

CHAPTER 4-16-HAZARDOUS SUBSTANCE CONTROL

GENERAL PROVISION

4-16-1 Short Title

This Chapter shall be known as the Colville Hazardous Substances Control ACT (HSCA). .

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

4-16-2 Declaration of Policy

(a) The beneficial stewardship of the land, air, and waters used by the Colville people is a solemn obligation of the present generation for the benefit of future generations.

(b) The Colville Business Council finds that immediate action of the Council is required to secure the preservation of life, health, property, and natural resources of the Tribe. Pollution sources are currently known to, or are believed to contaminate the Reservation air, land, surface water and ground waters ("Reservation Environment") for which existing federal law may not apply.

(c) The Tribe and its individual members, and all those who work with the Tribe or reside within the boundaries of the Reservation benefit from a healthy environment, and each person has a responsibility to preserve and protect the quality of the Reservation Environment.

(d) The main purpose of this Chapter is to provide remedial law for the cleanup of hazardous substances sites and to prevent future unauthorized releases of hazardous substances into the Reservation Environment.

(e) The provisions of this Chapter shall apply to all to al land and waters within the exterior boundaries of the Colville Indian Reservation, lands outside of the exterior boundaries of the Reservation held by the Tribe or its entities in trust or in fee status, and to all other land and waters to the maximum extent permitted by law ("Reservation Environment")

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(Amended 6/7/02, Resolution 2007-342)

4-16-3 Definitions

(a) "90th Percentile" means the value in a distribution under which 90 percent of the values occur and above which 10 percent of the values occur.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(b) "Acid Volatile Sulphide" (AVS) means an analyte used to predict the toxicity of divalent metals (including copper, cadmium, nickel, lead and zinc) in sediments.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(c) "Adverse effects" means any abnormal, harmful, or undesirable effects on an organism that causes anatomical, functional, or behavioral damage, irreversible physical changes, or increases the susceptibility to other biological, chemical, or environmental stresses.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(d) "Amphipod" means a crustacean of the order Amphipoda. Amphipod and *Hyalella azteca* are used interchangeably in Appendix C.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(e) "Attorney" or "Reservation Attorney" means the attorney authorized by the Council to carry out the duties as described in the Chapter.

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(f) "Agreed Order" means an order issued by the Department under this Chapter with which the potentially liable person receiving the order agrees to comply.

(g) "Benthic" means the lowest level of a body of water, such as an ocean or a lake, inhabited by organisms that live in close relationship with (if not physically attached to) the bed sediments, called benthos or benthic organisms.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(h) "Bioaccumulation" means the net accumulation of a substance by an organism as a result of uptake from all environmental sources.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(i) "Biomass" means the total mass of living biological material in a given area or of a biological community or group.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(j) "Chemicals of potential concern" (COPCs) mean the hazardous substances that are toxic and/or bioaccumulative substances that occur in environmental media at levels that could adversely affect ecological receptors.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(k) "Confederated Tribes of the Colville Reservation" means the Tribal government.

(l) "Contaminated sediment" means sediment that contains hazardous substances at concentrations that could harm microbial, benthic invertebrate, plant, fish, avian or mammalian communities.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(m) "Council" means the Colville Business Council of the Confederated Tribes of the Colville Reservation.

(n) "Department" means the Environmental Trust Department of the Confederated Tribes of the Colville Reservation.

(o) "Endpoint" means a measured response of a receptor to a stressor. An endpoint can be measured in a toxicity test or a field survey.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(p) "Facility" means:

(1) Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or

(2) Any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

(q) "Federal Cleanup Law" means the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601 et seq., as amended by Public Law 99 499.

(r) "Foreclosure and its equivalents" means purchase at a foreclosure sale, acquisition, or assignment of title in lieu of foreclosure, termination of a lease, or other repossession, acquisition of a right to title or possession, an agreement in satisfaction of the obligation, or any other comparable formal or informal manner, whether pursuant to law or under warranties, covenants, conditions, representations, or promises from the borrower, by which the holder acquires title to or possession of a facility securing a loan or other obligation.

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(s) "Good Samaritan Order" is a voluntary order entered into between the Department and a non-interested party not otherwise liable under this HSCA, who wishes to engage in remediation activities subject to the oversight and approval of the Department for the benefit of the public good.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(t) "Hazardous Substance" means:

(1) Any "dangerous waste", defined as any discarded, useless, unwanted, or abandoned substances disposed of in such quantity or concentration as to pose a present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes:

(A) Have short lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or

(B) Are corrosive, explosive, flammable, or may generate pressure throughout decomposition or other means.

(2) Any "hazardous waste," defined as any waste which:

(A) Will persist in a hazardous form for three (3) years or more at a disposal site; and

(B) While in its persistent form:

(i) Presents a significant environmental hazard and may be concentrated by living organisms through a food chain or may affect the genetic makeup of people or wildlife; or

(ii) Is toxic to people or wildlife; or

(iii) Adversely affects living organisms in soil, sediment, and water, or air; or

(C) If disposed of at a disposal site in such quantities or concentrations as might present a hazard to people or the environment.

(3) Any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics of dangerous waste or extremely hazardous waste.

(4) Any substance that, on March 1, 1989, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C. § 9601(14).

(5) Petroleum or petroleum products, and

(6) Any substance or category of substances, including solid waste decomposition products, determined by the director to present a threat to human health or the environment if released into the environment.

(7) The term hazardous substance does not include, any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal and Tribal laws.

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(u) "Hazardous waste account" means an account of money set aside for uses described in section 4-16-8.

(v) "Holder" means a person who holds indicia of ownership primarily to protect a security interest. A holder includes the initial holder such as the loan originator, any subsequent holder such as a successor in interest or subsequent purchaser of the security interest on the secondary market, a guarantor of an obligation, surety, or any other person who holds indicia of ownership primarily to protect a security interest, or a receiver, court appointed trustee, or other person who acts on behalf or for the benefit of a holder. A holder can be a public or privately owned financial institution, receiver, conservator; loan guarantor, or other similar persons that loan money or guarantee repayment of a loan. Holders typically are banks or savings and loan institutions but may also include others such as insurance companies, pension funds, or private individuals that engage in loaning of money or credit.

(w) "Independent remedial actions" means remedial actions conducted without Department oversight or approval, and not under an order, agreed order, or consent decree.

(x) "Indicia of ownership" means evidence of a security interest, evidence of an interest in a security interest, or evidence of an interest in a facility securing a loan or other obligation, including any legal or equitable title to a facility acquired incident to foreclosure and its equivalents. Evidence of such interests includes, mortgages, deeds of trust, sellers interest in a real estate contract, liens, surety bonds, and guarantees of obligations, title held pursuant to a lease financing transaction in which the lessor does not select initially the leased facility, or legal or equitable title obtained pursuant to foreclosure and their equivalents. Evidence of such interests also includes assignments, pledges, or other rights to or other forms of encumbrance against the facility that are held primarily to protect a security interest.

(y) "Non Interested Party" means a party who has no ownership interest in the specific property at issue, and who is not a potentially liable party under section 4-16-5.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(z) "Not toxic sediments" means sediment samples with survival, growth, biomass, or reproduction is greater than or equal to the minimum value of the reference envelope.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(aa) "Operating a facility primarily to protect a security interest" occurs when all of the following are met:

- (1) Operating the facility where the borrower has defaulted on the loan or otherwise breached the security agreement;
- (2) Operating the facility to preserve the value of the facility as an ongoing business;
- (3) The operation is being done in anticipation of a sale, transfer, or assignment of the facility; and
- (4) The operation is being done primarily to protect a security interest. Operating a facility for longer than one year prior to foreclosure or its equivalents shall be presumed to be operating the facility for other than to protect a security interest.

(bb) "Owner or operator" means:

- (1) Any person with any ownership interest in the facility or who exercises any control over the facility; or
- (2) In the case of an abandoned facility, any person who had owned, or operated, or exercised control over the facility any time before its abandonment;

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(3) The term does not include:

(A) The Tribe or any Tribal instrumentality which acquired ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or circumstances in which the Council involuntarily acquires title. This exclusion does not apply to an instrumentality of the Tribe which is subject to a waiver of sovereign immunity, which has caused or contributed to the release or threatened release of a hazardous substance from the facility;

(B) A person who, without participating in the management of a facility, holds indicia of ownership primarily to protect the person's security interest in the facility. Holders after foreclosure and its equivalent and holders who engage in any of the activities identified in section 4-16-3(p), sub subparts (E) through (G) of this section shall not lose this exemption provided the holder complies with all of the following:

(i) The holder properly maintains the environmental compliance measures already in place at the facility;

(ii) The holder complies with the reporting requirements in the rules adopted under this Chapter;

(iii) The holder complies with any order issued to the holder by the Department to abate an imminent or substantial endangerment;

(iv) The holder allows the Department or potentially liable persons under an order, agreed order, or settlement agreement under this Chapter access to the facility to conduct remedial actions and does not impede the conduct of such remedial actions;

(v) Any remedial actions conducted by the holder are in compliance with any preexisting requirements identified by the Department, or, if the Department has not identified such requirements for the facility, the remedial actions are conducted consistent with this Chapter; and

(vi) The holder does not exacerbate an existing release. The exemption in this section 4-16-3(o), subpart (3)(B) does not apply to holders who cause or contribute to a new release or threatened release or who are otherwise liable under section 4-16-4(a), subparts (2), (3), (4), and (5); provided, however, that a holder shall not lose this exemption if it establishes that any such new release has been remediated according to the requirements of this Chapter and that any hazardous substances remaining at the facility after remediation of the new release are divisible from such new release;

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(C) A fiduciary in his, her, or its personal or individual capacity. This exemption does not preclude a claim against the assets of the estate or trust administered by the fiduciary or against a non-employee agent or independent contractor retained by a fiduciary. This exemption also does not apply to the extent that a person is liable under this Chapter independently of the person's ownership as a fiduciary or for actions taken in a fiduciary capacity which cause or contribute to a new release or exacerbate an existing release of hazardous substances. This exemption applies provided that, to the extent of the fiduciary's powers granted by law or by the applicable governing instrument granting fiduciary powers, the fiduciary complies with all of the following:

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- (i) The fiduciary properly maintains the environmental compliance measures already in place at the facility;
- (ii) The fiduciary complies with the reporting requirements in the rules adopted under this Chapter;
- (iii) The fiduciary complies with any order issued to the fiduciary by the Department to abate an imminent or substantial endangerment;
- (iv) The fiduciary allows the Department or potentially liable persons under an order, agreed order, or settlement agreement under this Chapter access to the facility to conduct remedial actions and does not impede the conduct of such remedial actions;
- (v) Any remedial actions conducted by the fiduciary are in compliance with any preexisting requirements identified by the Department, or, if the Department has not identified such requirements for the facility, the remedial actions are conducted consistent with the rules adopted under this Chapter; and
- (vi) The fiduciary does not exacerbate an existing release.

The exemption in this section 4-16-3(o), subpart (3)(C) does not apply to fiduciaries who cause or contribute to a new release or threatened release or who are otherwise liable under section 4-16-5(a), subparts (2), (3), (4), and (5); provided however, that a fiduciary shall not lose this exemption if it establishes that any such new release has been remediated according to the requirements of this Chapter and that any hazardous substances remaining at the facility after remediation of the new release are divisible from such new release. The exemption in this section 4-16-3(o), subpart (3)(C) also does not apply where the fiduciary's powers to comply with this section 4-16-3(o), subpart (3)(C) are limited by a governing instrument created with the objective purpose of avoiding liability under this Chapter or of avoiding compliance with this Chapter; or
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(D) Any person who has any ownership interest in, operates, or exercises control over real property where a hazardous substance has come to be located solely as a result of migration of the hazardous substance to the real property through the ground water from a source off the property, if:

- (i) The person can demonstrate that the hazardous substance has not been used, placed, managed, or otherwise handled on the property in a manner likely to cause or contribute to a release of the hazardous substance that has migrated onto the property;
- (ii) The person has not caused or contributed to the release of the hazardous substance;
- (iii) The person does not engage in activities that damage or interfere with the operation of remedial actions installed on the person's property or engage in activities that result in exposure of humans or the environment to the contaminated ground water that has migrated onto the property;
- (iv) If requested, the person allows the Department potentially liable persons who are subject to an order, agreed order, or consent decree, and the authorized

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employees, agents, or contractors of each, access to the property to conduct remedial actions required by the Department. The person may attempt to negotiate an access agreement before allowing access; and

(v) Legal withdrawal of groundwater does not disqualify a person from the exemption in this section 4-16-3(o), subpart (3)(D).

(cc) "Participation in management" means exercising decision making control over the borrower's operation of the facility, environmental compliance, or assuming or manifesting responsibility for the overall management of the enterprise encompassing the day to day decision making of the enterprise.

(1) The term does not include any of the following:

(A) A holder with the mere capacity or ability to influence, or the unexercised right to control facility operations;

(B) A holder who conducts or requires a borrower to conduct an environmental audit or an environmental site assessment at the facility for which indicia of ownership is held;

(C) A holder who requires a borrower to come into compliance with any applicable laws or regulations at the facility for which indicia of ownership is held;

(D) A holder who requires a borrower to conduct remedial actions including setting minimum requirements, but does not otherwise control or manage the borrower's remedial actions or the scope of the borrower's remedial actions except to prepare a facility for sale, transfer, or assignment;

(E) A holder who engages in workout or policing activities primarily to protect the holder's security interest in the facility;

(F) A holder who prepares a facility for sale, transfer, or assignment or requires a borrower to prepare a facility for sale, transfer, or assignment;

(G) A holder who operates a facility primarily to protect a security interest or requires a borrower to continue to operate, a facility primarily to protect a security interest; and

(H) A prospective holder who, as a condition of becoming a holder, requires an owner or operator to conduct an environmental audit conduct an environmental site assessment, come into compliance with any applicable laws or regulations, or conduct remedial actions prior to holding a security interest is not participating in the management of the facility.

(dd) "Person" means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, state government agency, unit of local government, federal government agency, or a Tribal instrumentality that is subject to a waiver of sovereign immunity.

(ee) "Policing Activities" means actions the holder takes to insure that the borrower complies with the terms of the loan or security interest or actions the holder takes or requires the borrower to take to maintain the value of the security. Policing activities include: Requiring the borrower to conduct remedial actions at the facility during the term of the security interest; requiring the borrower to comply or come into compliance with applicable federal, state, and local environmental and other laws, regulations, and permits during the term of the security interest; securing or exercising authority to monitor or inspect the facility

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including on-site inspections, or to monitor or inspect the borrower's business or financial condition during the term of the security interest; or taking other actions necessary to adequately police the loan or security interest such as requiring a borrower to comply with any warranties, covenants, conditions, representations, or promises from the borrower.

(ff) "Potentially Liable Person" means any person whom the Department finds, based on credible evidence, to be liable under section 4-16-5. The Department shall give notice to any such person and allow an opportunity for comment before making the finding, unless an emergency requires otherwise.

(gg) "Practical Quantification Limit" (PQL) means the lowest concentration that can be reliably measured within specified limits of precision, accuracy, representativeness, completeness, and comparability during routine laboratory operating conditions, using methods approved by the Department.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(hh) "Prepare a Facility for Sale, Transfer, or Assignment" means to secure access to the facility; perform routine maintenance on the facility; remove inventory, equipment, or structures; properly maintain environmental compliance measures already in place at the facility; conduct remedial actions to clean up releases at the facility; or to perform other similar activities intended to preserve the value of the facility where the borrower has defaulted on the loan or otherwise breached the security agreement or after foreclosure and its equivalents and in anticipation of a pending sale, transfer, or assignment, primarily to protect the holder's security interest in the facility. A holder can prepare a facility for sale, transfer, or assignment for up to one (1) year prior to foreclosure and its equivalents and still stay within the security interest exemption in section 4-16-3 (o), subpart (2)(b).

(ii) "Primarily to Protect a Security Interest" means the indicia of ownership is held primarily for the purpose of securing payment or performance of an obligation. The term does not include indicia of ownership held primarily for investment purposes nor indicia of ownership held primarily for purposes other than as protection for a security interest. A holder may have other, secondary reasons, for maintaining indicia of ownership, but the primary reason must be for protection of a security interest. Holding indicia of ownership after foreclosure or its equivalents for longer than five (5) years shall be considered to be holding the indicia of ownership for purposes other than primarily to protect a security interest. For facilities that have been acquired through foreclosure or its equivalents prior to the date this Chapter is enacted and adopted by the Council, this five (5) year period shall begin as of the date of enactment and adoption.

(jj) "Public Notice" means, adequate notice mailed to all persons who have made timely request of the Department; published in the Tribal Tribune; and may include an opportunity for interested persons to comment.

(kk) "Quality Assurance Project Plan" means the document that outlines, defines and provides guidance for the operation of a laboratory. This document generally contains, but is not limited to, information pertaining to: laboratory personnel, sampling procedures and sample rejection criteria, sample handling and chain of custody routines, the equipment employed by the laboratory, analytical methods, data reduction, validation and reporting, calibration and quality control procedures, equipment maintenance, routine procedure for precision and accuracy, method validation, verification and corrective actions, health and safety policy and training.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(ll) "Reference sample" means a sample that is collected near an area of concern and is used to assess conditions exclusive of materials of interest.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

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(mm) "Reference envelope" means a statistical representation of data from reference locations that is used to evaluate toxicity data for test sites.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(nn) "Regional Background" means the concentration of a contaminant within a geographic area defined by the Department, that is primarily attributable to diffuse sources, such as atmospheric deposition, and not attributable to a specific source or release.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(oo) "Reservation Population" means all persons either residing or doing business within the Reservation Environment.

(pp) "Release" means any intentional or unintentional entry of any hazardous substance into the environment, including but not limited to the abandonment or disposal of containers of hazardous substances.

(qq) "Remedy" or "Remedial Action" means any action or expenditure consistent with the purpose of this Chapter to identify, eliminate, clean up, or minimize any threat of potential threat posed by hazardous substances to human health or the environment including any investigative and monitoring activities with respect to any release or threatened release of a hazardous substance and any health assessments or health effects studies conducted in order to determine the risk or potential risk to human health.

(rr) "Sediment" means unconsolidated material eroded from parent rock, including soil and/or any man made unconsolidated solid material of a particulate nature, which exists below the ordinary high water mark of any water body or wetland.

(ss) "Sediment Cleanup Level" (SCL) means a sediment quality standard (i.e., either narrative, numerical, or biological) that is established for all waters located within the Reservation Environment that are intended to protect human health and the environment from adverse effects associated with direct or indirect exposure to contaminated sediments.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(tt) "Sediment-dwelling organisms" mean the organisms that live in, on, or near bottom sediments, including both epibenthic and infaunal species.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(uu) "Sediment Management Standards" (SMS) mean those defined in the Washington Administrative Code (WAC) Chapter 173-204.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(vv) "Simultaneously extracted metals" (SEM) are divalent metals - commonly cadmium, copper, lead, mercury, nickel, and zinc - that are solubilized during acidification (0.5m HCl for 1 hour). Information on SEM concentrations is used with data on acid volatile sulfides in sediments to evaluate the potential for toxicity to benthic invertebrates.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(ww) "Status Letter" means a letter provided by the Department to a non-interested party to provide information regarding the current liability status of the non-interested party and the actions that must be voluntarily undertaken by such party, subject to the oversight and approval of the Department, to avoid liability under this Chapter if the non-interested party engages in the Department approved remedial work.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(xx) "Threshold Effects Concentration" (TEC) means the concentration of a hazardous substance in soil or in sediment below which adverse effects on soil-dwelling or sediment-dwelling organisms are unlikely to occur.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

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(yy) "Toxic sediment" means sediment samples with survival, growth, biomass, or reproduction lower than the minimum value of the reference envelope (includes both the moderately impacted and highly impacted categories).

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(zz) "Tribe" means the government of the Confederated Tribes of the Colville Reservation.

(aaa) "Tribal Instrumentality" means a unit of Tribal government or a Tribal organization that is ultimately responsible to the Colville Business Council.

(bbb) "Tribal Court" means the Tribal Court of the Colville Confederated Tribes as established in Amendment X of the Tribe's Articles and By Laws.

(ccc) "Whole sediment" means sediment and its associated pore water.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(Amended 6/7/02, Resolution 2007-342)

(Amended 3/20/03, Resolution 2003-131)

(Certified 3/26/03)

4-16-4 Department's Powers and Duties

(a) The Department may exercise the following powers in addition to any other powers granted by Tribal or federal law:

(1) Investigate, provide for investigating, or require potentially liable persons to investigate, any releases or threatened releases of hazardous substances, including but not limited to inspecting, sampling, or testing to determine the nature or extent of any release or threatened release. If there is a reasonable basis to believe that a release or threatened release of a hazardous substance may exist, the Department's authorized employees, agents, or contractors may enter upon any property and conduct investigations. The Department shall give reasonable notice before entering property unless an emergency prevents such notice. The Department may by subpoena require the attendance or testimony of witnesses and the production of documents or other information that the Department deems necessary;

(2) Conduct, provide for conducting, or require potentially liable persons to conduct remedial actions (including investigations under section 4-16-4(a), subpart (1) to remedy releases or threatened releases of hazardous substances. In carrying out such powers, the Department's authorized employees, agents, or contractors may enter upon property. The Department shall give reasonable notice before entering property unless an emergency prevents such notice. In conducting, providing for, or requiring remedial action, the Department shall give preference to permanent solutions to the maximum extent practicable, and shall provide for, or require adequate monitoring to ensure the effectiveness of the remedial action.

(3) Retain contractors and consultants to assist the Department in carrying out investigations and remedial actions;

(4) Carry out all Tribal programs authorized under federal law, including but not limited to the Resource Conservation and Recovery Act 42 U.S.C. § 6901 et seq., as amended, and other federal laws;

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(5) Classify substances as hazardous substances for purposes of section 4-16-3(10);

(6) Issue orders or enter into consent decrees or agreed orders that include, or issue written

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opinions under section 4-16-4(a), subpart (9) that may be conditioned upon, deed restrictions or other appropriate institutional controls as may be necessary to protect human health and the environment from a release or threatened release of a hazardous substance from a facility. Prior to establishing a deed restriction or other appropriate institutional control under this subsection, the Department shall notify and seek comment from the Tribal Planning Department

(7) Enforce the application of permanent and effective institutional controls that are necessary for a remedial action to be protective of human health and the environment;

(8) Require holders to conduct remedial actions necessary to abate an imminent or substantial endangerment pursuant to section 4-16-3(o), subpart (3), sub subpart (B)(iii);

(9) Provide informal advice and assistance to persons regarding the administrative and technical requirements of this Chapter. This may include site specific advice to persons who are conducting or otherwise interested in independent remedial actions. Any such advice or assistance shall be advisory only, and shall not be binding on the Department. As a part of providing this advice and assistance for independent remedial actions, the Department may prepare written opinions regarding whether the independent remedial actions or proposals for those actions meet the substantive requirements of this Chapter or whether the Department believes further remedial action is necessary at the facility. The Department may collect, from persons requesting advice and assistance, the costs incurred by the Department in providing such advice and assistance; however, the Department shall, where appropriate, waive collection of costs in order to provide an appropriate level of technical assistance in support of public participation. The Tribe, Department, and officers, agents, attorneys, and employees of the Tribe are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing, or failing to provide, informal advice and assistance; and

(10) Take any other actions necessary to carry out the provisions of this Chapter, including proposing that the Council amend this Chapter.

(b) The Department shall to the best of its ability implement all provisions of this Chapter, including the cleanup standards further described in section 4-16-11, and to the maximum extent practicable institute investigative and remedial actions where appropriate; and the Department shall:

(1) Provide public notice of investigative plans, cleanup plans, or remedial plans, guidance documents, and other significant actions taken under this Chapter;

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(2) Require the reporting by an owner or operator of release of hazardous substances to the environmental that maybe a threat to human health or the environment within ninety (90) business days of discovery, unless such release poses an aninminent and substantial threat in harm health or environment, where such report shall be reported to the Department within two (2) business days, or unless such release is otherwise exempt from reporting by the Department. However, this requirement shall not modify any existing requirements provide for under other laws.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(3) Establish reasonable deadlines for initiating an investigation of a hazardous waste site after the Department receives information that the site may pose a threat to human health or the environment and other reasonable deadlines for remedying releases or threatened releases at the site; and

(4) Enforce cleanup standards set forth in section 4-16-11; and

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(c) The Department may, as available resources permit, establish a program to identify potential hazardous waste sites and to encourage persons to provide information about hazardous waste sites.

(d) The Department may, in its sole discretion, seek to recover all costs and expenses that it may incur as part of investigations in carrying out its duties under the HSCA from any person determined by the Department to be a liable party in accordance with Chapter 4-16-1, and work related to determining sediment clean up levels (SCLs);

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(e) The Department may, from time to time, issue such guidance documents as it deems necessary to facilitate compliance with HSCA.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

4-16-5 Standard of Liability Settlement

(a) Except as provided in section 4-16-5(c), the following persons are liable with respect to a facility:

(1) The owner or operator of the facility;

(2) Any person who owned or operated the facility at the time of disposal or release of the hazardous substances;

(3) Any person who owned or possessed a hazardous substance and who by contract, agreement, or otherwise arranged for disposal or treatment of the hazardous substance at the facility, or arranged with a transporter for transport for disposal or treatment of the hazardous substances at the facility, or otherwise generated hazardous wastes disposed of or treated at the facility;

(4) Any Person:

(A) Who accepts or accepted any hazardous substance for transport to a disposal, treatment, or other facility selected by such person from which there is a release or a threatened release for which remedial action is required, unless such facility, at the time of disposal or treatment, could legally receive such substance; or

(B) Who accepts a hazardous substance for transport to such a facility and has reasonable grounds to believe that such a facility is not operated in accordance with Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq., as amended, and programs appropriately delegated under RCRA; and

(5) Any person who both sells a hazardous substance and is responsible for written instructions for its use if:

(A) The substance is used according to the instructions; and

(B) The use constitutes a release for which remedial action is required at the facility.

(b) Each person who is liable under this section is strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the releases or threatened releases of hazardous substances. The Department is empowered to recover all costs and damages from persons liable therefor.

(c) The following persons are not liable under this section:

(1) Any person who can establish that the release or threatened release of a hazardous substance for which the person would be otherwise responsible was caused solely by:

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(A) An act of God;

(B) An act of war; or

(C) An act or omission of a third party (including but not limited to a trespasser) other than:

(i) An employee or agent of the person asserting the defense, or

(ii) Any person whose act or omission occurs in connection with a contractual relationship existing, directly or indirectly, with the person asserting this defense to liability.

This defense only applies where the person asserting the defense has exercised the utmost care with respect to the hazardous substance, the foreseeable acts or omissions of the third party, and the foreseeable consequences of those acts or omissions;

(2) Any person who is an owner, past owner, or purchaser of a facility and who can establish by a preponderance of the evidence that at the time the facility was acquired by the person, the person had no knowledge or reason to know that any hazardous substance, the release or threatened release of which has resulted in or contributed to the need for the remedial action, was released or disposed of on, in, or at the facility. This section 4-16-4(c), subpart (2) is limited as follows:

(A) To establish that a person had no reason to know, the person must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property, consistent with good commercial or customary practice in an effort to minimize liability. Any court interpreting this section 4-16-5(c), subpart (2) shall take into account any specialized knowledge or experience on the part of the person, the relationship of the purchase price to the value of the property if uncontaminated, commonly known or reasonably ascertainable information about the property, the obviousness of the presence or likely presence of contamination at the property, and the ability to detect such contamination by appropriate inspection;

(B) The defense contained in this section 4-16-5(c), subpart (2) is not available to any person who had actual knowledge of the release or threatened release of a hazardous substance when the person owned the real property and who subsequently transferred ownership of the property without first disclosing such knowledge to the transferee;

(C) The defense contained in this section 4-16-5(c), subpart (2) is not available to any person who, by any act or omission, caused or contributed to the release or threatened release of a hazardous substance at the facility;

(3) Any natural person who uses a hazardous substance lawfully and without negligence for any personal or domestic purpose in or near a dwelling or accessory structure when that person is:

(A) A resident of the dwelling;

(B) A person who, without compensation, assists the resident in the use of the substance; or

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(C) A person who is employed by the resident but who is not an independent contractor;

(4) Any person who, for the purpose of growing food crops, applies pesticides or fertilizers without negligence and in accordance with all applicable Tribal and federal laws and regulations.

(d) There may be no settlement by the Department with any person potentially liable under this Chapter except in accordance with this subsection.

(1) The Department may agree to a settlement with any potentially liable person only if the Department finds that the proposed settlement would lead to a more expeditious cleanup of hazardous substances in compliance with cleanup standards under section 4-16-11(b), subpart (4) and with any remedial orders issued by the Department. Whenever practicable and in the public interest the Department may expedite such a settlement with a person whose contribution is insignificant in amount and toxicity.

(2) A settlement agreement under this subsection shall be entered as a consent decree issued by the Tribal Court or by a court of competent jurisdiction.

(3) A settlement agreement may contain a covenant not to sue only of a scope commensurate with the settlement agreement in favor of any person with whom the Department has settled under this section. Any covenant not to sue shall contain a reopener clause which requires the Tribal Court or a court of competent jurisdiction to amend the covenant not to sue if factors not known at the time of entry of the settlement agreement are discovered and present a previously unknown threat to human health or the environment.

(4) A party who has resolved its liability to the Department under this subsection shall not be liable for claims for contribution regarding matters addressed in the settlement. The settlement does not discharge any of the other liable parties but it reduces the total potential liability of the others to the Department by the amount of the settlement.

(5) If the Department has entered into a consent decree with an owner or operator under this section, the Department shall not enforce this Chapter against any owner or operator who is a successor in interest to the settling party unless under the terms of the consent decree the Department could enforce against the settling party, if:

(A) The successor owner or operator is liable with respect to the facility solely due to that persons ownership interest or operator status acquired as a successor in interest to the owner or operator with whom the Department has entered into a consent decree; and

(B) The stay of enforcement under this subsection does not apply if the consent decree was based on circumstances unique to the settling party that do not exist with regard to the successor in interest, such as financial hardship. Such unique circumstances shall be specified in the consent decree.

(6) Any person who is not subject to enforcement by the Department under section 4-16-4(d), subpart (5) is not liable for claims for contribution regarding matters addressed in the settlement.

(e) In addition to the settlement authority provided under section 4-16-4(d), the Department may agree to a settlement with a person not currently liable for remedial action at a facility who proposes to purchase, redevelop, or reuse the facility, provided that:

(1) The settlement will yield substantial new resources to facilitate cleanup;

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(2) The settlement will expedite remedial action consistent with this Chapter; and

(3) Based on available information, the Department determines that the redevelopment or reuse of the facility is not likely to contribute to the existing release or threatened release, interfere with remedial actions that may be needed at the site, or increase health risks to persons at or in the vicinity of the site.

(4) The Department does not have adequate resources to participate in all property transactions involving contaminated property. The primary purpose of this section 4-16-5(e) is to promote the cleanup and reuse of vacant or abandoned commercial or industrial contaminated property. The Department may give priority to settlements that will provide a substantial public benefit, including, but not limited to the reuse of a vacant or abandoned manufacturing or industrial facility, or the development of a facility by a Tribal entity to address an important public purpose.

(f) In addition to the settlement authority provided under section 4-16-4(d) and 4-16-4 (e), the Department may, in its sole discretion, release a non-interested party who is not otherwise liable under this Act, and who wishes to engage in remedial work, subject to the Department's oversight and review, for purposes of providing public benefit by entering into a good samaritan order, or issuing a status letter.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(g) Nothing in this Chapter affects or modifies in any way any person's right to seek or obtain relief under Tribal law, or other applicable laws, including but not limited to damages for injury or loss resulting from a release or threatened release of a hazardous substance. No settlement by the Department or remedial action ordered by the Tribal Court, a court of competent jurisdiction or the Department affects any person's right to obtain a remedy under Tribal law, or other applicable laws.

(Amended 6/7/02, Resolution 2007-342)

4-16-6 Enforcement

(a) With respect to any release, or threatened release, for which the Department does not conduct or contract for conducting remedial action and for which the Department believes remedial action is in the public interest, the Department shall issue orders or agreed orders requiring potentially liable persons to provide the remedial action. Any liable person who refuses, without sufficient cause, to comply with an order or agreed order of the Department is liable in an action brought by the Department for:

(1) Up to three times the amount of any costs incurred by the Department as a result of the party's refusal to comply; and

(2) A civil fine of up to twenty five thousand (\$25,000) dollars for each day the party refuses to comply.

The treble damages and civil fines under this subsection apply to all recovery actions filed on or after the date this Chapter is enacted and adopted by the Council.

(b) The Department shall seek, by filing an action if necessary, to recover the amounts spent by the Department for all costs and expenses incurred by the Department, including all investigative and other costs and expenses incurred with regard to remedial actions and orders, including amounts spent prior to the date this Chapter is enacted and adopted by the Council.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(c) The Department may request that the Reservation Attorney or an authorized Attorney bring an action to secure such relief as is necessary to protect human health and the environment under this Chapter.

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(d) Civil actions under this section and section 4-16-6 shall be brought in Tribal Court or in a court of competent jurisdiction.

(Amended 6/7/02, Resolution 2007-342)

4-16-7 Judicial Review

(a) The Department's investigative and remedial decisions under sections 4-16-4 and 4-16-4 and its decisions regarding liable persons under section 4-16-5 shall be reviewable exclusively in Tribal Court, unless a suit has been filed by the Department in another court of competent jurisdiction, and only at the following times:

(1) In a cost recovery suit under section 4-16-(b);

(2) In a suit by the Department to enforce an order or an agreed order, or to seek a civil fine under this Chapter; and

(3) In a suit by the Department to compel investigative or remedial action.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(b) In all such matters where judicial review is sought, the court shall uphold the Department's action unless such action was arbitrary and capricious.

(Amended 6/7/02, Resolution 2007-342)

4-16-8 Deposits to Hazardous Waste Account

(a) There shall be established a hazardous waste account to be administered by the Department.

(b) The following moneys shall be deposited into the hazardous waste account:

(1) The costs of remedial actions recovered under this Chapter;

(2) Penalties collected or recovered under this Chapter; and

(3) Any other money appropriated or transferred to the account by the Department. Moneys in the account may be used only to carry out the purposes of this Chapter including but not limited to the following activities:

(A) The hazardous waste cleanup program required under this Chapter;

(B) Matching funds required under any federal law;

(C) Tribal programs for the safe reduction, recycling, or disposal of hazardous wastes from households, small businesses, and agriculture;

(D) Hazardous materials emergency response training; and

(E) Water and environment health protection and monitoring programs;

(c) Moneys in the hazardous waste account may be spent only after approval of a budget by the Council. All earnings from investment of balances in the account shall be credited to the account.

4-16-9 Private Right of Action—Remedial Action Costs

(a) A person may bring a private right of action, including a claim for contribution or for declaratory relief against any other person liable under section 4-16-5 for the recovery of remedial action costs, except that no private right of action may be brought against the following:

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(1) The Tribe or instrumentalities of the Tribe (except where specifically provided for by waiver of sovereign immunity); or

(2) As provided in section 4-16-5(d), subparts (4) and (6).

(b) Recovery shall be based on such equitable factors as the Tribal Court or a court of competent jurisdiction determines are appropriate. Natural resource damages paid to the Tribe under this Chapter may be recovered. Remedial action costs shall include reasonable attorneys' fees and expenses. Recovery of remedial action costs shall be limited to those remedial actions that, when evaluated as a whole, are the substantial equivalent of a Department conducted or Department supervised remedial action. Substantial equivalence shall be determined by the Tribal Court or a court of competent jurisdiction with reference to this Chapter. An action under this section may be brought after remedial action costs are incurred but must be brought within three (3) years from the date remedial action confirms cleanup standards are met. The prevailing party in such an action shall recover its reasonable attorneys' fees and costs.

(Amended 6/7/02, Resolution 2007-342)

4-16-10 Remedial Actions—Exemption from Procedural Requirements

(a) A person conducting a remedial action at a facility under a good samaritan order, assurance letter, consent decree, order, or agreed order, and the Department when it conducts a remedial action, are exempt from the procedural requirements of all otherwise applicable Tribal laws. The Department shall ensure compliance with the substantive provisions of all otherwise applicable Tribal laws. The Department shall establish procedures for ensuring that such remedial actions comply with the substantive requirements adopted pursuant to such laws. The procedures shall provide an opportunity for comment by the public and by the Tribal agencies that would otherwise implement the laws referenced in this section. Nothing in this section is intended to prohibit implementing agencies from charging a fee to the person conducting the remedial action to defray the costs of services rendered relating to the substantive requirements for the remedial action.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(b) An exemption in this section or in any other applicable Tribal law shall not apply if the Department determines that the exemption would result in loss of approval from a federal agency necessary for the Tribe to administer any federal law, including the Federal Resource Conservation and Recovery Act; the Federal Clean Water Act; the Federal Clean Air Act; and the Federal Coastal Zone Management Act. Such a determination by the Department shall not affect the applicability of the exemptions to other statutes specified in this section.

4-16-11 Cleanup Standards

(a) Surface water, groundwater, soil and sediment cleanup standards: The cleanup standards enforced by the Department shall be those set forth in the State of Washington "Model Toxics Control Act" or, where the Tribe has adopted more stringent standards as set forth in Appendix A, Appendix B, and Appendix C to this Chapter, the cleanup standards enforced by the Department shall be those standards set forth in Appendix A, Appendix B, and Appendix C which are incorporated in full herein by this reference.

(b) Application of standards:

(1) Application of standard methods A and B of the State of Washington Model Toxics Control Act shall be at the sole discretion of the Department.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(2) When using Method C of the State of Washington Model Toxics Control Act the determination of "commercial" or "industrial" land use status shall be at the Department's discretion in consultation with the Tribal Planning Department. Commercial or industrial land use status shall not be granted in community wellhead protection zones as delineated by the Department nor shall it be granted in cases where in the opinion of the Department contamination from the site in

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question might be captured by a water source used for human consumption including but not limited to wells and springs.

(3) Use of a background level or a Regional Background level will be determined at the sole discretion of the Department with fair consideration given data and tests presented either by the Department or by the site owner operator.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

(4) In cases involving multiple chemicals with multiple health effects the Department may use W.A.C. § 173 340 as guidelines to determine aggregate cleanup levels that are protective of human health and the environment.

(5) The Department may consult with state and federal agencies, institutes of higher learning, and other entities with expertise in toxic cleanup and human or environmental toxicology in order to determine clean up levels which are protective of human health and the environment.

(Amended 3/20/03, Resolution 2003-131)

(Certified 3/26/03)

4-16-12 Sovereign Immunity

Nothing in this Chapter shall be construed to constitute a waiver of the sovereign immunity of the Tribe, or of any instrumentality, agent, officer, or employee of the Tribe.

4-16-13 Captions

As used in this Chapter captions constitute no part of the law.

4-16-14 Construction

The provisions of this Chapter are to be liberally construed to effectuate the policies and purposes of this Chapter. In the event of conflict between the provisions of this Chapter and any other act, the provisions of this Chapter shall govern.

4-16-15 Effective Date

The effective date of this Chapter shall be the date this Chapter is enacted and adopted by the Council. This Chapter shall apply retroactively.

4-16-16 Severability

If any provision of this Chapter or its application to any person or circumstance is held invalid, the remainder of the Chapter or the application of the provision to other persons or circumstances is not affected.

(Chapter 4-16-Adopted 12/9/99, Resolution 1999 828)

APPENDIX A

COLVILLE TRIBAL HAZARDOUS SUBSTANCES CONTROL

Ground water cleanup levels

The following chart indicates the minimum cleanup levels for ground water, in terms of amount of individual hazardous substance per unit volume, for the hazardous substances listed. These cleanup levels shall remain in effect until the Environmental Trust Department ("Department") amends them. The Department may also establish more stringent cleanup levels for a specific site, when, based on a site specific evaluation, the Department determines that such levels are necessary to protect human health and the environment.

For substances not listed below, refer to the state of Washington's current publication on "Model Toxics Control Act Cleanup Levels and Risk Calculations."

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	5.0 ug/liter
Benzene	71-43-2	5.0 ug/liter
Cadmium	7440-43-9	5.0 ug/liter
Chromium (Total)	7440-47-3	50.0 ug/liter
DDT	50-29-3	0.1 ug/liter
1,2 Dichloroethane	107-06-2	5.0 ug/liter
Ethylbenzene	100-41-4	30.0 ug/liter
Ethylene dibromide	106-93-4	0.01 ug/liter
Gross Alpha Particle Activity		15.0 pCi/liter
Gross Beta Particle Activity		4.0 mrem/yr
Lead	7439-92-1	5.0 ug/liter
Lindane	58-89-9	0.2 ug/liter
Methylene chloride	75-09-2	5.0 ug/liter
Mercury	7439-97-6	2.0 ug/liter
PAHs (carcinogenic)		0.1 ug/liter
PCB mixtures		0.1 ug/liter
Radium 226 and 228		5.0 pCi/liter
Radium 226		3.0 pCi/liter
Tetrachloroethylene	127-18-4	5.0 ug/liter
Toluene	108-88-3	40.0 ug/liter
Total Petroleum Hydrocarbons		1000.0 ug/liter
1,1,1 Trichloroethane	71-55-6	200.0 ug/liter

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Hazardous Substance	CAS Number	Cleanup Level
Trichloroethylene	79-01-5	5.0 ug/liter
Vinyl chloride	75-01-4	0.2 ug/liter
Xylenes	1330-20-7	20.0 ug/liter

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

APPENDIX B

Soil cleanup levels

The following chart indicates the minimum cleanup levels for soil, in terms of amount of individual hazardous substance per unit mass, for the hazardous substances listed. These cleanup levels shall remain in effect until the Environmental Trust Department ("Department") amends them. The Department may also establish more stringent cleanup levels for a specific site, when, based on a site specific evaluation, the Department determines that such levels are necessary to protect human health and the environment.

For substances not listed below, refer to the state of Washington's current publication on "Model Toxics Control Act Cleanup Levels and Risk Calculations."

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	20.0 mg/kg
Benzene	71-43-2	0.5 mg/kg
Cadmium	7440-43-9	2.0 mg/kg
Chromium	7440-47-3	100.0 mg/kg
DDT	50-29-3	1.0 mg/kg
Ethylbenzene	100-41-4	20.0 mg/kg
Ethylene dibromide	106-93-4	0.001 mg/kg
Lead	7439-92-1	250 mg/kg
Lindane	58-89-9	1.0 mg/kg
Methylene chloride	75-09-2	0.5 mg/kg
Mercury (inorganic)	7439-97-6	1.0 mg/kg
PAHs (carcinogenic)		1.0 mg/kg
PCB Mixtures		1.0 mg/kg
Tetrachloroethylene	127-18-4	0.5 mg/kg
Toluene	108-88-3	40.0 mg/kg
TPH (gasoline)		100.0 mg/kg
TPH (diesel)		200.0 mg/kg
TPH (other)		200.0 mg/kg

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1,1,1 Trichloroethane	71-55-6	20.0 mg/kg
Trichloroethylene	79-01-5	0.5 mg/kg
Xylenes	1330-20-7	20.0 mg/kg

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

APPENDIX C
Sediment Cleanup Levels for the Protection of
Human Health and Sediment-Dwelling Organisms

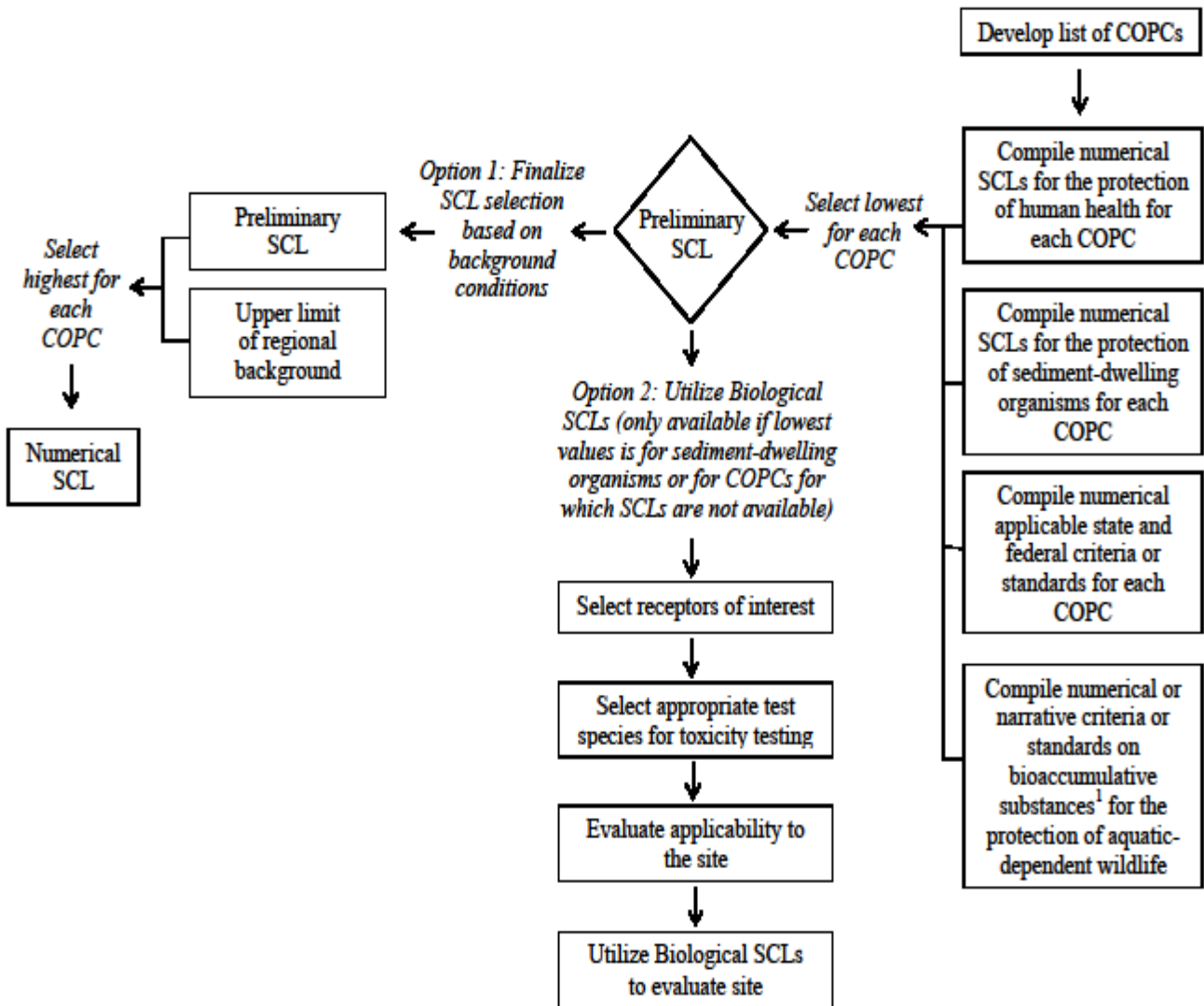
This Appendix describes the SCL-derivation framework for sediments for the protection of human health, and the SCLs for the protection of sediment-dwelling organisms. This Appendix also sets forth appropriate method for calculation of regional background levels of selected COPCs for sediments. The sediment quality standards established under the HSCA include narrative SCLs, numerical SCLs, and biological SCLs. The narrative standards apply to those toxic or bioaccumulative substances for which numerical standards are not listed in Tables 1 or 2. The numerical standards apply to all other substances.

The numerical standards for the protection of human health and sediment-dwelling organisms shall be applied using the framework presented in Figure 1. In accordance with this framework, the first step in the two step process for determining the numerical standards is the establishment of preliminary sediment cleanup levels. To establish preliminary sediment cleanup levels, a list of COPCs is developed, along with the rationale for inclusion or exclusion of each candidate COPC. Then, the numerical SCLs for the protection of human health, the numerical SCLs for the protection of sediment-dwelling organisms, and any other applicable federal or state criteria or standards is identified. The lowest of the applicable SCLs, criteria, or standards is then selected as the preliminary SCL for each COPC.

In the second step of the process, the Department compares the preliminary SCL for each COPC to the upper limit of regional background levels for that substance. The higher of the two values is then selected as the SCL for each COPC. The resultant SCL is then compared to the concentration of the COPC in each sediment sample that is collected at the site under investigation. For sites at which the SCLs for the protection of sediment-dwelling organisms are selected as the preliminary SCLs, the biological standards may be applied to determine if sediment quality conditions meet the sediment quality standards (see Figure 1). In such cases, the biological standards take precedence over the numerical SCLs established using this framework.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

Figure 1. Development of numerical Sediment Cleanup Levels (SCLs) for the protection of human health and biological receptors.



¹ Bioaccumulative substances include mercury, organochlorine pesticides, PCBs, and PCDDs/PCDFs

1. Sediment Cleanup Levels for the Protection of Human Health

Three types of SCLs may be established for the protection of human health to support the assessment and management of contaminated sediments, including:

- Narrative SCLs;
- Generic numerical SCLs; and
- Site-specific numerical SCLs.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

1.1 Narrative Sediment Cleanup Standards for the Protection of Human Health

Numerical SCLs for the protection of human health have been established for PAHs, PCBs, organochlorine pesticides, and PCDDs/PCDFs (see Table 1). For bioaccumulative substances for which there are no numerical standards in Table 1, the following narrative standard shall apply: Bioaccumulative substances shall not occur in sediments, either singly or in combination, at concentrations that cause, or can reasonably be expected to cause, injury to human health.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

1.2 Numerical Sediment Cleanup Levels for the Protection of Human Health

Numerical SCLs for the protection of human health are listed in Table 1. These numerical standards identify the minimum cleanup levels for contaminated sediments and shall be considered during the selection of preliminary SCLs for bioaccumulative COPCs (see Figure 1 for an overview of the framework for SCLs for the assessment and management of contaminated sediments).

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

1.3 Site-Specific Sediment Cleanup Levels for the Protection of Human Health

The numerical standards for the protection of human health listed in Table 1 are intended to provide a consistent basis for establishing preliminary SCLs for bioaccumulative COPCs. However, in some cases, it may be appropriate to develop site-specific SCLs to support the determination of preliminary SCLs (i.e., for substances not listed in Table 1 or when site-specific conditions are considered to be atypical). In these cases, the numerical SCLs for the protection of human health may be replaced by site-specific SCLs for non-carcinogens and/or carcinogens.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

Table 1 indicates the minimum numerical cleanup levels for contamination in sediments caused by the listed hazardous substances for the protection of human health. These cleanup levels are given in µg of contaminant/kg of organic carbon (OC). A Colville Reservation fish consumption rate of 400 g/day was used in the calculation of the cleanup levels in Table 1.

Table 1. Sediment Cleanup Levels for the Protection of Human Health

Chemicals of Concern	Sediment Cleanup Levels (µg/kg OC)
<i>Polycyclic Aromatic Hydrocarbons</i>	
Benzo(a)pyrene	7.020
Dibenz[a,h]anthracene	7.020
Benz[a] anthracene	7.020
Chrysene	4.485

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Benzo(b)fluoranthene	7.020
Benzo(k)fluoranthene	7.020
Indeno(1,2,3 cd)pyrene	7.020

Polychlorinated Biphenyls

Aroclor 1016	0.501
Aroclor 1242	0.173
Aroclor 1248	0.173
Aroclor 1254	0.173
Aroclor 1260	0.173
Total PCBs	0.173

Pesticides

Aldrin	0.013
Chlordane	0.173
Dieldrin	0.014
p,p-DDD	0.926
p,p-DDE	0.559
p,p-DDT	0.663
Total DDT*	0.826
Endosulfan	3,672.5
Endrin	55.9
Heptachlor	0.133
Heptachlor epoxide	0.066
Alpha hexachlorocyclohexane(HCH)	0.096
Beta HCH	0.325
Technical HCH	0.335
Lindane (gamma HCH)	0.468
Mirex*	5.785
Toxaphene*	1.651

Dioxins and Furans

1,2,3,4,6,7,8 Heptachlorodibenzo p-dioxin	1.222
1,2,3,4,6,7,8 Heptachlorodibenzofuran	1.222
1,2,3,4,7,8,9 Heptachlorodibenzofuran	1.222

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1,2,3,4,7,8 Hexachlorodibenzo-p-dioxin	0.005
1,2,3,4,7,8 Hexachlorodibenzofuran	0.005
1,2,3,6,7,8 Hexachlorodibenzo-p-dioxin	0.005
1,2,3,6,7,8 Hexachlorodibenzofuran	0.005
1,2,3,7,8,9 Hexachlorodibenzo-p-dioxin	0.005
1,2,3,7,8,9 Hexachlorodibenzofuran	0.005
1,2,3,7,8 Pentachlorodibenzo-p-dioxin	0.001
1,2,3,7,8 Pentachlorodibenzofuran	0.003
2,3,4,6,7,8 Hexachlorodibenzofuran	0.005
2,3,4,7,8 Pentachlorodibenzofuran	3.16E-4
2,3,7,8 Tetrachlorodibenzo-p-dioxin	1.53E-5
2,3,7,8 Tetrachlorodibenzofuran	0.001
Octachlorodibenzodioxin	12.220
Octachlorodibenzofuran	12.220

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

1.3 Site-Specific Sediment Cleanup Levels for the Protection of Human Health

The numerical standards for the protection of human health listed in Table 1 are intended to provide a consistent basis for establishing preliminary SCLs for bioaccumulative COPCs. However, in some cases, it may be appropriate to develop site-specific SCLs to support the determination of preliminary SCLs (i.e., for substances not listed in Table 1 or when site-specific conditions are considered to be atypical). In these cases, the numerical SCLs for the protection of human health may be replaced by site-specific SCLs for non-carcinogens and/or carcinogens.

Table 1 indicates the minimum numerical cleanup levels for contamination in sediments caused by the listed hazardous substances for the protection of human health. These cleanup levels are given in µg of contaminant/kg of organic carbon (OC). A Colville Reservation fish consumption rate of 400 g/day was used in the calculation of the cleanup levels in Table 1. For the purpose of deriving site-specific SCLs, the procedures described in WAC 173-204-561 (WDOE 2013) shall generally be applied by the Department, subject to the use of additional considerations with respect to key parameters for the calculation of risk-based concentrations for site-specific reasonable maximum exposure (RME) scenarios to be outlined in guidance documents.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

2.0 Sediment Cleanup Levels for the Protection of Sediment-Dwelling Organisms, Fish, and Aquatic-Dependent Wildlife

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

2.1 Narrative Cleanup Levels for the Protection of Ecological Receptors

Numerical SCLs for the protection of sediment-dwelling organisms have been established for metals, PAHs, PCBs, and organochlorine pesticides (see Table 2). For toxic or bioaccumulative substances for which there are no numerical standards in Table 2, the following narrative standards shall apply:

- (i) Toxic substances shall not occur in sediments, either singly or in combination, at concentrations that cause, or can reasonably be expected to cause, injury to ecological receptors, including aquatic plants, sediment-dwelling organisms, or benthic fish; and,

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(ii) Bioaccumulative substances shall not occur in sediments, either singly or in combination, at concentrations that cause, or can reasonably be expected to cause, injury to ecological receptors, including aquatic plants, sediment-dwelling organisms, fish, or aquatic-dependent wildlife.

All response actions implemented in accordance with HSCA shall comply with the preceding narrative standards for sediment quality.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

2.2

Numerical Cleanup Levels for the Protection of Sediment-Dwelling Organisms

Numerical SCLs for the protection of sediment-dwelling organisms are listed in Table 2. The numerical SCLs listed in Table 2 define the concentrations of selected COPCs that are likely to be associated with no adverse acute or chronic effects on the benthic community. These numerical standards are also considered to be protective of benthic fish species. The SCLs for the protection of sediment-dwelling organisms are stated in milligrams per kilogram (mg/kg) for metals or Φ g/kg for other COPCs, expressed on a dry weight basis.

The numerical standards listed in Table 2 identify the minimum cleanup levels for contaminated sediments and shall be considered during the selection of preliminary SCLs for toxic COPCs (see Figure 1 for an overview of the framework for selecting preliminary SCLs for the assessment and management of contaminated sediments). Adverse effects on sediment-dwelling organisms or benthic fish have the potential to occur when the SCL for one or more COPCs are exceeded in a sediment sample collected at a site under investigation. The results of chemical analyses of sediment samples may be used to evaluate sediment quality conditions only if the practical quantification limit (PQL) for each COPC at the site is below the corresponding SCL.

Where the numerical standards listed in Table 2 represent the sum of two or more individual substances, the following methods shall be applied:

(i) The concentration of total PAHs shall be calculated as the sum of the concentrations of the 13 parent PAHs, including 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, phenanthrene, benz(a)anthracene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, and pyrene;

(ii) The concentration of total PCBs shall be calculated as the sum of the 209 PCB congeners or 10 homolog groups, including monochlorobiphenyls, dichlorobiphenyls, trichlorobiphenyls, tetrachlorobiphenyls, pentachlorobiphenyls, hexachlorobiphenyls, heptachlorobiphenyls, octachlorobiphenyls, nonachlorobiphenyls, and decachlorobiphenyl. In the absence of data on the concentrations of individual PCB congeners or homologs, total PCB concentrations may be estimated as the sum of seven PCB mixtures, including Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, and Aroclor 1260

(iii) The concentration of chlordane shall be calculated as the sum of *cis*- (or alpha) chlordane and *trans*- (or gamma) chlordane; The concentration of sum DDD shall be calculated as the sum of 2,4-DDD and 4,4-DDD. The concentration of sum DDE shall be calculated as the sum of 2,4-DDE and 4,4-DDE. The concentration of sum DDT shall be calculated as the sum of 2,4-DDT and 4,4-DDT. The concentration of total DDT shall be calculated as the sum of 2,4-DDD, 4,4-DDD, 2,4-DDE, 4,4-DDE, 2,4-DDT and 4,4-DDT; and,

(iv) When the concentration of a substance is reported as less than the specified PQL, a value of one-half of the PQL shall be used in the calculation of the total concentration of the analyte group (e.g., total PAHs). However, non-detected measurements with PQLs above the numerical SCL should not be included in the total calculation.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

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Table 2. Sediment cleanup levels for the protection of sediment-dwelling organisms.

Substance	Sediment Cleanup Levels
<i>Metals (in mg/kg DW)</i>	
Arsenic	9.79
Cadmium	0.99
Chromium	43.4
Copper	31.6
Lead	35.8
Mercury	0.18
Nickel	22.7
Zinc	121
<i>Polycyclic Aromatic Hydrocarbons (µg/kg DW)</i>	
Anthracene	57.2
Fluorene	77.4
Naphthalene	176
Phenanthrene	204
Benz[a]anthracene	108
Benzo(a)pyrene	150
Chrysene	166
Fluoranthene	423
Pyrene	195
Total PAHs	1610
<i>Polychlorinated Biphenyls (µg/kg DW)</i>	
Total PCBs	59.8
<i>Organochlorine Pesticides (µg/kg DW)</i>	
Chlordane	3.24
Dieldrin	1.9
Sum DDD	4.88
Sum DDE	3.16
Sum DDT	4.16
Total DDTs	5.28
Endrin	2.22
Heptachlor Epoxide	2.47
Lindane (Gamma-BHC)	2.37

DW = dry weight

2.3 **Site-Specific Sediment Cleanup Levels for the Protection of Ecological Receptors**

The numerical standards for the protection of sediment-dwelling organisms listed in Table 2 are intended to provide a consistent basis for establishing preliminary SCLs for toxic COPCs. In some cases, the Department may determine that it is appropriate to develop site-specific SCLs to support the determination of preliminary SCLs (i.e., for substances not listed in Table 2, for bioaccumulative substances that could adversely affect fish or aquatic-dependent wildlife, or when site-specific conditions are considered to be atypical; e.g., low levels of OC are present in site sediments, sites affected by metals mining, milling or smelting activities, taxa of special concern are present at the site, etc.). In these cases, the Department may decide in its sole discretion to substitute site-specific SCLs for selected COPCs in place of the numerical SCLs for the protection of sediment-dwelling organisms. In making this determination, the Department must assure that criteria outlined in guidance documents is followed:

- (i) Sediments from the site (representing the <2.00 mm fraction) are collected for chemical analysis and toxicity testing, with sediments submitted to the laboratories for chemical analysis and toxicity testing representing true splits of the sediment collected at each sampling station. A quality assurance project plan (QAPP) and field sampling plan (FSP) that describe the proposed sediment investigation shall be submitted to the Department for review and approval prior to conducting any sediment sampling;
- (ii) Sediments from the site are collected in accordance with the Department approved QAPP/FSP;
- (iii) Sediments from the site are evaluated using a suite of whole-sediment toxicity tests ;
- (iv) The acceptability of the whole-sediment toxicity tests is evaluated using the test acceptability criteria described in USEPA (2001) and ASTM (2012a);
- (v)The results of the whole-sediment toxicity tests are evaluated using the reference envelope approach; and
- (vi) The toxicity of sediment samples from the site under investigation are evaluated using the biological criteria specified in Table 3.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

Table 3. Recommended methods for designating sediments as toxic or not toxic to benthic invertebrates.

Requirement / Species	Recommended Biological Criteria	
	No Effect	Minor Effect
Minimum Toxicity Testing Requirements		
<i>Chironomus dilutus</i> (10-d toxicity test) ¹	Control-adjusted response ⁷ within the reference envelope ⁸	Control-adjusted response ⁷ within 10% of the reference envelope ⁸
<i>Hyalella azteca</i> (28-d toxicity test) ²	Control-adjusted response ⁷ within the reference envelope ⁸	Control-adjusted response ⁷ within 10% of the reference envelope ⁸
Additional Toxicity Testing Requirements³		
<i>Lampsilis siliquioidea</i> (28-d toxicity test) ⁴	Control-adjusted response ⁷ within the reference envelope ⁸	Control-adjusted response ⁷ within 10% of the reference envelope ⁸
<i>Chironomus dilutus</i> (50- to 65-d toxicity test) ⁵	Control-adjusted response ⁷ within the reference envelope ⁸	Control-adjusted response ⁷ within 10% of the reference envelope ⁸
<i>Hyalella azteca</i> (42-d toxicity test) ⁶	Control-adjusted response ⁷ within the reference envelope ⁸	Control-adjusted response ⁷ within 10% of the reference envelope ⁸

d = day; T = test sediment; C = control sediment; R = response.

¹ Endpoints include: survival, ash-free dry weight, and biomass.

² Endpoints include: survival, growth (length and weight), and biomass.

³ Additional toxicity testing may be required at sites within the historic range of taxa of special concern (see Section 5.4).

⁴ Endpoints include: survival, weight, and biomass.

⁵ Endpoints include: survival, ash-free dry weight, biomass, percent emergence and emergence timing, number of egg cases oviposited, number of eggs produced, and number of eggs hatched.

⁶ Endpoints include: survival, growth (length and weight), biomass, and number of young per female.

⁷ Control-adjusted response = (Response in test sediments / Response in control sediments) * 100

⁸ Reference envelope is developed using geographic and internal sediments that meet the biological and chemical criteria outlined in Section 5.5. It is defined by the minimum and maximum response observed in the reference sediments for each endpoint.

3.0 Procedures for Evaluating the Toxicity of Contaminated Sediments within the Waters of the Colville Indian Reservation.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

3.1 Design of the Sediment Sampling Program

Sediment sampling programs for evaluating sediment quality conditions at sediment contaminated sites (i.e., to determine if sediment standards are exceeded at a site that may contain contaminated sediments) or evaluating the efficacy of remedial actions (i.e., to determine if sediment standards have been met following remedy implementation) shall be designed to assess the nature and extent of sediment contamination and whole-sediment toxicity at the site under investigation. General guidance on the design of sediment sampling programs is provided in MacDonald and Ingersoll (2002). A key element of the study design will be selection of reference areas from which to obtain an adequate number of reference sediment samples to support interpretation of toxicity test results. The conceptual design also needs to describe the sampling program for evaluating the nature and extent of contamination and toxicity, along with the associated rationale for the proposed sampling design. A conceptual design for the proposed sediment sampling program must be submitted to the Department for

review and approval prior to the development of a Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP) for the study.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

3.2 Collection of Sediment Samples

Sediment samples for evaluating the nature and extent of contamination and sediment toxicity shall be collected using appropriate methods. Standard methods for collection, storage, characterization, and manipulation of sediment samples for toxicity testing are described in ASTM (2012b). In addition, USEPA (2001) provides guidance on the collection, storage, manipulation, and characterization of sediment samples collected to support toxicity testing.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

3.3 Chemical Analysis

Sediment samples collected to support the development of site-specific SCLs shall be evaluated to determine the concentrations of all COPCs (e.g., metals, simultaneously extracted metals, PAHs, PCBs, organochlorine pesticides, and PCDDs/PCDFs), as well as the concentrations of those variables that support interpretation of the data on COPC concentrations (e.g., total organic carbon, acid volatile sulfide, grain size). Responsible persons must develop a list of COPCs for the site and the rationale for their selection. The rationale for eliminating candidate COPCs from the list should also be provided. Furthermore, the PQL for each COPCs must be lower than the numerical standards listed in Table 1 and 2). All such information must be submitted to the Department for review and approval prior to developing a Quality Assurance Project Plan (QAPP) and a Field Sampling Plan (FSP) for the study.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

3.4 Toxicity Testing

Sediment samples collected to support assessment of compliance with the biological criteria listed in Table 3, or to support development of site-specific SCLs, must be evaluated using a suite of toxicity tests that include, at minimum, the following:

- (i) 10-d whole-sediment toxicity tests with the midge, *Chironomus dilutus* (Endpoints: survival, ash-free dry weight, and biomass); and,
- (ii) 28-d whole-sediment toxicity tests with the amphipod, *Hyaella azteca* (Endpoints: survival, weight, and biomass).

At sites located within the historic range of taxa of special concern (e.g., freshwater mussels, white sturgeon, bull trout, adfluvial rainbow trout, etc.) or at sites with sediments that are contaminated by substances that are expected to adversely affect the reproduction of ecological receptors (e.g., PCBs, PCDDs/PCDFs), may be required by the Department to conduct additional toxicity tests at all or a subset of the stations that are sampled. The suite of such additional toxicity tests include, but are not limited, to:

- (i) 28-d whole-sediment toxicity tests with the freshwater mussel, *Lampsilis siliquoidea* (Endpoints: survival, weight, biomass);
- (ii) 50- to 65-d whole-sediment toxicity tests with the midge, *Chironomus dilutus* (Endpoints: survival, ash-free dry weight, biomass, percent emergence and emergence time, number of egg cases oviposited, number of eggs produced, number of eggs hatched); and/or,
- (iii) 42-d whole-sediment toxicity tests with the amphipod, *Hyaella azteca* (Endpoints: survival, growth, biomass, and number of young per female).

Responsible persons must confer with the Department prior to developing a study plan to obtain information on Department approved methods for toxicity testing. Responsible persons are also required to prepare a list of

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proposed whole-sediment toxicity tests, along with the rationale for their selection, and must submit the materials to the Department for review and approval prior to developing a QAPP and FSP for the study.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

3.5 Development of a Reference Envelope for Evaluating Sediment Toxicity

A reference envelope approach shall be used to designate sediment samples as toxic or not toxic sediments. To implement this approach, candidate reference sediment samples must first be collected from one or more areas that are considered to represent reference conditions. Candidate reference areas may be identified using the results of historical sampling programs conducted within the Reservation Environment and/or nearby areas. Information on the chemical composition and toxicological characteristics of at least of six (6) reference sediment samples are required to implement the reference envelope approach. Responsible persons are encouraged to include more than the minimum number (6) of candidate reference sediment samples in the sampling program, in case one or more of the samples are determined by the Department as not qualifying as reference sediment samples.

Following the completion of chemical analysis and toxicity testing, the candidate reference sediment samples must then be evaluated to determine if they qualify for use in reference envelope development. More specifically, reference sediment samples must meet the following chemical and biological requirements (MacDonald *et al.* 2012):

Chemical Requirements - Candidate reference sediment samples must be substantially free of contamination to qualify as reference sediment samples, as indicated by:

Mean $PEC-Q_{METALS(1\%OC)} < 0.1$;
 $PEC-Q_{TOTAL PAH} < 0.1$;
 $PEC-Q_{TOTAL PCB} < 0.1$;
Mean $PEC-Q_{ORGANOCHLORINE PESTICIDES} < 0.1$;
Mean $PEC-Q < 0.1; (3SEM-AVS)/f_{OC} < 130 \text{ mol/g}$; and, $3ESBTU < 0.1$.

[Where: $PEC-Q$ = probable effect concentration-quotient; OC = organic carbon; f_{OC} = fraction organic carbon; SEM = simultaneously extracted metals; AVS = acid volatile sulfides; and, $ESBTU$ = equilibrium-based sediment benchmarks for toxic units (PAHs). See MacDonald and Ingersoll 2002, USEPA 2003, and USEPA 2005 for information on the calculation of these metrics.]

Biological Requirements - Candidate reference sediment samples must meet test acceptability criteria for negative control samples for the toxicity tests that were conducted, as specified in ASTM (2012a). Attainment of the biological requirements shall be evaluated on a test-by-test basis (i.e., a sediment sample may qualify as a reference sediment sample for one or more toxicity tests).

Candidate reference sediment samples that meet both the chemical requirements and the biological requirements in the pool of reference sediment samples that are used to develop the reference envelope for each toxicity test.

Following the evaluation and selection of reference sediment samples for each toxicity test, a reference envelope shall be determined for each toxicity test that was conducted and each endpoint that was measured. The reference envelope for each toxicity test endpoint shall be established by determining the range of the biological responses that were measured in the toxicity tests conducted with reference sediment samples. The reference envelope for each toxicity test endpoint shall include all of the control-adjusted response data for reference sediment samples between the minimum value and the maximum value for each endpoint, where the control-adjusted response is described as the mean response observed in the test sediment as a percentage of the mean response in the batch control sediment.

The purpose of the reference envelope is to define the normal range of responses for sediment-dwelling organisms exposed to relatively uncontaminated sediment samples. Sediment samples with effect values

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within the reference envelope shall be designated as not toxic for the endpoint under consideration. Sediment samples with effect values that fall below the lower limit of the reference envelope shall be designated as toxic for the endpoint under consideration. Minor adverse effects on sediment-dwelling organisms are expected when effect values for a toxicity test endpoint falls below, but within 10% of, the lower limit of the reference envelope. Major adverse effects on sediment-dwelling organisms are expected when effect values for a toxicity test endpoint falls below the lower limit of the reference envelope by greater than 10%.

The results of the toxicity tests shall be used to determine if the site-specific SCL is exceeded at each sampling station at the site. The site-specific SCL for a sampling station is exceeded when:

- (i) Two or more of the toxicity test endpoints indicate that minor effects on sediment-dwelling organisms are expected; and/or,
- (ii) One or more of the toxicity test endpoints indicate that major effects on sediment-dwelling organisms are expected.

All data generated under a QAPP and FSP must be submitted to the Department for review and evaluation.
(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

3.6 Development of Site-Specific Numerical Sediment Cleanup Levels

In certain specific cases, the Department may require responsible persons to develop site-specific numerical SCLs. In these cases, sediment sampling at the site will include collection and characterization of a substantial number of sediment samples representing a broad gradient in COPC concentrations. All of these samples, along with the required number of reference sediment samples, shall be evaluated to determine the concentrations of COPCs and toxicity to sediment-dwelling organisms. Further guidance on the methods that may be used to develop site-specific numerical SCLs shall be provided by the Department on request.

(Amended 8/7/14, Resolution 2014-511, Certified 8/21/14)

4.0 Regional Background Levels of Chemicals of Potential Concern

Regional background concentrations for COPCs that have the potential to contaminate sediments must be determined to meet the second step of the SCL determination process. As part of the HSCA framework, the preliminary SCL for each COPC is compared to the upper limit of regional background levels for that substance. The higher of the two values is then selected as the SCL for each COPC. Sinclair *et al.* (2013) provides an example of appropriate calculation of regional background calculation for a large-area site. The determination of regional background concentrations is site-specific and values determined for one site may not be directly applicable to other sediment sites. In accordance with 4-16-3 Environmental Trust may recover costs associated with establishing regional background levels.

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1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3.76
1,2,3,4,6,7,8-Heptachlorodibenzofuran	3.76
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.76
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.0144
1,2,3,4,7,8-Hexachlorodibenzofuran	0.0144
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.0144
1,2,3,6,7,8-Hexachlorodibenzofuran	0.0144
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.0144
1,2,3,7,8,9-Hexachlorodibenzofuran	0.0144
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.00288
1,2,3,7,8-Pentachlorodibenzofuran	0.00815
2,3,4,6,7,8-Hexachlorodibenzofuran	0.0144
2,3,4,7,8-Pentachlorodibenzofuran	0.000972
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0000470
2,3,7,8-Tetrachlorodibenzofuran	0.00408
Octachlorodibenzodioxin	37.6
Octachlorodibenzofuran	37.6

OC = organic carbon; NS = no sediment quality standard is derived. Standards to be developed as more data become available.

Chart II. Sediment Cleanup Levels for the Protection of Sediment-dwelling Organisms

Substance	Sediment Cleanup Levels
<i>Metals (in mg/kg DW)</i>	
Arsenic	9.79
Cadmium	0.99
Chromium	43.4
Copper	31.6
Lead	35.8
Mercury	0.18
Nickel	22.7
Zinc	121
<i>Polycyclic Aromatic Hydrocarbons (µg/kg DW)</i>	
Anthracene	57.2
Fluorene	77.4
Naphthalene	176
Phenanthrene	204

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Benz[a]anthracene	108
Benzo(a)pyrene	150
Chrysene	166
Fluoranthene	423
Pyrene	195
Total PAHs	1610

Polychlorinated Biphenyls (µg/kg DW)

Total PCBs	59.8
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Organochlorine Pesticides (µg/kg DW)

Chlordane	3.24
Dieldrin	1.90
Sum DDD	4.88
Sum DDE	3.16
Sum DDT	4.16
Total DDTs	5.28
Endrin	2.22
Heptachlor Epoxide	2.47
Lindane (gamma-BHC)	2.37

DW = dry weight

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 (Amended 3/20/03, Resolution 2003-131)
 (Certified 3/26/03)