from consideration, mainly by 1) assuming that environmental statutes are protective of tribal communities; 2) not evaluating tribes as a potentially exposed subpopulation; and 3) not considering all conditions of use and all exposure pathways.

We include the following sections:

1 45-Day Comment Period During A Pandemic 3
2 Tribes Are Potentially Exposed Subpopulations (PESS) 4
3 Reliance on Environmental Statutes to Address Tribal Chemical Exposures 8
3.1 Inadequate Protection of Native Americans by the Safe Drinking Water Act (SDWA) ... 8

3.2 Inadequate Protection of Native Americans by the Clean Water Act (CWA) 11
3.3 Inadequate Protection of Native Americans by the Clean Air Act (CAA) 13
3.4 Inadequate Protection of Native Americans by the Resource Conservation and Recovery Act (RCRA) 14
3.5 Tribal Exposure Pathways Uncovered by Reliance on Environmental Statute Authorities 17
4 Legacy Use 19
5 General Tribal Conceptual Model for Environmental Releases and Wastes 19
6 Tribal Exposure Scenario Example – Waste Handling, Treatment, And Disposal 20
7 Closing Remarks 22

1 45-Day Comment Period During A Pandemic

EPA has provided a 45-day public comment period on these scopes, which NTTC finds insufficient given the impact of the global COVID-19 pandemic on tribal environmental offices and staff. The current coronavirus pandemic disproportionately impacts tribal communities[1]. Incidence rates are alarmingly high on some reservations and healthcare infrastructure is generally poor. High risk conditions such as diabetes are disproportionately present in these nations' populations. Many isolated tribal communities have had their supply chains severely disrupted. For example, the primary, and in many cases only, transport and freight airlines stopped serving over one hundred Alaska tribes[2].

Tribal environmental staff, who typically would be the primary parties to research and prepare comments for discussion and direction from their Councils, are the very staff who are also responsible for leading their tribal nation's response to the numerous COVID-19 environmental health concerns. They must ensure indoor air, waste disposal, water treatment operations, and community practices are changed to conform with the best up-to-date information and that their workers and communities are safe and informed. They do this while often homeschooling, caring for elders, and carrying out customary and traditional practices. Our volunteer Council members, as tribal employees, are no exception and their NTTC duties are in addition to their work for their tribes.

[1] Hedgepeth, D., Fears, D., and Scruggs, G. Indian Country, Where Residents Suffer Disproportionately from disease, Braces for Coronavirus. Washington Post, April 4, 2020; https://www.washingtonpost.com/climate-environment/2020/04/04/native-american-coronavirus/

[2] Hollander, Zaz. Ravn Suspends Air Service, Including Mail Deliveries, to Most Rural Alaska Communities. Anchorage Daily News, April 3, 2020. https://www.adn.com/alaska-news/aviation/2020/04/02/ravn-suspends-air-service-including-mail-deliveries-to-most-rural-alaska-communities/

We believe that a 45-day comment period, the entirety of which occurs during a pandemic, is far too short under normal circumstances to expect substantial tribal comment for reasons expressed previously by the NTTC regarding other TSCA-related comment opportunities. As a primary grantor to most federally recognized tribes, EPA is aware that many Tribal Councils are shut down except for essential operations by explicit order. It would be impossible for tribes to send in comments or for Councils to consider whether they wish to send in comments. EPA should provide an additional 90-day comment period on the scoping documents for all 20 chemicals.

2 Tribes Are Potentially Exposed Subpopulations (PESS)

TSCA defines a "potentially exposed or susceptible subpopulation" as "a group of individuals within the general population identified by the Administrator who, due to either greater susceptibility or greater exposure, may be at greater risk than the general population of adverse health effects from exposure to a chemical substance or mixture, such as infants, children, pregnant women, workers, or the elderly." *Tribes clearly meet this definition but are not included in the PESS that EPA has listed in the scoping documents, making that list incomplete, and leaving tribal risks out of any future risk assessment.*

Not only would the continued exclusion of tribes from risk assessment be in violation of TSCA, it would also be in violation of EPA's commitment to integrating environmental justice into "the development, implementation, and enforcement of environmental laws, regulations, and policies". Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. According to the EPA, "no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies". Executive Order 12898, to which risk assessment processes are subject, directs federal agencies to identify and address "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Tribes are a minority and low-income population whose lifeways place them at higher exposure potential to chemicals in the natural environment so that EPA must include exposure scenarios representative of tribal lifeways in its TSCA risk assessment process. In not doing so, tribal risks are left unevaluated, and tribes are left with a disproportionate share of the negative consequences and effects resulting from EPA's TSCA policies and operations.

In the final scoping documents and the risk evaluations to follow, EPA needs to identify all potentially exposed and susceptible subpopulations and analyze their risks, as required by TSCA, and tribes should be explicitly considered as such. As NTTC has informed the EPA in previous comment letters and presentations to the Agency, tribes have unique lifeways that place them at different risk due to multiple exposure pathways not experienced by the general population. For example, these lifeways include differences in:

1. Diet, such as significantly higher consumption of fish and other aquatic life that is typically locally harvested
2. Higher consumption of deer, elk, and other wildlife that is locally harvested and may be contaminated from industrial and mine releases to tribal lands
3. Housing, which tends to be more often substandard, with older household furniture and products, that lack garages (resulting in product storage inside the home), and can be associated with dirt yards and unpaved roads
4. Worker safety protocols, which tend to be less stringently practiced due to multiple small businesses, self-employment, and do-it-yourself practices, and remote access locations unvisited by OSHA
5. Water use for:
    - Drinking, which can be from untreated and unregulated small systems (less than 15 homes), including well water and surface haul water
    - Hygienic use, through daily steam baths
    - Ceremonial use through steam baths
    - Multiple artisanal activities (e.g. reed harvest, mouthing, weaving);
    - Subsistence activities (e.g. hunting, gathering)
    - Recreational activities (swimming in natural water)
    - Other lifeways.

Due to aggregate exposures via multiple pathways of which many have greater frequency and duration than those of the general population or other human receptor populations, Native Americans are at higher risk generally from chemical releases to the natural environment than these populations. For convenience, we include a graphic on the following page that depicts many of these exposures.

EPA's Science Advisory Committee on Chemicals, in its November 2019 report[3] on the HBCD and 1,4-dioxane draft risk evaluations, strongly agreed with NTTC's recommendation that EPA must consider all exposure routes and give:

> …special consideration to specific populations (e.g., tribal, arctic inhabitants, etc.) who depend on fish as a major source of food because of cultural considerations and provide some quantitative sense of how much extra risk exists for these populations.[4]
>
> In considering special and susceptible population exposures, more consideration needs to be given to populations with specific preexisting conditions, such as metabolic disease and obesity, as well as to tribal, ethnic and other subpopulations that depend heavily on potentially contaminated foods, such as Native American subsistence fishers"[5].

[3] TSCA Science Advisory Committee on Chemicals Meeting Minutes and Final Report No. 2019-02, Peer Review for EPA Draft Risk Evaluations for 1,4-Dioxane and Cyclic Aliphatic Bromide Cluster (HBCD), July 29- August 2, 2019, 166 pp.

[4] Ibid, pg. 149.

[5] Ibid, pg 155.

Referencing the conceptual model above, the SACC also recommended that "the context of the assessment would be improved by including a graphic similar to the one presented by the National Tribal Toxics Council at the public meeting, that illustrates exposure routes for potentially sensitive or highly exposed populations"[6]. Despite this feedback from its SACC, and despite NTTC's work to educate the EPA on tribal exposures, tribes were not considered as PESS for HBCD, a highly bioaccumulative contaminant, or in any of the other risk evaluations conducted for the first 10 chemicals under TSCA. The TSCA amendments of 2016 require the EPA to consider all PESS for each chemical risk evaluation. Tribal risks were not evaluated in any of the first 10 risk evaluations conducted under the Lautenberg Act including for HBCD, a flame retardant which is highly bioaccumulative and found throughout the world even in the tissues of arctic mammals.

NTTC strongly urges the EPA to include and analyze tribes as PESS in the final scope documents and next 20 risk evaluations. Special consideration of the multiple aggregate exposures inherent in tribal lifeways and circumstances must be included in all analyses in order to determine the risks Native Americans face from all 20 chemical substances. Aggregate exposures are defined as "the combined exposures to an individual from a single chemical

[6] Ibid, pg 40.

substance across multiple routes and across multiple pathways" (40 C.F.R. § 702.33) and consideration of aggregate exposures is mandated by TSCA Section 6(b)(4)(F).

EPA also needs to analyze those PESS that face greater potential exposure due to their proximity to conditions of use, particularly disposal. In the scope documents, these populations are not listed. Many tribal communities live in close proximity to a landfill or other waste disposal site, such as a transfer station. For example, three quarters of the 229 tribal communities in Alaska have residents living within 1 mile of unlined landfills which lack design performance, are open access, and typically employ open burning without emissions treatment as a waste management strategy, all in compliance with RCRA Subtitle D, as well as the Clean Air Act (CAA) which includes a specific provision for Alaska villages[7]. Because such communities are often off the road system, drinking water sources and primary diet sources are also typically proximate so that aggregate exposures are likely to be present.

Because it is EPA that is ultimately responsible for these authorized exceptions, and because exposures from disposal site releases are clearly not adequately managed under other statutes, disposal site releases need to be evaluated and should include releases from *all* waste disposal and waste disposal sites, including those left unregulated by RCRA, such as transfer stations and construction waste landfills. The multiple exposure pathways associated with proximity to unlined disposal site releases to environmental media must be analyzed for both individual exposures and the aggregate exposures that tribal members face from their customary and traditional tribal lifeways (inhalation, dermal, ingestion). If these exposures are not analyzed, then no determination can be made on the risks these populations face, which would be in violation of TSCA. As part of this analysis, EPA should identify all populations living near landfills and other waste management and/or disposal sites as potentially exposed or susceptible subpopulations. Groups living near National Priority List sites and proposed National Priority List sites should be included, as well.

In some of the scope documents, the EPA states that

> "in developing exposure scenarios, EPA plans to analyze reasonably available information to ascertain whether some human receptor groups may be exposed via exposure pathways that may be distinct to a particular subpopulation or life stage (e.g., children's crawling, mouthing or hand-to-mouth behaviors) and whether some human receptor groups may have higher exposure via identified pathways of exposure due to unique characteristics (e.g., activities that would lead to elevated fish ingestion or otherwise lead to increased duration or level of exposure) when compared with the general population".

As OPPT's tribal partnership group, NTTC believes the information it provides on tribal lifeways should be included in such "reasonably available information" and should lead to the inclusion of tribes in these analyses as PESS. NTTC will welcome the opportunity to work closely with EPA

[7] Federal Incinerator Regulations for Remote Alaska Incinerators Commercial/Industrial (CISWI) and Other Solid Waste Incinerators (OSWI) Prepared May 25, 2017 by ADEC Air Compliance Program.

OPPT and assist in providing education and possibly tribal data to effect the inclusion of tribes in EPA risk assessments.

NTTC has expressed concern at the paucity of data on tribal risks, as well as the observation that tribal people are underrepresented or absent from EPA's risk evaluations and proposed actions. It is well documented in the scientific literature that Native Americans experience significant health disparities from the general population. The practice of leaving them out of any protections will only contribute to further health disparities. NTTC has in the past provided detailed information to EPA on the chronic exposures tribal people experience. In order to protect tribal communities, the unique tribal lifeways and exposures, including those from disposal of products containing toxic chemicals in open dumps that are unlined and that practice open burning of wastes, have to be considered by EPA. NTTC is willing to assist EPA in obtaining or generating relevant data on tribal risks and exposures that EPA can use in order to accurately determine tribal risks.

3 Reliance on Environmental Statutes to Address Tribal Chemical Exposures

Section 2.6.3 of the scoping documents presents a regulatory overlay to identify how the Safe Drinking Water Act (SDWA), the Clean Water Act (CWA), the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA) address exposure pathways and hazards to human and environmental receptors from chemical releases from industrial and commercial sources. All but 4 of the 13 scoping documents presume that one or more EPA statutes will be protective of human and environmental receptors, precluding evaluation of pathways falling under these statutes from consideration. NTTC notes that these environmental statutes do not guarantee protection from exposures, particularly in the case of tribes, who are often disproportionately impacted by these statutes' exclusions, exemptions, and exceptions. We provide examples in the subsections below.

3.1 Inadequate Protection of Native Americans by the Safe Drinking Water Act (SDWA)

In the Conceptual Models for Environmental Releases and Wastes: Environmental and General Population Exposures and Hazards ("conceptual models"; Figs 2-10 in the scopes), the SDWA is assumed to adequately manage oral and dermal exposures via water from drinking and bathing and therefore EPA does not plan on evaluating these exposure pathways in the risk evaluations for these chemicals.

Importantly, there are multiple exemptions to the SDWA that leave tribes and other small communities unprotected by this statute. As an example, 13 million rural households throughout the United States rely on private drinking water wells–for drinking and other purposes—that are unregulated by the SDWA[8]. Due to the rural and remote nature of most

[8] USEPA Private Drinking Water Wells webpage, accessed May 23, 2020. https://www.epa.gov/privatewells, using data from the US Census American Housing Survey 2017

reservations, multiple tribes have residents relying on individual groundwater wells or community water systems serving less than 25 people, which are also exempt from the SDWA. This unregulated and unmonitored water is used for drinking, cooking, bathing, daily steam baths, ceremonies, home crops, and more, and any exposures via these pathways will not be managed under SDWA. EPA's current policy of reliance on SDWA excludes these critical exposure pathways from evaluation.

Also unconsidered are exposures from the multiple ground water wells used for livestock, such as cattle, sheep, and goats, and agriculture that are unregulated. Unconsidered in general are the many tribal communities that subsist on these local customary and traditional resources. Substantial documentation exists that a number of these wells are used for drinking water and household use as well, particularly for those homes that are unplumbed[9]. Haul water for unplumbed homes is often from unregulated and untreated surface and groundwater sources. It is noteworthy that Native American households are 19 times more likely than other households to lack indoor plumbing[10]. Nearly 14% of Native households lack access to a public water system compared to 0.6% of the USA as a whole, with some tribes lacking access for more than 30% of their populations, creating a greater reliance on unregulated sources[11]. EPA clearly cannot assume that these exposures are adequately managed by the SDWA for tribes and other small or rural populations and these exposure pathways cannot be left out of risk evaluations under TSCA.

Even when water used by tribes is regulated by statute, it is noteworthy that EPA does not account for violations. For example, in 2015, nearly 21 million people relied on community water systems that violated health-based quality standards under the SDWA[12]. In 2013, tribal water systems were 19 times more likely to have violations than other water systems[13]. A 2016 legal analysis of the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) revealed that, compared with nontribal facilities, tribal facilities experience less rigorous CWA and SDWA enforcement and are more likely to violate these laws[14].

According to a study published by the National Academy of Science that examined health-based violations (which excludes recording and monitoring violations), substantial differences across time exist between rural and urban areas, with low-income rural areas having a larger

---

[9] Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5

[10] US water alliance, Closing the Water Access Gap in the United States, 2019 closethewatergap.org

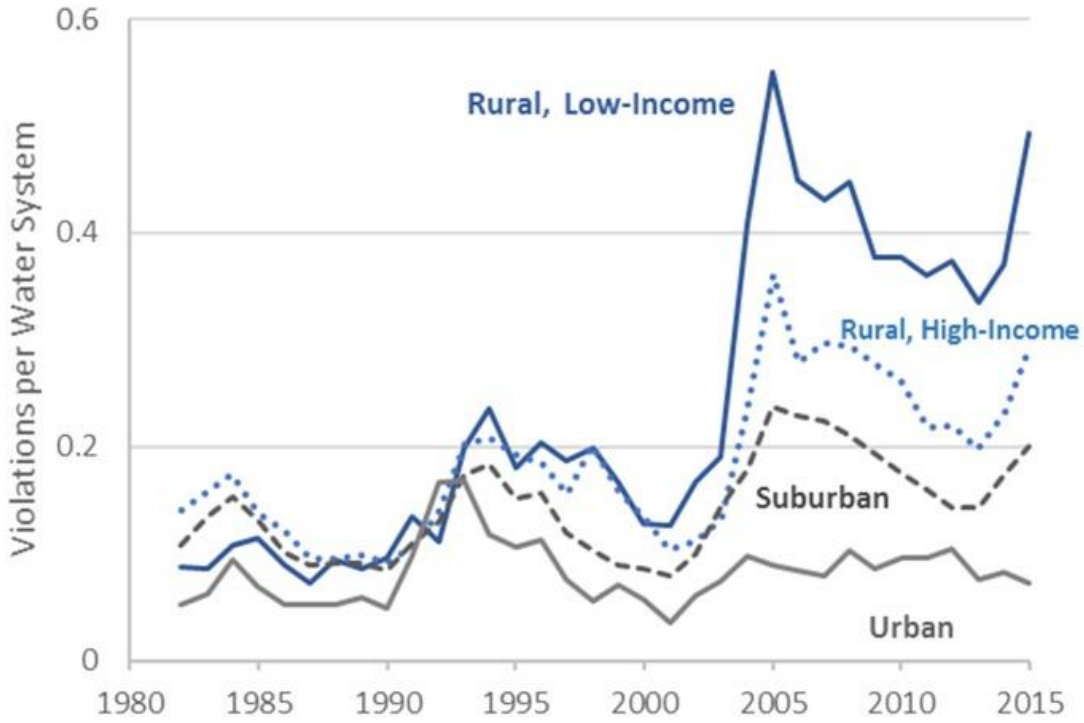
[11] Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5

[12] Allaire M, Wu H, Lall U. National trends in drinking water quality violations. *Proc Natl Acad Sci U S A*. 2018;115(9):2078-2083. doi:10.1073/pnas.1719805115

[13] Note, 2013 just the last year that EPA published this statistic. Providing Safe Drinking Water in America: National Public Water Systems 2013 Compliance Report, https://www.epa.gov/sites/production/files/2015-06/documents/sdwacom2013.pdf

[14] M. Teodoro, M. Haider, D. Switzer U.S. Environmental Policy Implementation on Tribal Lands: Trust, Neglect, and Justice, Policy Science JournalVol 46(1), Pages 37-59, Feb 2018https://doi.org/10.1111/psj.12187

compliance gap than higher-income rural areas[15]. The study states that "Utilities in more rural, less urbanized areas tend to have less capacity to comply with quality regulations and face financial strain due to declining populations and lower incomes." For reference, NTTC includes the study graphic below.



Due to the cited regulatory overlay, EPA proposes to not analyze oral, inhalation, and dermal exposures via surface or groundwater for:

1,3-Butadiene
o-Dichlorobenzene
p-Dichlorobenzene
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloroethylene
1,2-Dichloropropane
Ethylene Bromide
1,1,2-Trichloroethane

[15] Allaire M, Wu H, Lall U. National trends in drinking water quality violations. *Proc Natl Acad Sci U S A*. 2018;115(9):2078-2083. doi:10.1073/pnas.1719805115

As described above, the SDWA is not protective of tribes and their exposures via these pathways are not managed under that statute. These exposures and risks have to be evaluated under TSCA.

3.2 Inadequate Protection of Native Americans by the Clean Water Act (CWA)

For multiple chemicals, EPA assumes that the CWA adequately manages exposures via water, sediment, and fish ingestion and does not plan to evaluate these exposure pathways under TSCA. Multiple CWA exemptions and exceptions leave tribes and other small communities unprotected from this statute.

For example, many publicly owned wastewater treatment plants (POTWs) discharging into marine waters have received NPDES variances under the CWA. At issue again is that tribes consume fish, shellfish, marine mammals, and aquatic plants and seaweed at far greater quantities than the general population, and are exposed to the water and sediment while harvesting these foods. One example is the NPDES permit administered by EPA for the city of Anchorage POTW, which comprises nearly half the population of the state of Alaska and discharges primary treated effluent into an inlet used by tribal people for millennia in multiple customary and traditional practices, including marine mammal consumption. This permit has been administratively extended since 2005. In issuing variances under the CWA for discharges, tribal customary and traditional uses are not specifically included for consideration.

Another example of an exclusion in the CWA is the Navigable Waters Protection Rule, which was published by EPA on April 21, 2020. This Rule excluded ephemeral waters and wetlands not adjacent to navigable waters. Because these waters are often critical in supporting native plants, fish, and wildlife[16], they are vital to tribal lifeways and exposures resulting from chemical releases to such water must be evaluated. Such exposures include harvesting & mouthing plants and resources for artisan, ceremonial, and consumption purposes, as well as ingestion of terrestrial and aquatic species exposed to chemical releases.

Additionally, tribal communities and reservations support multiple small businesses and self-employed contractors. The Small Business Exemption under CWA § 122.21(g)(8) does not consider local use of water for the wide variety of tribal uses, and the vast majority of tribes at this time have no specific delegated authority to make the exemption more stringent.

Additionally, EPA has determined that water quality criteria developed under Section 304(a) of the CWA sufficiently address exposures from the presence in water and fish tissue of the following seven high priority chemicals:

- o-Dichlorobenzene
- p-Dichlorobenzene

[16] For example, US EPA ORD, NERL, Environmental Sciences Program, The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest, 2008. ephemeral_streams_report_final_508-kepner.pdf

1,1-Dichloroethane
1,2-Dichloroethane
trans-1,2-Dichloroethylene
1,2-Dichloropropane
1,1,2-Trichloroethane

Because of the regulatory overlay, EPA does not plan to consider environmental exposure pathways from water and fish tissue. The NTTC finds this unacceptable because the human health assessment methodology used by EPA to develop Ambient Water Quality Criteria for these chemicals does not meet the congressional mandate in TSCA to protect PESS that have much higher fish ingestion rates than the general population.

EPA's 2000 human health methodology guidance[17], "Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health" states:

> EPA's national 304(a) criteria are usually derived to protect the majority of the general population from chronic adverse health effects. EPA has used a combination of median values, mean values, and percentile estimates for the parameter value defaults to calculate its national 304(a) criteria. (pg 34)
>
> EPA considers that its target protection goal is satisfied if the population as a whole will be adequately protected by the human health criteria when the criteria are met in ambient water. (pg 34)
>
> The default fish consumption value for the general adult population in the 2000 Human Health Methodology is 17.5 grams/day…. This default value is chosen to be protective of the majority of the general population. (pg 31)

TSCA risk evaluations are mandated by Congress to consider PESS. Water quality criteria developed under CWA 304(a) are calculated to be protective of the general population and not subpopulations with well-documented high fish ingestion rates, like tribes. By not considering these exposure pathways, and inaccurately assuming they are adequately managed by other statutes, EPA fails in its responsibility to evaluate risks to PESS under TSCA.

For the carcinogens in the 304(a) list- 1,2-Dichloroethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, the CWA methodology also fails sensitive subpopulations by <u>allowing cancer risk levels at two order of magnitude less protection than that recommended for the general population</u>. EPA's human health methodology[18] states:

> With AWQC derived for carcinogens based on a linear low-dose extrapolation, the

[17] *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., EPA-822-B-00-004 (Oct. 2000), 185 pp.
[18] Ibid

> Agency will publish recommended criteria values at a 10^{-6} risk level. States and authorized Tribes can always choose a more stringent risk level, such as 10^{-7}. EPA also believes that criteria based on a 10- risk level are acceptable for the general population as long as States and authorized Tribes ensure **that the risk to more highly exposed subgroups (sportfishers or subsistence fishers) does not exceed the 10^{-4} level**. (emphasis added, pg 31)

NTTC finds that EPA's protections for these chemicals under Ambient Water Quality Criteria do not meet the congressional mandate and thus, the scopes for these seven high priority chemicals must be revised to consider water and sediment contact, and fish ingestion. In analyzing fish ingestion as an exposure pathway, the much higher consumption rates of fish and other aquatic life (e.g. shellfish, marine mammals, aquatic plants) that many tribes have must be included and NTTC urges EPA to use rates of consumption that are representative of tribal lifeways. Extensive documentation exists for tribes in Alaska, the Great Lakes, and the Southwest via Lifeline Group Dietary files, an effort funded by OPPT, and thus which should be considered "reasonably available information".

3.3 Inadequate Protection of Native Americans by the Clean Air Act (CAA)

For multiple chemicals, EPA assumes that exposures via inhalation of chemicals released to the air from landfills and other disposal sites are adequately managed by the CAA and does not plan to evaluate risk to the general population via these pathways. But exemptions to the CAA leave tribes unprotected from certain exposures by this statute and the risks they face still must be evaluated under TSCA.

A majority of tribes live in rural areas where individuals employ open barrels for burning of household wastes. Under an exemption of the State's delegated CAA program Over three-quarters of Alaska tribes use a "burnbox" at the landfill to burn the full community waste stream and its untreated emissions release directly to ambient air[19]. A self-report database with information collected from tribal environmental professionals whose positions are paid and trained through EPA Indian General Assistance Program (IGAP) monies indicates residents in over one-quarter of those communities smell the smoke three or more days each week, with nearly nine in ten communities experiencing emissions odors in town at least monthly. Without burn controls, the fire is left to self-extinguish, and can smolder for up to two days with associated low-temperature emissions. Very Small Municipal Incinerators qualify as Other Solid Waste Incineration (OSWI) and are subject to less reporting and only annual monitoring and visual opacity tests. Small and Remote Commercial/Industrial Solid Waste Incineration (CISWI) units such as those used at mine camps, oil and gas facilities and construction camps are likewise subject to reduced burdens of reporting and monitoring. Again, because of the small population sizes, and the inherent nature of natural resource development occurring in rural areas, tribes are more likely to live near incineration units with less stringent regulations.

[19] Federal Incinerator Regulations for Remote Alaska Incinerators Commercial/Industrial (CISWI) and Other Solid Waste Incinerators (OSWI) Prepared May 25, 2017 by ADEC Air Compliance Program.

For non-incinerated waste emissions, the installation and removal of a gas collection and control system (GCCS) is not required for facilities producing less than 34 Mg/yr of nonmethane organic compounds(NMOC) emissions, so that sampling cannot be easily performed. Further, as of March 2020, 42 states and territories have not submitted plans for their Emission Guidelines (EG) for Municipal Solid Waste (MSW) Landfills. Additionally, emission controls apply only to landfills constructed after July 2014. Therefore, EPA cannot presume landfills are in compliance with emission guidelines.

Beyond the sections of the CAA dealing with waste disposal, States, local governments, and tribes can be given delegated responsibilities for developing emission plans for area sources and small businesses (non-major source emitters). These sources may be under general permits which again do not guarantee monitoring or compliance for HAPS, and may be subject to little or no enforcement. In addition, many tribes are impacted by State issued permits, that are often violated and leave tribal lands with elevated levels of contamination, high PM 10 and 2.5, sulfur dioxide, nitrogen dioxide, fluorides, and other toxins. Tribal members are left unprotected by the CAA and are relying on the intent and foundation of TSCA to offer some protections.

3.4 Inadequate Protection of Native Americans by the Resource Conservation and Recovery Act (RCRA)

For multiple chemical Conceptual Models, EPA assumes that any exposure pathways from Municipal landfills, Hazardous landfills, underground injection wells, and off-site waste transfer are adequately managed by RCRA. This assumption is faulty in the case of tribes.

Many tribal populations are in rural areas and operate or use waste transfer stations, which are not subject to RCRA design or monitoring requirements, and are likely to allow public access, and be unlined. Because they reside in rural areas with small populations, tribal communities may live proximate to tribal or county landfills receiving less than 20 tons per day, which again, under RCRA and the 1996 ``Land Disposal Program Flexibility Act'' (LDPFA), are exempted from the design requirements of larger facilities, including daily cover, leachate treatment, gas recovery, and liners. Those small landfills receiving less than 25 inches per year of precipitation are not subject to groundwater monitoring requirements. Additionally, approved State RCRA programs have the ability to grant a No Migration Exemption to larger landfills that waives groundwater monitoring requirements. Several states do not even require site specific data in order for landfills to be granted such an exemption[20]. For example, high salinity is a sufficient parameter for an exemption in the State of Utah. Beyond these waste disposal exceptions, other landfill types are also not covered by RCRA, including Construction Waste landfills, which tend to be unlined in many states and often may lack cover, monitoring, or leachate and gas collection and treatment. Construction waste landfills tend to be sited in rural areas because,

[20] USEPA, Preparing No-Migration Demonstrations for Municipal Solid Waste Disposal Facilities: A Screening Tool, EPA530-R-99-008 February 1999

without the more stringent design and operational regulations, it is less costly to operate a large expanse of land inefficiently than a small one with higher areal waste density requiring more intensive management.

Additionally, RCRA may not be delegated to Tribal governments so most, if not all RCRA permits are issued by states or overseen by the EPA. States many times do not provide information on releases to tribal governments, putting tribal populations at even greater risks when a release occurs. Many industrial facilities that require RCRA permits may not coordinate with Tribal governments on their release notifications and again, by the time tribal governments are informed of the RCRA release or violation, the tribal membership living in the vicinity of the facility have been exposed.

The 20 high priority chemicals are all in use in commerce and can be found in a variety of products that consumers, including children, may use daily. All of these products eventually will be disposed in a landfill or other waste management site and, in the case of many tribal and rural communities, the disposal site may be in close proximity to residents, may be unlined, may be open access, and may include open burning as a management practice, all of which present multiple exposure pathways and routes for intake and uptake and all of which need to be evaluated. Environmental release from disposal of consumer products containing toxic chemicals is the main way contaminants enter the environment and the communities within that environment. These releases provide the primary way that flora and fauna may uptake or intake contaminants, and tribal people depend on these local food resources for dietary sustenance and tribal health and welfare.

We have brought to EPA's attention the fact that in evaluating risks, long absent has been the consideration of waste disposal and transfer facilities that either are not covered by RCRA, or not required under RCRA to have liners, leachate treatment, groundwater monitoring, daily cover material, and/or other protective features. Such facilities are prevalent in and near tribal communities, particularly rural areas, where the bulk of tribes reside. As mentioned, all rural landfills in Alaska lack these protective features. Used consumer products are managed by burning or placement nearby in unlined and uncovered landfills that commonly flood at least annually, joining snowmelt and breakup waters in which residents walk and children play. Most of the state is located in wetland. Landfills are often only a few feet above the water table and are proximate to surface drinking water intakes and traditional (untreated) household use water, particularly for unplumbed communities. Chemicals release to rivers and ponds from which Alaska tribes obtain drinking water and foods. About three quarters of landfills are less than one mile from homes and about one-fifth are within one quarter mile. Inhalation of disposal site emissions is prevalent. Emissions can adhere to, or ash settle on, fish and marine mammals that are placed on in-town drying racks and that potentially represent a full year's supply of a family's dietary protein.

The above exposure pathways present clear human and environmental health implications. Indeed, associations between open dump sites and negative health outcomes in Alaska have been identified. Adverse health effects were found for newborn babies associated with

community landfills characterized to be of moderate to high hazard threat, including low birth weight, preterm birth, and intrauterine growth restriction (IUGR). Infants born to mothers residing in communities with high hazard site contents were more likely to have "other" birth defect(s) than other infants, and positive odds ratios were found for all categories of congenital anomalies. In a preliminary retrospective cohort study, residents living near dumpsites had greater incidences of self-reported vomiting and fever. Vomiting and dizziness was associated with a dose response to burning waste near residences. Odor complaints (a wind direction proxy) and dumpsite visits were correlated with increases in several symptoms with indications of dose-response, including fever, vomiting, cough, and headache.

NTTC's position is that the disposal exposure pathways faced by tribes throughout the United States as a result of the multiple RCRA exceptions and exemptions that apply to rural, remote, and small populations should be evaluated. If they are not, then any risk assessment conducted under TSCA is not relevant to tribal peoples, and their risk has not been evaluated. We believe that EPA agrees this circumstance would be unacceptable. EPA is mandated by TSCA to determine whether the disposal of toxic chemicals presents unreasonable risk to human health and/or the environment. For example, transfer stations are unregulated by federal RCRA requirements. In rural areas, they are generally unlined, allow open access, and have few or none design requirements, and the majority of non-Alaska tribes use such facilities. These facilities are often located proximate to residences to provide convenience.

Therefore, EPA must evaluate consumer product disposal as a condition of use for all 20 of the high priority chemicals and not assume it is adequately managed under RCRA. To facilitate this outcome, NTTC has in previous comment letters informed EPA in detail about the unique characteristics of disposal sites on tribal lands and in tribal communities and we are able and willing to provide extensive photographic and narrative evidence that exposure through disposal is very likely for tribal people.

EPA proposes to evaluate, or at least consider, releases from land disposal for RCRA regulated facilities when the chemical is not on the on the list of hazardous wastes pursuant to RCRA 3001 (40 CFR §§ 261.33). This is laudatory with a *caveat,* that evaluation must include exposure scenarios as experienced by PESS living near unlined and under-designed sites as allowed for under RCRA. Aggregate exposures that presume PESS and worker proximate residence, access and use of the facility, and a range of lifeways practiced near and in lands and water impacted by facility environmental releases must be considered.

Further, for all chemicals, NTTC urges that environmental release to air, water, soil, and sediment from *all* waste disposal sites, including transfer stations, C&D sites, materials recovery facilities, disaster debris facilities, and landfills be evaluated in the light of the common exceptions these facilities have for the range of design, performance, and monitoring features described above.

3.5 Tribal Exposure Pathways Uncovered by Reliance on Environmental Statute Authorities

Because tribes are generally remote, rural, and small populations with lifeways involving multiple local environmental exposures of high duration, it is clear that federal statute exceptions, variances, local flexibilities, and exclusions – which tend to address these very demographics-- disproportionately affect tribes. In proposing blanket determinations as to whether releases are managed under RCRA, CWA SDWA, or CAA, EPA is failing in its mission to adequately protect not only the health of tribes, but of other rural, remote, and small populations who essentially fall through the regulatory cracks. Because exceptions for small systems, businesses, and communities are common throughout federal statute authorities, and tribes use resources in ways that are not considered in granting such exceptions, addressing all primary tribal exposure pathways is critical. The multiple unique ways in which tribes use water and other impacted resources in their environment are not considered or regulated under federal statutes and are indicated in contributing to the environmental health disparities that tribal peoples continue to experience.

For example, biomonitoring confirms higher exposure to uranium and associated metals in Native American adults, neonates, and children than would be expected to result from conventional exposures living near abandoned uranium mines[21]. These elevated levels contribute to kidney disease and hypertension, and an increased likelihood of developing multiple chronic diseases. Customary and traditional life practices, including drinking of unregulated water, ingestion of locally raised sheep and goats, and ceremonial practices, are indicated as underlying aggregate exposures contributing to these levels.

A 2017 review of mining and environmental health disparities in Native American communities concludes that:

> The persistence of disparities in virtually all prevailing diseases across multiple language groups suggests other contributors to these outcomes, such as social determinants, underexplored disparities in environmental exposures and response to toxic insults, or gene-environment interactions[22]

EPA granted the many variances, exemptions, and exclusions described above, and the burden of proof that an environmental statute is protective of tribal people, lands, and waters, must rest on EPA. *It is not acceptable to assume blanket protections when these statutes wholly or partially exclude the protection of tribal people.*

Tribes clearly experience exposures even where EPA interprets responsibility to rest on environmental statutes. NTTC strongly urges EPA to comply with their TSCA statutory obligation to consider all exposures, particularly for PESS, such as tribes. The risks from these chemicals are the very reason why they may be regulated, at least partially, under other environmental

[21] Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5

[22] Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5

statutes. Unfortunately, these statutes may reduce releases of these chemicals into the environment for the general population, but with the wide range of exceptions affecting rural facilities and small service populations, EPA cannot presume the same outcome for tribes, nor for rural and small communities generally. Table 1 summarizes the general population and tribal exposure pathways that are proposed to be excluded from analyses for the first 13 high priority chemical substances under a misguided reliance on environmental statutes.

Table 1. Use of Other Environmental Statutes to Justify Exclusion of Exposure Risk Consideration[1]

Chemical	RCRA Used to exclude various disposal releases	CWA Used to exclude fish ingestion, sediment & water dermal	SDWA used to exclude dermal, oral, inhalation of drinking water	CAA excludes Fugitive dust, incinerator emissions
1,3-Butadiene			x	x
o-Dichlorobenzene	X	x	x	
p-Dichlorobenzene	X	x	x	x
1,1-Dichloroethane	X		x	x
1,2-Dichloroethane	X	x	x	x
1,2-Dichloroethylene	X	x	x	
1,2-Dichloropropane	X	x	x	x
Ethylene Dibromide	X		x	x
HHCB				
TBBPA				
TPP				
1,1,2-Trichloroethane	X	x	x	x
TCEP				

[1] It is important to note that multiple exposure pathways are excluded regardless of whether the above statutes are relied on for protection. For example:

1. Under RCRA for all chemicals, direct surface water release is assumed to be mitigated. However, multiple disposal facilities do not mitigate. Also, RCRA does not regulate multiple waste disposal facilities, such as transfer stations – the main waste disposal facility for non-Alaska Tribes, so these exposures are not considered.
2. Regardless of whether the SDWA is relied on for protection, populations using ground water drinking wells or small water systems are excluded from consideration
3. Regardless of whether the CWA is relied on for protection, dermal exposure to water and sediment is not considered (bathing, swimming, harvesting). Exposures via ingestion of fish and other aquatic life, dermal exposure of water and sediment in non-adjacent wetlands (e.g. basket making, greens harvesting, etc.) and ephemeral streams are not considered
4. Regardless of whether CAA is relied on for protection, exposure via inhalation/ingestion from small business minor sources and waste incinerator emissions from very small facilities is not considered.

4 Legacy Use

Legacy use of products containing these 20 chemicals is also not proposed to be analyzed in the scope documents. In order to accurately address the risks these chemicals may pose to human health and the environment, the use and unsafe disposal of consumer products containing them need to be evaluated. Not considering legacy use, and the risks it poses, disproportionately affects tribes' exposures. According to the US Census, Native Americans experience the highest poverty rate in the country, much higher than the general population. Low income housing is prevalent in tribal communities today. Older electronics, furniture, and thrift store purchases can lead to continued and chronic exposure to toxins inside people's homes. NTTC strongly urges EPA to consider the impacts of legacy use of these 20 chemicals on tribal populations.

On November 15, 2019, the Ninth Circuit Court of Appeals released its decision in the challenge to the TSCA risk evaluation and prioritization rules that EPA can no longer exclude "legacy" chemical uses from a risk evaluation, nor can it exclude any conditions of use from consideration.

5 General Tribal Conceptual Model for Environmental Releases and Wastes

NTTC developed the conceptual model below that we recommend EPA use as a starting point in conducting representative and relevant risk assessments for tribes as PESS.

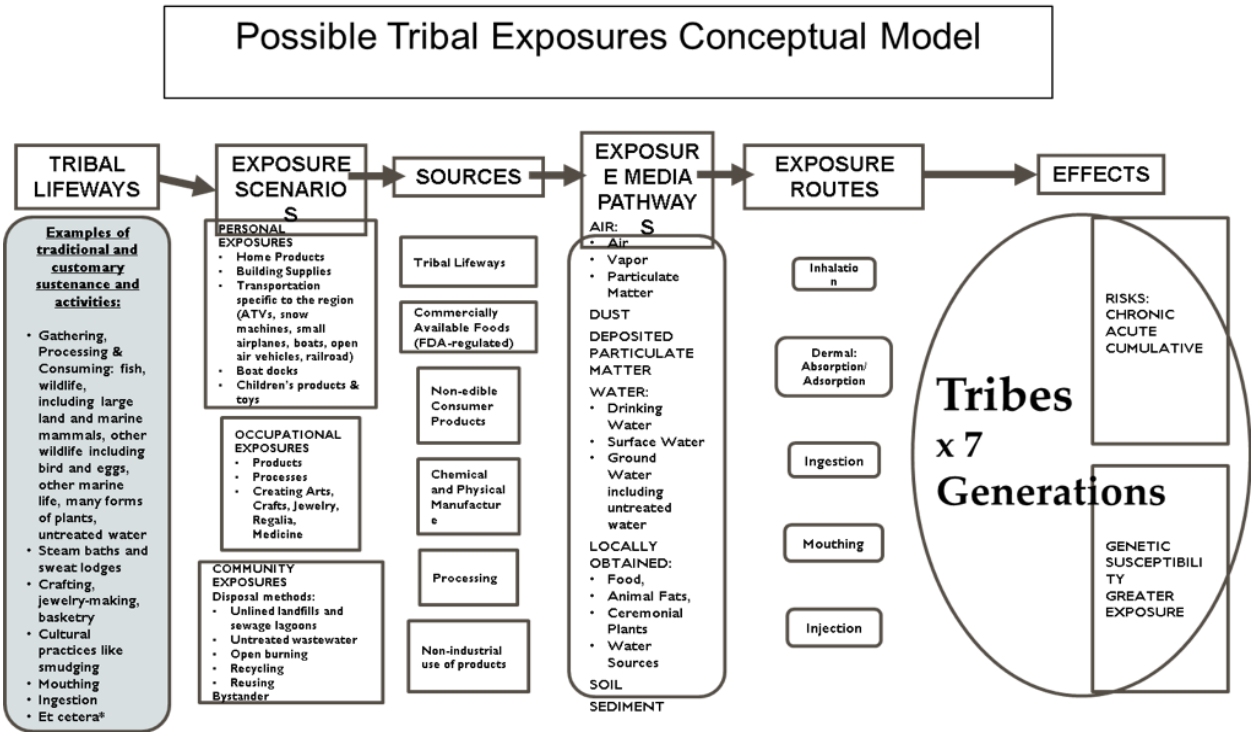


Figure 1. Possible Tribal Exposures Conceptual Model

6 Tribal Exposure Scenario Example – Waste Handling, Treatment, And Disposal

EPA may use the model provided in this section, which was based on HBCD releases, as an example of tribal-specific exposure scenarios related to waste handling, treatment, and disposal for chemicals with properties exhibited by bioaccumulative flame retardants.

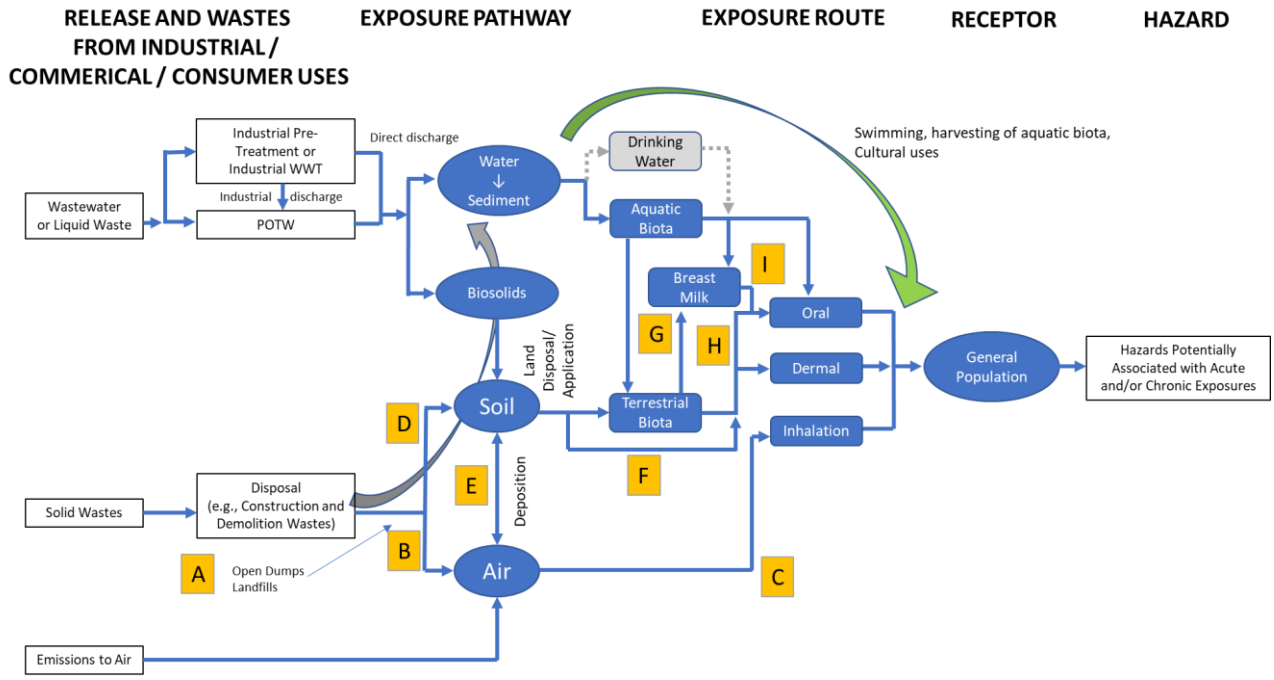


Figure 2. Annotation of a Bioaccumulative Flame Retardant Chemical Conceptual Model for Environmental Releases and Wastes: General Population Exposures and Hazards

With respect to Waste Disposal (see "A" in Figure 2), uses impacting tribes may include unlined permitted Alaska Class III and II landfills under the state's delegated RCRA program, small (less than 20 ton/day) or dry (less than 25 in per year) unlined, undesigned, and/or unmonitored Subtitle D municipal landfills, construction and demolition (C&D), open dumps (unpermitted, unauthorized disposal sites), waste transfer stations, waste recovery stations, and illegal or non-designed landfills that are unmanaged, uncovered, and/or not secured. Such sites may not be necessarily on tribal land but are adjacent. Thus, contaminated water, air, and soil are distributed on tribal lands or otherwise reach tribal people. Vectors can be scavenging animals like birds, fox, rodents, or people. The latter often must self-haul their household garbage and/or special wastes to open access sites. Contact with contaminants is made via contaminated dust, soil, and ponded water or snow. Additionally, contact can be made with toxic compounds made available from degraded and broken products. People carry contaminants on their shoes, vehicle, and clothing, potentially transferring them to an adjacent or nearby site onto tribal land or to tribal homes, schools, and workplaces.

Burning of waste is relevant for Air as an Exposure pathway ("B") leading to Inhalation as the Exposure route ("C"). Additionally, leaching can occur to Soil as an Exposure pathway ("D")

leading to direct re-suspension of particles to Air ("E"). Soil can act as a pathway to the Oral (ingestion) and Dermal Exposure Routes directly, or mediated[23] by clothing, shoes, and equipment, toys, and recreational vehicles (e.g. ATVs) ("F"). Soil as a Pathway to the Oral Route can be mediated by uptake into or consumption by terrestrial biota ("G"), which is then consumed by tribal persons ("H") and can be transmitted through breast milk ("I"). Additionally, ash emptied from the large metal containers used for open waste burning is discarded on-site, uncovered and open to public access. This process may resuspend particles to Air ("B") or be deposited to Soil ("D").

An exposure medium/source of special concern to tribes is via surface water contamination, and related consumption of aquatic biota (e.g., fish, marine mammals, shellfish, and edible and medicinal plants). Figure 2 only highlights surface water as an exposure medium (and subsequently aquatic biota) due to discharge of wastewater directly into surface waters. Figure 2 has been annotated to highlight leaching from disposal sites to soil and then to nearby surface waters (see added Gray arrow). Additionally, Figure 2 indicates that exposure routes that involve surface waters are mediated by drinking water or aquatic biota. This does not take into account recreational uses (e.g. swimming) of surface water that can be an exposure route, and direct contact with surface waters during subsistence harvesting of aquatic biota (e.g. fishing, utilizing nets for fishing, using fishing pots for crab and shrimp, harvesting shellfish like clamming). An additional exposure route can be through cultural uses of surface and drinking water, such as sweat lodges and steam baths. Figure 2 has been further annotated to indicate surface waters as a direct route to Oral, Dermal, and Inhalation routes (see added Green arrow). As many Tribes harvest aquatic biota (e.g. fish, clams, mussels, seals) for subsistence, bioaccumulation of toxins in aquatic biota is a major concern, as well as both direct ingestion of and dermal exposure to surface waters during harvesting. Additionally, surface (and/or drinking) water used in cultural practices such as sweat lodges and steam baths present a direct exposure pathway to all three routes. For example, the daily use of steam baths with water collected from nearby natural sources is a customary practice for multiple Alaska Tribes. As summarized in Figure 3 on the following page, several Tribal exposure pathways (Medium-(transport mechanism)-exposure route-receptor [child or adult]) of potential concern are possible.

[23] For Oral ingestion, resuspended dust or air particles are inhaled, deposited in the respiratory track and then swallowed.

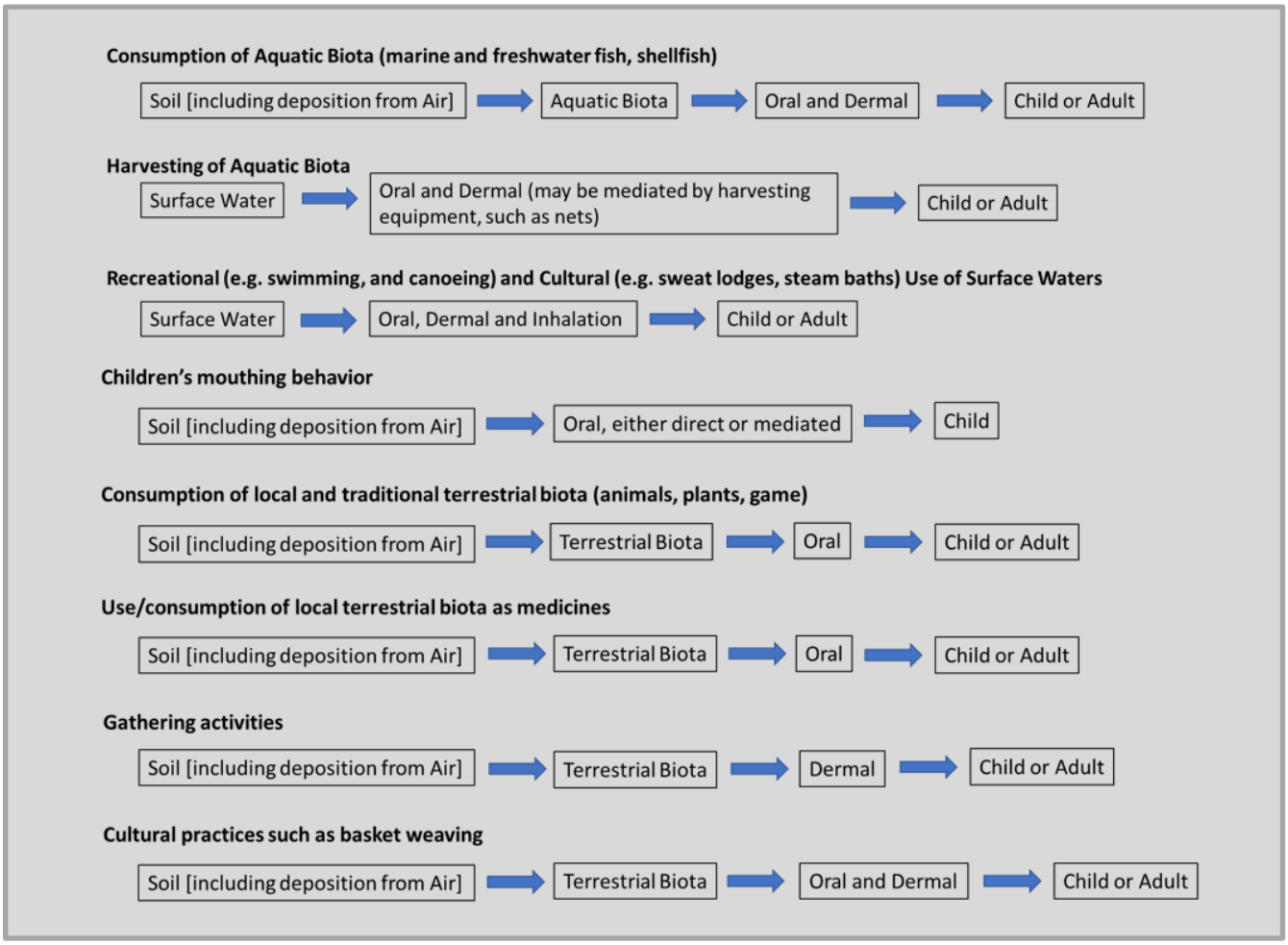


Figure 3 Tribal Exposure Pathways.

7 Closing Remarks

In closing, the NTTC would first request that EPA extend the comment period on the draft scopes for the 20 High-Priority substances undergoing risk evaluation under TSCA. This will provide the time needed by tribes and the public during a global pandemic to better review and provide comment on these essential guidelines for the forthcoming risk evaluations. In addition, an extension of the comment period will provide time for the collection of information that EPA evidently needs to complete a more thorough and exhaustive evaluation of PESS than was done for the draft scopes. The public should be asked specifically to provide this information during the comment period extension.

The final scoping documents should provide a detailed explanation of which populations and exposure pathways were considered in EPA's evaluation of PESS for each chemical as mandated by TSCA and in compliance with EPA's Environmental Justice policy. The final scoping documents should identify what information is needed to complete an accurate evaluation of the risks to PESS communities.

Exemptions, exceptions, and exclusions of environmental statutes must be examined in detail before these statutes are assumed to be universally protective. Many such rules and policies leave tribes unprotected by EPA's statutes because tribal lifeways and circumstances are excluded or not considered. By relying on these statutes to protect the American people in risk evaluations under TSCA, EPA is excluding risks Native Americans face.

As OPPT's tribal partnership group, the NTTC looks to chemical regulation under TSCA as the most effective means that EPA has to achieving its mission to protect human and environmental health. EPA should take advantage of the authority granted by the Frank R. Lautenberg Chemical Safety for the 21st Century Act and work to improve TSCA risk evaluations by fully applying them to the those subpopulations with the highest potential for exposure and those that are most susceptible, thereby modernizing its approach to achieving chemical safety. Rather than relying on other environmental regulations to limit the impact of chemicals to human and environmental health, TSCA could be the primary regulatory backstop that keeps harmful chemicals from impacting the health and safety of US citizens. To support this mission and to protect the health of all, the NTTC again offers our help to EPA in providing information and data on tribal environmental exposures and risks.

We look forward to the Agency's written response to these comments within 90 days. Should you or your staff have questions or comments regarding our letter, please contact myself, Dianne Barton, NTTC Chair, at (503) 731-1259 / bard@critfc.org or Fred Corey, NTTC Co-Chair, at (207) 764-7765 / fcorey@micmac-nsn.gov.

Sincerely,

Dianne C. Barton, Ph.D.
Chair, National Tribal Toxics Council