



EHRA

**ENVIRONMENT AND
HUMAN RIGHTS
ADVISORY**

PO Box 927 Yachats, OR 97498
www.environmentandhumanrights.org
ehra@environmentandhumanrights.org

A Human Rights Assessment of Aerial Herbicide Applications Near and Adjacent To Triangle Lake, Oregon

Prepared for:

Mr John Blackwell, Chair
Oregon Board of Forestry
2600 State Street
Salem, Oregon 97310

Mr Doug Decker, State Forester
Oregon Department of Forestry
2600 State Street
Salem, Oregon 97310

Ms Katy Coba, Director
Oregon Department of Agriculture
635 Capitol Street NE
Salem, Oregon 97301-2532

Ms Lisa Arkin, Executive Director
Oregon Toxics Alliance
1192 Lawrence Street
Eugene, Oregon 97401

Matter of Concern:

Aerial herbicide applications over forested areas near
and adjacent to Triangle Lake, Oregon

Date:

July 18, 2011

Copies:

John Kitzhaber, Governor
John Kroger, Oregon State Attorney General
Gail Shibley, Admin, Environmental Public Health
Faye Stewart, Chair, Lane County Board of Commissioners
Senator Joanne Verger
Representative Jean Cowan
Day Owen, Pitchfork Rebellion, Triangle Lake, OR
Jae Douglas, Oregon Health Authority
Richard Kauffman, Senior Regional Representative, ATSDR
Scott Downey, Environmental Protection Agency, Region Ten

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Executive summary

Residents of Triangle Lake have been concerned about exposure to herbicides applied aerially to forestlands near their homes, and about the health impacts their families have experienced. Recent laboratory findings have been interpreted as lending credibility to their concerns.

Urine samples of thirty-four residents, including children, taken after Weyerhaeuser's April 8 and April 19 aerial sprays, were provided to laboratories at Emory University and tested for the presence of atrazine and 2,4-D. All thirty-four urine samples tested positive for both herbicides. Two examples: one adult male's urine showed a 129% increase in urine atrazine after the aerial applications and a 31% increase in urine 2,4-D, and an adult female resident's urine showed a 163% increase in urine atrazine, and a 54% increase in urine 2,4-D after the aerial applications, both compared to baseline levels taken some months earlier.

Viewed in light of human rights standards, this may raise liability concerns for agencies.

Human Rights norms of concern

This report details twenty-three human rights norms of concern, including:

- The right to security of person and bodily integrity. This is one of the most basic of rights and is articulated in many human rights treaties, including the instruments that make up the International Bill of Human Rights
- The family's right to protection – also articulated in the instruments composing the International Bill of Human Rights.
- The right of motherhood and childhood to special care and protections
- The right of the child to the highest standard of health – both of these articulated in the same instruments as well as in the 1990 *Convention on the Rights of the Child*.

In addition, the *Declaration of Alma-Ata* reminds states that they are responsible for regulating agricultural, forestry, industry, manufacturing and other sectors to protect citizens' health.

Human rights standards are justified moral claims held by all persons vis-à-vis their governments, and moral duties that governments at all levels owe their citizens.

Human rights standards are recognized as trumping other types of policy considerations such as utility, cost-benefit analysis, social policy, etc. Additionally, human rights norms represent basic moral minimums, a moral floor beneath which state and state-regulated behaviors must not sink. If civil laws represent hard legal boundaries outside of which certain behaviors are not legally permissible, human rights standards represent hard ethical boundaries that define the outer limits of morally permissible behaviors.

Governments that sign human rights treaties, as the US has done, commit themselves to promulgating these norms and to being held accountable to them.

Potential liabilities

Potential consequences of continuing to allow aerial applications in such close proximity to residences include a risk of public and perhaps media perception that BOF, ODF and ODA do not respect human rights norms, potentially resulting in diminished trust by affected communities. Institutional trust is not high in communities impacted by aerial herbicide applications, and when lost could take decades to win back.

Potential economic risks include liability insurance carriers reconsidering their coverage, conditions and premiums for pesticide applications near human populations.

Other economic risks include potentially costly legal actions brought against BOF, ODF or ODA for failure to adequately regulate aerial application of herbicides as a violation of human rights, possible legal action re the Americans with Disabilities Act, and possible multiple small claims court actions.

One goal of human rights activism, often referred to as “the mobilization of shame,” involves human rights organizations using tools such as media attention, video recording of actions considered to be human rights violations and of persons responsible for them, posting those videos publically, and holding citizens’ inquiries and tribunals.

Pathways to reduce liabilities

The first step to reduce liabilities would be for BOF, ODF and ODA to initiate good faith discussions with Oregon Toxics Alliance, the Pitchfork Rebellion, and other local citizen groups, and to suspend aerial applications in the area until satisfactory agreements can be reached in those discussions.

Agencies should require that timber companies rely as much as possible on non-chemical means of vegetation control.

If some use of chemical herbicides were to be used, agencies should provide examples of well designed population studies undertaken by third parties (i.e., not pesticide manufacturers or agriculture/forestry interests) that demonstrate no adverse health effects from exposure to the relevant pesticide formulation(s). Such studies may not be available, but if they are they should be provided.

Agencies should provide wide public notification at no charge and by multiple means. Notifications should include attached labels and MSDS sheets for each relevant herbicide product.

Alternative lodging, transportation and services should be provided to those who require that they and their family members not be exposed to sprays, as well as provisions for insuring that place-bound persons not be required to endure spray exposures.

Strategies should be developed for insuring that children, because of their greater biological vulnerability to environmental exposures, not suffer exposures to sprays, drift or residues.

Agencies should arrange for health effects monitoring studies to be undertaken by the

Department of Health or independent third parties. Active (not passive) surveillance should monitor for a range of adverse health effects, both acute and chronic. Representatives from citizen groups should be actively involved in all phases of these studies: design, planning, implementation and monitoring.

Agencies should arrange for regular monitoring of local air and surface waters for the chemicals used in aerial applications, to be undertaken by the Department of Health, or Department of Environmental Quality or independent third parties, again with active citizen involvement in all phases.

Oversight by external observers, agreed to by BOF, ODF, ODA and citizen environmental organizations, should be arranged to monitor the implementation phase of these studies to help insure credibility and community buy-in.

Purpose of This Report

The purpose of this Report is to provide the Oregon Board of Forestry (BOF), the Oregon Department of Forestry (ODF), the Oregon Department of Agriculture (ODA), and the residents of Triangle Lake, Oregon a list of formal human rights norms of concern associated with aerial herbicide applications over forested areas near and adjacent to Triangle Lake, to outline BOF's, ODF's and ODA's potential liabilities and to describe pathways BOF, ODF and ODA can take to reduce those liabilities.

Facts

Weyerhaeuser Corporation has periodically undertaken aerial herbicide applications on private timberlands within a three or four mile radius of Triangle Lake.

Private timber companies do not normally, prior to application, identify the specific herbicide formulations that will be used for a given application but instead provide a list of products and formulations from which herbicides will be selected. In herbicide application notification number 201178100151, dated February 22, 2011, signed by Willie Bronson and prepared for Doug Decker, State Forester, Weyerhaeuser lists the following herbicide products that could be used in applications in the Triangle Lake area between March 14, 2011 and December 31, 2011:

Brand [names]: Accord Concentrate, Oust XP, Hardball, Felpar DF, Westar, Atrazine 4L, Garlon 3A, Garlon 4, Tahoe 3A, Tahoe 4E, Transline, Clean Slate;

Common [names]: 2,4-D;

Additives: Activator 90, Induce, Liberate, MSO;

Comments [additional chemicals]: Foresters, LV6, SFM

Triangle Lake, Oregon is an unincorporated community located in and near agricultural and forested areas about 25 miles west of Junction City on Oregon Highway 36 in Lane County.

Triangle Lake community residents have reported a range of acute reactions immediately following sprays including vomiting, burning eyes, burning and itchy skin, flu-like symptoms, muscle spasms, etc, and these have been reported by both adults and children. Residents are concerned as well about chronic health conditions that could develop later, particularly in their children. Recent laboratory findings have been interpreted as lending credibility to their concerns.

Urine samples of thirty-four Triangle Lake men, women and children, taken after Weyerhaeuser's April 8 and April 19 aerial sprays, were provided via secure chain of custody to Dr Dana Barr, Professor in the Department of Environmental

Health at Emory University's Rollins School of Public Health and current president of the International Society of Exposure Science. Her laboratory assayed the samples and found both atrazine and 2,4-D in all of them. According to Dr Barr's testimony at the Board of Forestry meeting on April 29th, 2011, only two to four percent of the US population shows any traces of atrazine or 2,4-D in their urine, so she found it significant that 100% of those sampled in Triangle Lake tested positive for both. Some residents had been tested both during the winter to provide a baseline and after the April 8 and 19 aerial applications. As an example, one adult male's urine showed a 129% increase in urine atrazine after the aerial applications and a 31% increase in urine 2,4-D, and an adult female resident's urine showed a 163% increase in urine atrazine, and a 54% increase in urine 2,4-D after the aerial applications, both compared to baseline.

Dr Barr is a former researcher at the Centers for Disease Control and Prevention, is presently serving as President of the International Society of Exposure Science, and recently completed a 5-year term as Editor-in-Chief of the *Journal of Exposure Science and Environmental Epidemiology*.

Atrazine has been identified as immunotoxic and as an endocrine disruptor. Some studies have found links between 2,4-D exposure and immune system compromise.

Acute effects of exposure to 2,4-D include irritation and inflammation of eyes and skin, hives, nausea, vomiting, throat irritation, headache, dizziness, coughing, and difficulty breathing.

Triangle Lake residents have requested Weyerhaeuser's records documenting which herbicides were actually applied on April 8 and 19 but have so far not been provided that information by the company or by ODF.

Issues

Triangle Lake residents have been distressed to learn of the presence of significant levels of atrazine and 2,4-D in their bodies and the bodies of their children. They think of this as a form of trespass.

Residents are concerned about *acute* adverse health effects they have experienced when exposed to herbicide spray, spray drift and subsequent volatilization from spray residues.

They are also concerned about potential *long-term* health effects known to be associated with acute or prolonged exposures to herbicide spray, drift and subsequent volatilization, particularly to atrazine and 2,4-D.

They are concerned about acute health impacts their children have experienced when exposed to spray, drift and residues, and are particularly concerned about potential long-term health impacts that may surface later in their children's lives.

They are also concerned about other impacts on the lives and property of citizens who live near, work near, visit or travel along routes adjacent to the proposed spray areas.

Human Rights Norms of Concern

Environmental concerns often directly impact human rights, and part of the purpose of this Report is to help BOF, ODF, ODA and Triangle Lake residents appreciate the human rights dimensions of aerial herbicide applications. As Daniel Taillant, Director of the Argentine-based Center for Human Rights and the Environment says, “Everything and anything that influences the environment directly influences our human condition, and a violation of the environment is a violation of our human rights.”¹

Human rights standards apply to individuals, not just to communities or majorities. This means that if even one or two persons’ rights are violated, then human rights violations have occurred.² Some of the following rights are grounded in legal authority – ADA rights, rights in the Nuremberg Code, protections against chemical trespass, etc. But all of these rights, including those without grounding in domestic law, are recognized as grounded in moral authority.

Human rights standards are recognized as trumping other types of policy considerations such as utility, cost-benefit analysis, social policy, etc. I.e. “right-holders are authorized to make special claims that ordinarily ‘trump’ utility, social policy, and other moral or political grounds for action.”³ Additionally, human rights norms are considered to represent a moral minimum for behavior of governments and non-state actors, a moral floor beneath which policy and state-regulated behaviors must not sink.⁴

As civil laws represent hard legal boundaries outside of which certain behaviors are not legally permissible, human rights standards represent hard ethical boundaries that define the outer limits of morally permissible behaviors.

Listed below are 23 specific human rights norms that may have direct relevance to aerial herbicide applications near Triangle Lake. (This list does not include rights that may be protected by the US or Oregon constitutions or by state statutes.) These norms can be found articulated in several different human rights declarations, conventions, charters and other international instruments, including:

- *Universal Declaration of Human Rights (UDHR)*⁵
- *International Covenant on Civil and Political Rights (CCPR)*⁶
- *International Covenant on Economic, Social and Cultural Rights (CESCR)*⁷
- *Convention on the Rights of the Child (1990) (CRC)*⁸
- *Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)*⁹
- *Rio Declaration on Environment and Development*
- *The World Health Organization Declaration of Alma Ata*¹⁰
- *The Nuremberg Code*¹¹

The first three documents above, *UDHR*, *CCPR* and *CESCR*, are considered primary and are referred to as the International Bill of Human Rights, so in the list below they are given a certain pride of place when identifying documents in which specific rights are articulated.¹²

1. Right to life, liberty and security of person.

Articulated in

UDHR Article 3

“Everyone has the right to life, liberty and security of person.”

CCPR Article 9

“Everyone has the right to liberty and security of person.”

UDHR Article 13

“(1) Everyone has the right to freedom of movement and residence within the borders of each State.”

What this right entails

This is the right to be safe and secure in one’s person.

The right to liberty entails the freedom to move about within the boundaries of one’s state.

Reasons for concern

- Documented reports of adverse physical health effects associated with aerial spray exposures.
- Adverse health effects attributable to exposures to aerial sprays, drift and volatilizing residues include respiratory, cardiovascular, dermal and neurologic effects, as well as miscarriages and birth anomalies, particularly for pregnancies conceived or carried during periods of exposure.
- If any citizens consider their freedom of movement to be restricted due to their need to avoid aerial sprays, drift and residues, particularly if those restrictions result in documentable economic loss, that would be of concern.
- If any citizens consider that threat of injury from spray exposures will require them to move out of the area, particularly if that would result in documentable economic loss, that would be of concern.

2. Right to privacy and home

Articulated in

UDHR Article 12

“No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence....”

CCPR Article 17

“No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence.”

What this right entails

This is the right to be secure in one's home , to be able to enjoy the use of one's property and to not have one's property devalued as a result of a state's failure to adequately regulate.

"The European Human Rights Court noted that severe environmental pollution may affect individuals' well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health."¹³

This means that adverse health effects are not the only kind of adverse effects that violate the right to one's property and home.

Reasons for concern

- Discomfort experienced at home, or compromised ability to enjoy one's home and property due to exposure to aerial sprays, drift or residues, even without adverse health effects.
- Potential adverse physical health effects related to sprays, drift or residues and suffered in the home.

3. The family's right to protection

Articulated in

CCPR Article 23

"The family is the natural and fundamental group unit of society and is entitled to protection by society and the State."

CESCR Article 10

"The widest possible protection and assistance should be accorded to the family, which is the natural and fundamental group unit of society, particularly for its establishment and while it is responsible for the care and education of dependent children."

What this right entails

This means that the health, strength, well-being and social integrity of families must be protected and supported; if these become compromised as a result of sprays or direct effects of sprays then this right has been violated.

Reasons for concern

- Adverse physical or economic effects on families attributable to sprays, drift or residues.
- If the health or well being of families, including economic well being, have been adversely affected as a result of the sprays, that would be of concern.

4. Right to property

Articulated in

UDHR Article 17

"No one shall be arbitrarily deprived of his property."

What this right entails

See number 2 above regarding the right to privacy and home.

Reasons for concern

- Any adverse physical or economic impacts on property or property values attributable to sprays, drift or residues.
- If individuals, families or businesses have been forced to leave or sell their property due to sprays or the spray program, that would be of concern.
- If individuals' or families' ability to enjoy the use of their property has been compromised due to the spray program, that would be of concern.

5. Right to work

Articulated in

CESCR Article 6

"The States Parties to the present Covenant recognize the right to work, which includes the right of everyone to the opportunity to gain his living by work which he freely chooses or accepts, and will take appropriate steps to safeguard this right."

What this right entails

This right refers to the right to work, whether on one's own property or elsewhere, and, by extension, the right to be able to transport oneself to work without being made sick along the way.

Reasons for concern

- Citizens who become unable to work because of disabilities resulting from exposure to sprays, drift or residues.
- Citizens who are unable to work because their place of work is located in or near the spray zone.
- Citizens who may be unable to transport themselves to work due to their need to avoid exposure to sprays, drift or residues.
- Work areas that have been contaminated by sprays enough that some workers are unable to perform their work or keep their jobs would be of concern.

6. Right to safe and healthy working conditions

Articulated in

CESCR Article 7

"States Parties to the present Covenant recognize the right of everyone to the enjoyment of just and favourable conditions of work which ensure...[s]afe and healthy working conditions"

What this right entails

This entails the right to a safe and healthy work environment, whether on one's own property or elsewhere.

Reasons for concern

- Adverse physical effects experienced in the work area that are attributable to aerial sprays, drift or residues.
- Workplaces becoming less safe for some as a result of contamination by aerial sprays, drift or residues.

7. Motherhood and childhood's right to special care

Articulated in

UDHR Article 25

"Motherhood and childhood are entitled to special care and assistance. All children...shall enjoy the same social protection."

CESCR Article 12 (section 2a)

establishes the obligation of states party to this Covenant to take steps to make "provision for the reduction of the stillbirth-rate and...infant mortality and for the healthy development of the child."

CRC Article 27

"1. States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development."

What this right entails

This is the right of children and their mothers to be provided special care, protection and assistance. This means that both state and non-state actors have a positive duty to protect children, mothers and women of child-bearing age from anything, including exposure to environmental toxics, that may compromise the child's physical, mental, spiritual or social development.

Reasons for concern

- Research indicates that children are at much greater risk than adults because of their increased biological susceptibility to adverse health effects from exposure to environmental toxics.
- Research indicates that fetuses and pregnant mothers are at risk for adverse effects from exposure to pesticides.
- If mothers, and mothers' ability to be good caregivers for their children, are adversely affected by aerial sprays, that would be of concern.

8. Duty to protect the child (i.e., persons under age 18):

Articulated in

CRC Article 19

"States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, [or] maltreatment...."

CESCR Article ten (section three)

"Special measures of protection and assistance should be taken on behalf of all children and young persons without any discrimination for reasons of parentage or other conditions."¹⁴

What this right entails

This is the child's right to special protections, and the state's duty to provide special protections, from infliction of harm, including harm that could result from unavoidable exposures to environmental toxics.

Reasons for concern

- See above.

9. Right of the child to the highest standard of health

Articulated in

CRC Article 24

"States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health."

What this right entails

This is the right of children to live in safe and healthy conditions, including safe and healthy environmental conditions, and not to have to undergo exposure to conditions or substances that may adversely impact their health and well-being.

Reasons for concern

- Activities that put children at increased risk of adverse health effects are of concern.
- Adverse health effects attributable to exposures to herbicide sprays, drift or residues can include respiratory, cardiovascular, dermal and neurologic effects, as well as miscarriages and birth anomalies, particularly for pregnancies conceived or carried during periods of exposure.

10. Right of all persons to the highest standard of health

Articulated in

CESCR Article 12

"States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."

What this right entails

This is the right to live in conditions conducive to the highest standard of health.

Reasons for concern

- Activities that put citizens at increased risk of adverse health effects are of concern.
- Adverse health effects attributable to exposures to sprays, drift or residues can include respiratory, cardiovascular, dermal and neurologic effects, as well as miscarriages and birth anomalies, particularly for pregnancies conceived or carried during periods of exposure.
- Adverse psychological health impacts associated with spray exposures are also of concern.

11. State's duty to provide for the health of citizens

Articulated in

The *Declaration of Alma-Ata*, Article V

“Governments have a responsibility for the health of their people which can be fulfilled only by the provision of health and social measures.”

What this right entails

This more clearly reframes the right to health as a duty of a government to its citizens to provide for the health of its citizens.

Reasons for concern

- See above

12. State’s duty to provide for the health of citizens demands coordinated efforts of all sectors

Articulated in

Declaration of Alma-Ata Article VII

[Provision of health measures includes,] “in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors; and demands the coordinated efforts of all those sectors.”

What this entails

This article elucidates the meaning of “provision of health and social measures,” saying that a state’s duty to provide the highest standard of health for its citizens extends beyond just the health sectors of governments; it involves all other sectors as well, including the responsibility to see that the industrial, manufacturing, forestry and agricultural sectors are regulated in ways that are protective of citizens’ health.

Reasons for concern

- This article says that in addition to departments of health, all government departments, including departments of agriculture, forestry, transportation and other agencies that deal with chemicals and other health risks also have a positive duty to protect the health of citizens.

13. Right to a healthy environment

Articulated in

Aarhus Convention Preamble

“every person has the right to live in an environment adequate to his or her health and well-being, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations.”

What this right entails

This Convention articulates both a right and a duty. The right is to live in an environment

adequate to one's health and well-being. The duty is to protect the environment so this right is respected.

Reasons for concern

- Aerial sprays, drift and residues that compromise the environment or cause conditions injurious to health, even if those conditions affect the health of some people more than others, are of concern.

14. Duty to encourage school attendance

Articulated in

CRC Article 28, 1(e)

"[States Parties shall] Take measures to encourage regular attendance at schools."

What this right entails

If states are enjoined to take measures "to encourage regular attendance at schools," it follows that they are also required, *a fortiori*, to proscribe measures that make it difficult or impossible for students to attend school.

Reasons for concern

- Aerial sprays that prevent any students from attending school or being transported to school due to their need to avoid spray exposures are of concern.
- Aerial sprays that expose students to spray, drift or residues while waiting for school buses would be of concern.
- Aerial sprays occurring near enough to schools that some students are unable to attend or remain in school would be of concern.

15. Right to education

Articulated in

CESCR Article 13 (section 1)

"States Parties to the present Covenant recognize the right of everyone to education."

Reasons for concern

- See #14 above.

16. Right to effective remedy

Articulated in

CCPR Article 2(3)a

"Each State Party to the present Covenant undertakes: To ensure that any person whose rights or freedoms as herein recognized are violated shall have an effective remedy, notwithstanding that the violation has been committed by persons acting in an official capacity...."

What this right entails

“The legal obligation to offer restitution for injury is as old as the Code of Hammurabi, the first formal set of laws in history.”¹⁵ It is recognized both internationally and domestically that “one of the major, primordial functions of the law is to return the victims of an unjust act to their previous condition.”¹⁶

“Effective remedy” means that by judicial action, monetary compensation or some other means any person whose rights have been unjustly violated will be restored as much as possible to their previous condition.

The right to effective remedy would be violated if, despite attempts to stop the proposed sprays using normal governmental methods and channels, the spray programs continued.¹⁷

Reasons for concern

- The potential for being required to pay monetary compensation when citizens are adversely impacted by aerial sprays, drift or residues would be of concern.

17. Right to compensation

Articulated in

In 1985 the U.N. General Assembly spelled out the nature of indemnification in the Declaration of Basic Principles of Justice for Victims of Crime and Abuses of Power. This declaration insists that “victims are entitled to prompt redress for the harm that they have suffered’ and that offenders should ‘pay fair restitution to victims, their families and dependents.”¹⁸

What this right entails

“The basic moral law of every society asserts that a government [or private entity] which wrongly injures its own citizens must make them whole insofar as this is possible.”¹⁹

Reasons for concern

- Personal economic losses resulting from exposure to aerial sprays, drift or residues would be of concern.
- Any other losses that can be measured in economic terms would be of concern.

18. Right to know

Articulated in

The *Rio Declaration on Environment and Development* establishes citizens’ right to information about environmental toxics to which they may be exposed.

Rio Declaration Principle 10

“Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available.”

Aarhus Convention Article 1

“each Party shall guarantee the rights of access to information, public participation in decision-making, and access to justice in environmental matters...”

What this right entails

This is the right of citizens to be provided full information about environmental issues so they can participate knowledgeably in decision-making about those issues. It entails the right to full disclosure of information about what product formulations have been applied, what the ingredients (both active and undisclosed “inert” ingredients) of these formulations are, about details of spray plans, planned effectiveness studies, Health Risk Assessments, Environmental Impact Reports, planned monitoring (or lack thereof) of health effects, etc.

Reasons for concern

- Despite manufacturers’ claims that information about undisclosed ingredients is proprietary, precedents are emerging around the world in support of citizens’ right to know the ingredients of chemical products to which they are exposed.
- The fact of spray drift can be significant, particularly with aerial applications. The problem of drift, residues and subsequent vaporization exacerbates human rights concerns primarily because of the larger number of persons who are impacted by sprays and who may be uninformed, unwarned and perhaps unconsenting.

19. Right to participation in decision-making in environmental issues

Articulated in

Rio Declaration Principle 10
Aarhus Convention Article 1
(see above)

Reasons for concern

- If citizens have not had sufficient opportunity for effective participation in decision-making about proposed sprays which may impact them and their families, that would be of concern.

20. Right to equal protection of the law

Articulated in

CCPR Article 26
“All persons are equal before the law and are entitled without any discrimination to the equal protection of the law. In this respect, the law shall prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any ground...”

What this right entails

This means that discrimination against persons and classes is proscribed.

The basic principles of environmental justice require that those communities that are disadvantaged in any way – socially, economically, as a result of discriminatory racial policies, etc, or who simply have less ready access to resources – be accorded the same degree of respect, fair treatment and opportunity for meaningful involvement in decision-

making as communities that are more socially or economically advantaged and have greater access to resources. As explained on the Environmental Protection Agency website “Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of...negative environmental consequences.”²⁰

Reasons for concern

- Are all communities, whether rural or urban treated equally regardless of perceived social privilege or socioeconomic status?
- Are economically disadvantaged communities impacted more or differently than more economically privileged communities?
- Does the socio-economic makeup of communities appear to be a factor in any decisions made about the proposed sprays?
- Are communities with different racial compositions affected differently?

21. Right to freedom from discrimination due to disability

Articulated in

The Americans With Disabilities Act (US)

What this right entails

The US Department of Justice maintains a website with detailed information about ADA requirements.²¹ In general this law requires that everyone who has, or is perceived to have, a disability not be discriminated against in any way.

A booklet providing an overview of ADA “requirements for ensuring equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation,” etc. is available on the ADA website.²²

Reasons for concern

- Discrimination occurs when any sub-group is disproportionately impacted by a policy or practice and no sufficient accommodations are made for them. Individuals with asthma or other respiratory conditions, chemically sensitive persons, pesticide sensitive persons, people with certain allergies, immunocompromised people, the elderly, the very young, pregnant women,²³ any place-bound persons (in hospitals or elder care facilities, for example), to name a few vulnerable sub-sets of residents, may be reasonably expected to experience more serious adverse effects from aerial spray exposures than the general population.
- Have reasonable accommodations been developed for persons in those groups to help them avoid being unfairly impacted by the sprays?

22. Right of experimental subjects to free and informed consent

Articulated in

Nuremberg Code Item 1

“The voluntary consent of the human subject is absolutely essential.”

Nuremberg Code Item 9

“the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where continuation of the experiment seems to him to be impossible.”

What this right entails

This is the right to be fully informed about an experiment before agreeing to participate, the freedom to choose whether to participate or not, and the freedom to withdraw from the experiment at any time.

The rights of experimental subjects to informed consent and to protection from possible harms, as they are expressed in *The Nuremberg Code*, are premised on the acknowledgment that aerial spraying, and the health impacts of aerially applied herbicides on exposed humans, have not been adequately studied, contain important unknowns, and are thus at least partially experimental in nature.

Reasons for concern

- Have citizens been provided opportunity to consent or not consent to exposure to aerial sprays, drift and residues?
- Have citizens been provided ways to withdraw themselves or their families from the spray and residue exposures if they do not wish to be exposed?
- Have citizens, particularly those with certain disabilities, been notified about details of aerial sprays and provided alternative places to stay during and shortly after sprays to reduce exposures?

23. Right of experimental subjects to be protected from injury, disability or death

Articulated in

Nuremberg Code Item 7

“Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.”

What this right entails

This is the right to be protected from anticipated, remote or unanticipated harms that may possibly result from participation in the experiment.

Reasons for concern

- Have such protections been provided, particularly for those at increased risk of harm from spray exposure?

Potential Liabilities

Listed below are some potential liabilities that BOF, ODF and ODA may incur if aerial application of herbicides in such close proximity to rural neighborhoods and private residences were to continue.

1. The potential consequences of governments ignoring human rights norms are not insignificant. Loss of public confidence in agencies and their processes is not a small thing, even from the perspective of the agency, and even when viewed through the lens of basic practicality. When human rights standards are compromised and institutional trust is lost the consequences can be monumental, costly and long lasting.

Human rights abuses (sometimes committed unwittingly) in the US Public Health Service's infamous Tuskegee Syphilis Study (1932-72), and the debilitating consequences that have continued to compromise the effectiveness of public health work in African American communities ever since, are only one example of how failure to respect human rights standards can negatively impact the ability of government agencies to effectively do their work. Institutional trust is not high in communities impacted by aerial herbicide applications, and when lost could take decades to win back.

2. If BOF, ODF and ODA were to continue allowing aerial application of herbicides in such close proximity to rural neighborhoods and family residences there would be risk of a public and perhaps media perception that BOF, ODF and ODA do not respect human rights norms. There could also be a public recognition that despite awareness of links between herbicide exposure and health impacts, and despite awareness of human rights concerns, BOF, ODF and ODA did not move to eliminate or more strictly regulate aerial sprays and replace them with alternative control measures.
3. Greater involvement of human rights organizations such as Human Rights Watch, the Global Network for the Study of Human Rights and the Environment, Pesticide Action Network and others in this situation.
4. One goal of human rights activism, often referred to as "the mobilization of shame," involves human rights organizations using tools such as video recording of actions considered to be human rights violations and of persons believed responsible for those actions; posting those videos publically; holding public, community-led, trial-like Citizens' Tribunals with independent judges who weigh, using human rights norms rather than civil law, the justness of a given situation; and public, community-led, Citizens Inquiries which record and document oral and written testimony from affected community members presented to a panel of commissioners.
5. Potential economic risks include liability insurance carriers reconsidering their coverage, conditions and premiums for pesticide applications near human populations.

6. Other economic and social risks include potentially costly legal actions brought against BOF, ODF or ODA for failure to adequately regulate aerial application of herbicides as a violation of human rights; possible legal action re the Americans with Disabilities Act; and possible multiple small claims court actions for economic redress.
7. Potential litigation through the Inter-American Court of Human Rights, a court of the Organization of American States.

Pathways to Reduce Liabilities

1. The most important first step to reduce liabilities would be for BOF, ODF and ODA to initiate good faith discussions with Oregon Toxics Alliance, the Pitchfork Rebellion, and with other local citizen groups concerned about aerial herbicide applications near human populations, and to suspend aerial applications in the area until satisfactory agreements can be reached in those discussions.
2. Provide evidence of dermal, ocular and inhalation safety, since those would be the primary routes of exposure, for each of the herbicide formulations that may be used in the spray area. That is,
 - a. Provide examples of large scale, large sample, well designed population studies undertaken by third parties (i.e., not pesticide manufacturers or agriculture/forestry interests) published in the peer reviewed scientific literature that demonstrate no adverse health effects from dermal, ocular and inhalation exposure to the specific pesticide formulation(s) that will be used (i.e., not to just one of the ingredients). Residents may doubt whether reliable studies of this sort exist, but if they do they should be made available free of charge to interested parties.
 - b. Absent such studies, provide examples of any studies published in the peer reviewed literature that demonstrate no adverse effects from dermal, ocular and inhalation exposure of urban populations to the specific pesticide formulation(s) that will be used.
 - c. Absent that, provide examples of any studies anywhere that show there to be no adverse health effects from dermal, ocular and inhalation exposure to the specific pesticide formulation(s) that will be used.
3. Agencies should require that timber companies rely as much as possible on non-chemical means of vegetation control.
4. If some use of chemical herbicides were to occur:
 - a. Provide notification at no charge and by multiple means – signage, email lists, websites, phone calls, etc. – especially to those persons in the area susceptible to or concerned about adverse health impacts.
 - b. Include in all public notification announcements a full disclosure of all precautions included on the labels of each product formulation that may be used.
 - c. Provide to community members the official label for each herbicide product that may be used in the application.
 - d. Provide to community members the complete Material Safety Data Sheet for each herbicide formulation (i.e., not just for the ingredients designated as “active”) to be used.

- e. Publicly disclose all ingredients, both active and “inert,” of each formulation that would be applied.
- f. Develop strategies for providing alternative lodging, transportation and services to those who, for reasons of health or health concerns, require that they and their family members not be exposed to the sprays, drift or residues.
- g. Develop strategies for insuring that place-bound persons, such as disabled persons living in homes near the spray zone, those in daycare facilities, elder care facilities, hospitals, schools, etc, not be required to endure spray exposures if they wish not to.
- h. Develop strategies for insuring that children, because of their greater biological vulnerability to environmental exposures, not be required to endure exposures to the sprays, drift or residues.
- i. Arrange for health effects monitoring studies to be undertaken by the Department of Health or independent third parties. Active (rather than passive) surveillance methodologies should monitor for a range of adverse health effects, both acute and chronic, associated with spray exposures. Representatives from citizen groups should be actively involved in design, planning, implementation and monitoring of these studies. They should be actively engaged partly because as members of the vulnerable community they have a right to be involved, partly because community members have access to a wide range of relevant local knowledge that outside researchers do not have access to, and partly to help insure credibility and community buy-in for the studies’ results
- j. Arrange for regular monitoring of local air and local surface waters for the chemicals used in aerial applications, to be undertaken by the Department of Health, or Department of Environmental Quality or independent third parties, again with active citizen involvement in all phases.
- k. Arrange oversight by external observers agreed to by BOF, ODF, ODA and citizen environmental organizations, to monitor implementation of these studies and of revised plans for herbicide applications.

Conclusion

This Report provides the Oregon Board of Forestry, the Oregon Department of Forestry, the Oregon Department of Agriculture, and the residents of Triangle Lake, Oregon a list of formal human rights norms of concern associated with aerial herbicide applications over forested areas near and adjacent to Triangle Lake, outlines BOF's, ODF's and ODA's potential liabilities and describes pathways BOF, ODF and ODA can take to reduce those liabilities.

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The Center for Human Rights and the Environment is headquartered in Córdoba, Argentina. <http://www.cedha.org.ar>

Information about the Inter-American Commission on Human Rights, the Inter-American Court on Human Rights (seated in San José, Costa Rica) and human rights instruments pertinent to American states can be found at <http://www1.umn.edu/humanrts/inter-americansystem.htm>

Endnotes

¹ Picolotti, Romina and Jorge Daniel Taillant, *Linking Human Rights and the Environment*, University of Arizona Press, 2003, p 123 (emphasis in original).

² “With the exception of the right to self-determination, all the rights in the *Universal Declaration* and the Covenants are the rights of individuals. Enumerations of rights thus typically begin ‘Every human being...’, ‘Every one has the right...’, ‘No one shall be...’, ‘Everyone is entitled....’” Jack Donnelly, Andrew Mellon Professor in the Graduate School of International Studies at the University of Denver, *Universal Human Rights in Theory and Practice*, Cornell University Press, 2002, p23.

³ Donnelly, *Universal Human Rights in Theory and Practice*, Cornell University Press, 2002, p8.

⁴ “Human rights are minimal standards. They are concerned with avoiding the terrible rather than with achieving the best. Their focus is protecting minimally good lives for all people.” James Nickel, “Human Rights” in the *Stanford Encyclopedia of Philosophy*, 2006.

⁵ The *Universal Declaration of Human Rights* was unanimously adopted by the United Nations in 1948.

⁶ Signed by the US in 1977, ratified in 1992 and entered into force in 1992, though with reservations on articles 5-7, 10(2,3), 15(1), 19, 20, 27 and 47, and formal understandings on articles 2(1), 4(1), 7, 9(5), 14(3,6), 26. Ratification means that the provisions of this international instrument, aside from the reservations, do have the force of domestic law in the US.

⁷ Signed by the US in 1977; not ratified.

⁸ Signed by the US in 1995; not ratified. Though the US has not ratified this convention, “One hundred and ninety states have agreed to become parties to the Convention on the Rights of the Child, giving it the distinction of being the most widely ratified treaty in the history of the world.” Lauren, Paul Gordon, *The Evolution of International Human Rights*, University of Pennsylvania Press, Philadelphia, 2d ed, 2003, p 249.

⁹ Signed by the US in 1980; not ratified.

¹⁰ 1978

¹¹ Rights enunciated in the 1947 *Nuremberg Code* are for the protection of individuals being studied in research protocols. If the case can be made that a population is being studied as research subjects – e.g., that persons living and working in the spray zone are being studied for health effects resulting from spray exposures – then provisions of the *Nuremberg Code* would apply to individuals in that population.

¹² Many of the rights listed below have been articulated in several different human rights declarations, conventions or charters, but for simplicity’s sake this Report lists only one or two instruments for each right.

¹³ This passage continues: “It found that the determination of whether this violation had occurred in *Lopez-Ostra v. Spain* should be tested by striking a fair balance between the interest of the town’s economic well-being and the applicant’s effective enjoyment of her right to respect for her home and her private and family life. In doing this, the Court applied its “margin of appreciation” doctrine, allowing the State a “certain” discretion in determining the appropriate balance, but finding in this case that the margin of appreciation had been exceeded. It awarded Mrs Lopez-Ostra 4,000,000 pesetas [approximately US\$35,600], plus costs and attorneys’ fees.” Shelton, Dinah, “The Environmental Jurisprudence of International Human Rights Tribunals,” in Picolotti, R and Taillant, JD, 2003, p 15.

¹⁴ See item 21 below on discrimination.

¹⁵ Drinan, Robert F, *The Mobilization of Shame, A World View of Human Rights*. Yale University Press, 2001 p 186.

¹⁶ Drinan RF. 2001. p 170.

¹⁷ In reference to a specific case: “the human right to effective judicial remedy has been violated because despite the riverside communities’ plea to the judicial system, nothing has been done to stop the contamination.” in Picolotti, R and Taillant, JD, 2003, p 146.

¹⁸ Drinan RF. 2001. p 171.

¹⁹ Drinan RF. 2001. p 187.

²⁰ US EPA's definition of environmental justice. See <http://www.epa.gov/compliance/resources/faqs/ej/index.html> Quoted in Robert D Bullard, *The Quest for Environmental Justice: Human Rights and the Politics of Pollution*, Sierra Club Books, San Francisco, 2005, p. 4.

²¹ <http://www.usdoj.gov/crt/ada/>

²² <http://www.usdoj.gov/crt/ada/publicat.htm#Anchor-ADA-44867>

²³ In this regard, see provisions in the *Convention on the Elimination of All Forms of Discrimination against Women*.