



# Wood Pole Integrated Pest Management Plan

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**Nelson Hydro**

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## Revision History

| Revision # | Date            | Status | Revision Description                              | Author    |
|------------|-----------------|--------|---------------------------------------------------|-----------|
| 1.0        | October 5, 2025 | Draft  | Initial Document Creation – Nupqu Ltd Partnership | JH and RP |
|            |                 |        |                                                   |           |



## Table of Abbreviations

|       |                                                                                    |
|-------|------------------------------------------------------------------------------------|
| ALR   | Agricultural Land Reserve                                                          |
| Am    | Amended IPM Regulation Since 2016                                                  |
| CKISS | Central Kootenay Invasive Species Society                                          |
| CAS   | Chemical Abstracts Service Registry Number (identifies specific active ingredient) |
| EDRR  | Early Detection Rapid Response                                                     |
| IPM   | Integrated pest management                                                         |
| IPMA  | Integrated Pest Management Act                                                     |
| IPMR  | Integrated Pest Management Regulations                                             |
| KNC   | Ktunaxa Nation Council                                                             |
| MBR   | Migratory Bird Regulations                                                         |
| MOE   | Ministry of Environment                                                            |
| MOTT  | Ministry of Transportation and Transit                                             |
| NIT   | Notice of Intent to Treat                                                          |
| NTZ   | No treatment zone                                                                  |
| OCP   | Official Community Plan                                                            |
| PCP   | Pesticide control Product                                                          |
| PFZ   | Pesticide free zones                                                               |
| IPMP  | Integrated Pest Management Plan                                                    |
| PMRA  | Pest Management Regulatory Agency                                                  |
| PPE   | Personal Protective Equipment                                                      |
| QP    | Qualified Professional                                                             |
| RAPR  | Riparian Areas Protection Regulation                                               |
| ROW   | Rights-of-way                                                                      |
| SAR   | Species at Risk                                                                    |
| SDS   | Safety Data Sheets                                                                 |
| SRW   | Statutory Right-of-Way                                                             |
| TDGA  | Transportation of Dangerous Goods Act                                              |
| WHF   | Wildlife Habitat Feature                                                           |
| WHMIS | Workplace Hazardous Materials Information System                                   |

## 1. Introduction

This document is a Integrated Pest Management Plan (IPMP) for the maintenance of wood poles. It has been prepared through a collaborative partnership between Nupqu Resource Limited Partnership and VAST Resource Solutions Inc., in accordance with Section 58 of the Pest Management Plans Regulation [BC Reg 235/2015, s. 29; July 1, 2026.] and Section 5: Pesticide Use Notice Requirements [BC 235/2015, s.20; 19/2022, s.1.; February 7, 2022] of the Integrated Pest Management Regulation (B.C.) (IPMR). The Regulation was last amended March 5, 2025, by BC Reg 41/2024. The wood pole IPMP aligns with the Nelson Hydro Five-Year Vegetation Management Plan and other Community Management Plans and Best Practices.

### 1.1. Nelson Hydro

Nelson Hydro is wholly owned by the City of Nelson. Nelson Hydro provides electricity and related services to customers in the City of Nelson and surrounding areas, including Blewett, Taghum, the North Shore, Harrop, Procter, Balfour and Queen's Bay. Nelson Hydro provides generation, transmission and distribution power lines, as well as residential and business services to customers within the City of Nelson and the above surrounding communities. These services are provided under a series of standard operating practices and guidelines outlined in Nelson Hydro's Integrated Pest Management Plans.

Under the British Columbia *Integrated Pest Management Act (IPMA)*, Section 58, a Pest Management Plan is defined as a plan that describes:

- Prescribed for the purpose of Section 7 (1) of the Act as using either restricted, commercial or domestic pesticides;
- A program for managing pest populations or reducing damage caused by pests based on integrated pest management (IPM); and,
- The methods of handling, preparing, mixing, applying and otherwise using pesticides within the program.

Within the *IPMA*, the term "pesticide" is defined as a microorganism, chemical, or other material used to prevent, destroy, repel, or mitigate a pest. A pest is referred to under the Act as an injurious, noxious or troublesome living organism (*IPMA*, Part 1, See definitions). A wood preservative pesticide is discussed herein as a control product that is used to destroy, inactivate or reduce mould, mildew or odours [Am. B.C. Reg 234/2015, s.3.]

The British Columbia *IPMA* and the *IPMR* require that management and maintenance of wood poles on all power line corridors, road frontage areas, generation facilities and electrical facilities throughout their service area. Wood poles are located on private, municipal and Crown land. More than seven thousand (7,000) wood poles support the transmission and distribution lines; however, most are for distribution line support. Nelson Hydro's current pole inventory consists mainly of wood poles (West Red Cedar) and roughly less than 5% galvanized steel. Nelson Hydro is cognizant that the presence of pests in or on their wood poles can compromise infrastructure integrity. This can pose a threat to workers and public safety, compromising the system's reliability. This IPMP incorporates the principles of IPM and is designed to control and/or eradicate pest species that may cause wood rot or structural damage.

Compliance with environmental legislation is a top priority for Nelson Hydro; therefore, in 2025, existing IPMPs were revised in accordance with Section 59 of the *IPMR*, which requires that a IPMP term not exceed five years.

The IPMP ensures:

- Compliance with all applicable provisions of the *IPMA* and *IPMR*, and other applicable Federal, Provincial and regional laws and regulations;
  - The responsible use of pesticides;
  - The incorporation and use of *IPM*, and,
- The Nelson Hydro vegetation management program will be publicly available to the City of Nelson and surrounding communities for pest management activities conducted on wood poles.

## 1.2. Geographic Boundaries of the Area to Which This Plan Applies

[IPMR Section 58(1)(a)]

This IPMP addresses the Nelson Wood Pole Maintenance IPMP and the utilization of wood preservative pesticides within the geographical boundaries of Nelson Hydro's service area and surrounding areas. This plan outlines the pest management program implemented for wood poles located across multiple land parcels. Additionally, it emphasizes safety protocols, environmental considerations, and compliance with relevant regulations to ensure effective and responsible pest control practices. Regular monitoring and documentation are integral components of the plan, facilitating timely interventions and ongoing assessment of the effectiveness of pest management. This structured approach aims to maintain the safety, durability, and functionality of the infrastructure while minimizing ecological impact. These include all power line corridors (transmission and distribution), road frontage areas on Crown land, private land where Nelson Hydro has an easement, generation facilities, and electrical facilities within their service area. These activities aim to manage pests affecting the wood poles and electrical infrastructure. Geographically, the surrounding regions include Blewett, Taghum, the North Shore, Harrop, Procter, Balfour and Queen's Bay.

A Nelson Hydro territory map, detailing the geographical boundaries to which this IPMP will apply, is shown in Appendix A.

## 1.3. Person Responsible for Managing Pest

[IPMR Section 58(1)(b)(c)]

Within Nelson Hydro, the person responsible for wood pole maintenance and vegetation management, as well as the principal contact for information related to this IPMP, will be Neal Dermody, Operations and Line Manager at Nelson Hydro. Mr. Dermody can be contacted at (250) 352-8213, or at: [NDermody@nelson.ca](mailto:NDermody@nelson.ca)

## 1.4. Role and Term of This IPMP

The primary purpose of maintaining wood poles is to extend their service life, thereby minimizing replacement costs. Pest management objectives on wood poles are based on operating and engineering requirements. The treatment of wood poles with wood preservative pesticides is undertaken to prevent decay from wood rot or structural damage from insects, which can lead to pole failure, increased power outages and reduced worker and public safety. Electrocution from power lines can result in severely disabling injuries or death. As a result, Nelson Hydro must use wood preservative pesticides for liability and safety reasons. Using wood preservative pesticides reduces the number of poles that must be

replaced (and, thus, the number of trees that need to be harvested) and extends the service life of wood poles by up to five times. This IPMP permits Nelson Hydro to utilize pesticides, in certain situations, for wood pole maintenance throughout its service area. The IPMP will be pertinent for a five-year period from the date the Confirmation of a Pesticide Use Notice is obtained. The use of this IPMP will ensure:

- Legal accountability with the provisions of the *IPMA* and *IPMR*, as well as all applicable federal, provincial and regional laws and regulations;
- General alignment with the City of Nelson's Management Plans and Best Practices and other area specific guidelines listed in Table 3-1;
- The responsible use of pesticides for wood preservative pesticides;
- The incorporation and use of IPM principles;
- Public awareness of, and input into, the vegetation management program; and,
- The practical use of IPM considers environmentally sensitive areas and land uses.

## **2. Objectives of Wood Pole Maintenance Management**

A wood pole maintenance management program is critical to meeting the zero-tolerance policy for outages on its electrical grid. Nelson Hydro's policy is to effectively and safely manage the risk of such outages.

The specific goals of wood pole maintenance on Nelson Hydro wood poles are to:

- Minimize public and worker safety hazards;
- Reduce the number of outages from old or compromised poles;
- Reduce the risk of fires caused by old poles toppling and energized lines contacting trees or vegetation;
- The program further strives to:
  - Respect agreements with the public, landowners, other stakeholders, and First Nations' traditional rights;
  - Comply with all government regulations and corporate policies;
  - Selectively control undesirable (target) species around poles; and,
  - Enhance biodiversity by protecting breeding bird populations, wildlife Species at Risk, and high-priority habitat features of regional management concern.

## **3. Wood Pole Maintenance Management Using Integrated Pest Management**

[*IPMA* Part 1 Interpretation Definitions]

To ensure effective management of wood rot, pests (insects), and mechanical damage caused by pests, Nelson Hydro has adopted IMP principles into its programming.

IPM means a process for managing pest populations that includes the following activities:

- Planning and managing ecosystems to prevent organisms from becoming pests (i.e. Prevention);

- Identifying pest problems and potential pest problems;
- Monitoring populations of pests and beneficial organisms; damage caused by pests and environmental conditions;
- Using injury (treatment) thresholds in making treatment decisions;
- Suppressing pest populations to tolerable levels using strategies based on consideration of biological, physical, cultural, mechanical, behavioural and chemical controls in appropriate combinations and environmental and human health protection (i.e. Pest Treatment Options and Treatment Method Selection); and,
- Evaluating the effectiveness of pest management strategies.

Each of the above IPM elements is integral to the Nelson Hydro wood pole maintenance program and is discussed in detail herein.

### **3.1. Prevention (Planning)**

[IPMR Section 58(2)(a)]

Implementing proactive measures is essential to mitigate the risk of wood pole deterioration. These measures include the purchase of treated poles, such as full-length poles or butt poles, which are designed to resist environmental and biological factors that cause decay. Additionally, careful pole selection processes ensure that only high-quality, durable poles are used in installations. The Nelson Hydro Pole Test and Treat programs further enhance the longevity of wood poles by assessing their condition and applying protective treatments as needed over an eight-year treatment cycle, unless the pole is located within a no-treatment zone or a sensitive area.

#### **3.1.1. Purchase of Treated Poles**

Nelson Hydro aims to minimize wood pole deterioration and decrease the reliance on wood preservative pesticide treatments by purchasing high-quality pre-treated Western red cedar wood poles. Nelson Hydro does not purchase or use untreated poles.

Poles purchased before 1990 were butt treated (using a thermal process) with an oil-borne preservative. They were incised (teeth marks applied to the wood surface) to enhance the penetration of the preservative. Poles purchased after this date have been treated full-length using a pressure vacuum system, which results in a much cleaner product. All poles purchased since 1990 have also undergone a thermal process that embeds the chemical treatment into the wood, ensuring that no wood preservatives enter the environment once the poles are placed in the ground.

Full-length treated poles generally suffer minor decay during the first 20 to 30 years of service life. Butt-treated poles show signs of decay above the treated section, particularly internal decay, earlier than full-length treated poles.

#### **3.1.2. Pole Selection Options**

The poles currently available for utility use are wood, steel, composite, and concrete. Approximately 99% of the Nelson Hydro poles are made of Western red cedar, and 1% are constructed from galvanized steel. Wood is used for poles because it is climbable, widely available, and has the lowest cost. When bucket trucks are unavailable or impractical, wood poles can be safely ascended using tree-climbing spurs. These

specialized tools provide workers with a secure grip and support, enabling them to access elevated positions on wooden utility poles efficiently and safely. Wood poles are derived from a renewable resource.

Concrete and steel poles cannot be easily climbed and typically require the use of bucket trucks to access. Nelson Hydro does not use concrete poles, and composite poles could replace the steel product in the future. Nelson Hydro currently does not utilize composite poles in its operations. However, the organization remains open to considering the adoption of composite poles in specific, limited situations where their use could offer advantages or meet particular requirements.

### 3.2. Identification of Species

[IPMR Section 58(2)b(ii)]

An essential step in the IPM process is accurately identifying the pest problem, allowing for the implementation of effective control programs. Two main pest groups attack wood poles, and species of concern can be present both above and below ground. Infestation of pests in wood poles can cause mechanical damage to the poles, requiring costly maintenance programs. The main pest species to be controlled under this IPMP are:

- Wood-nesting ants (carpenter, cornfield and thatching);
- Termites (Pacific damp wood and Western subterranean);
- Wood-boring beetle (powder post, bark, buprestid and long-horned); and;
- Wood-decaying fungi (brown rot, white rot, soft rot);

There are numerous causes of pole damage, including excavating nesting cavities and bill damage from woodpeckers, mechanical injury from vehicle impact, wear caused by repeated scrapings from truck trailers, farm machinery, lawn maintenance equipment, snow plowing, or constant strikes from water irrigation equipment. The key to effective pest control is knowing the pest's biology, life cycle, behavioral patterns, and habitat preferences. Once a problem species is identified, the pest manager can accurately monitor the population, plan and implement preventive measures (such as reducing suitable habitat), and select appropriate controls at the correct time in the pest life cycle to be the most effective.

Table 3-1 below provides web links for Nelson Hydro management plans and best practices for maintenance around electrical wood poles. Other online resources for identifying pest species, control options, and wood preservative pesticides are also included below.

**Table 3-1. BC Online Resources and Nelson Community Plans and Best Practices**

| Source                                           | Document                                                       | Web Link                                                                                                                                                                                                                                 |
|--------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nelson Hydro website                             | Vegetation Management Plan                                     | <a href="https://www.nelson.ca/DocumentCenter/View/5505/2024-Nelson-Hydro-Five-Year-Vegetation-Management-Plan">https://www.nelson.ca/DocumentCenter/View/5505/2024-Nelson-Hydro-Five-Year-Vegetation-Management-Plan</a>                |
| Nelson Hydro website                             | Vegetation Management Best Practices                           | <a href="#">Nelson-Hydro-Vegetation-Best-Management-Practices</a>                                                                                                                                                                        |
| Nelson Hydro website                             | Nesting Bird Best Management Practices                         | <a href="#">NH Nesting Bird BMP</a>                                                                                                                                                                                                      |
| Government of Canada                             | Migratory Birds Regulations, 2022                              | <a href="https://laws-lois.justice.gc.ca/eng/regulations/SOR-2022-105">https://laws-lois.justice.gc.ca/eng/regulations/SOR-2022-105</a><br>(last amended on 2024-10-04)<br>➤ Protection for Birds, Nest and Eggs and issuance of permits |
| BC Ministry of Env. & Climate Change Strategy    | Run a community watershed query                                | <a href="https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/community-watersheds">https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/community-watersheds</a>              |
| Government of Canada                             | Canadian Center for OH&S SDS Database                          | <a href="#">CCOHS: SDS Database (English Language)</a>                                                                                                                                                                                   |
| Canadian Electricity Association                 | Bird Beneficial Management Practices Guide for Utilities, 2018 | <a href="#">Bird Beneficial Management Practices Guide for Utilities   Electricity Canada</a>                                                                                                                                            |
| City of Nelson Community website                 | Interim Urban Forestry Plan                                    | <a href="https://nelson.civicweb.net/document/128081/">nelson.civicweb.net/document/128081/</a>                                                                                                                                          |
| City of Nelson Community website                 | Fire Smart Plan                                                | <a href="#">Community-Wildfire-Resiliency-Plan</a>                                                                                                                                                                                       |
| City of Nelson Community                         | Spill Response Plan                                            | Contact for Emergency Management BC:<br>Toll Free: 1-800-663-3456<br><a href="https://www.nelson.ca/3094/Spill-Response">https://www.nelson.ca/3094/Spill-Response</a>                                                                   |
| Pacific Northwest Insect Management PNM Handbook | Wood-Infesting Insect Pests                                    | PDF Link to Structural and Health Pests<br><a href="https://pnwhandbooks.org/insect/structural-health/wood-infesting-insect">https://pnwhandbooks.org/insect/structural-health/wood-infesting-insect</a>                                 |
| The National Pesticide Info Center website       | Links to Pest and Product Info                                 | <a href="https://npic.orst.edu">https://npic.orst.edu</a>                                                                                                                                                                                |

| Source                   | Document                                     | Web Link                                                                                                                                                                                                                                    |
|--------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wood Preservation Canada | Specifier-Guide-Utility-Poles-2025           | Select the Specifier Guide from the list under Specification Sheets.<br><br><a href="https://woodpreservation.ca/en/non-residential-sitemap/specifiers-guide/">https://woodpreservation.ca/en/non-residential-sitemap/specifiers-guide/</a> |
| Health Canada            | Pesticide Label Search<br>(downloadable App) | <a href="https://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php">https://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php</a>                                                                                                                                   |

### 3.2.1. Types of Problem Insect Pests

The presence of one or more of the following signs generally indicates an insect infestation:

- Apparent insect activity (i.e., their visual presence);
- Piles of sawdust-like material or wood fiber at the base of the wood poles;
- Round or oval holes on the surface of the pole; or,
- Galleries (tunnels) under the surface of the wood that may be filled with excrement or other material.

The species of insect can generally be identified by:

- Comparing specimens with an insect collection;
- Referring to pictures or pictorial keys;
- Recognizing characteristics of the damage, excrement or castings (called frass), and,
- Consulting experts for assistance with complex or unfamiliar species.

#### 3.2.1.1. Ants

Wood-nesting ants can be found throughout the Nelson Hydro service area. Ants are social insects and live in colonies. They hollow out nests in poles for shelter, but do not eat the wood for food. Ant nesting cavities can lead to loss of structural integrity in the wood poles. The most common identification signs are ants moving around the base of the poles in search of food and piles of sawdust.

Ants tend to be more prevalent in areas with a high water table (e.g., the Nelson Hydro service area). They commonly seek out areas of high moisture in and around wood poles and build their nests in damp wood. In most cases, decay is already present in wood before ants excavate nests.

#### 3.2.1.2. Termites

Termites are social insects that live in large colonies. Termites eat wood, which is digested by protozoa (microscopic, one-celled organisms) living in their gut. In the fall, large swarms of winged females leave the nest to mate and start new colonies.

#### 3.2.1.3. Wood-Boring Insects

Several wood borers (Powder post beetles and common wasps) are responsible for most pole damage. They are attracted to damp wood and standing poles that already have internal decay. Pole failure is rare, but as the population increases, it may reduce much of the interior of infested wood to a powder.

### **3.2.2. Wood Decaying Fungi**

Three types of fungi (brown rot, white rot, and soft rot) can attack the pole's cell walls, reducing its strength. Most species enter the pole surface from the soil or through above-ground checks or bolt holes. They break down the lignocellulose complex that comprises the cell walls of the wood, resulting in structural weakening of the wood.

## **3.3. Monitoring Program for Wood Poles**

[IPMR Section 58(2)(c)(i)(ii)(iii)]

### **3.3.1. Pole Test and Treatment Program**

The Nelson Hydro Pole Test and Treat Program is a preventative pest monitoring program in conjunction with new pole purchase policies and maintenance program. The testing and treatment of wood poles involves an evaluation of the integrity of the pole's physical characteristics and serviceability despite deterioration or damage, and taking measures to preserve its service life.

At regular intervals, Nelson Hydro conducts testing and treatment of all in-service wood utility poles in its operating areas. The benefit of maintaining wood poles is to extend their service life, thereby minimizing costly replacements. The testing and treatment methods are designed to ensure public, employee and contractor safety, provide appropriate reliability, and prevent high-consequence pole failures and outages.

The Nelson Hydro Pole Test/Treat Program has been designed to prevent the deterioration of poles due to decay fungi and insects. As a preventative measure, wood preservative pesticides are applied (or re-applied) before the pests are present.

### **3.3.2. Frequency of Monitoring (Maintenance Cycles)**

Nelson Hydro purchases pre-treated transmission poles that generally suffer minor decay during the first 20 years of their life. After installation, in-service poles shall be inspected on an eight-year cycle, based on factors such as the manufacturer's recommendations, pole research, pole type, and the practical requirements of the Pole Test/Treat Program.

Even though rot may not yet be present at the time of the maintenance cycle, the risk of incipient rot is significant. There are exceptions to established preventive maintenance programs. Changes in road grades or other pole damage may occur, requiring applicators to go in and treat poles outside the eight-year cycle. Additionally, there may be infestations of ants and termites that develop off-cycle, as reported by homeowners or line crews.

### **3.3.3. Monitoring Methods and Data Collected**

To determine whether wood poles remain in service or need to be replaced, the selected poles are inspected by certified inspectors using conventional visual, sounding, and boring techniques. These methods are effective in determining shell rot, as well as other serious defects that occur when a pole is overstressed or weakened by insect or bird activity. Annually, contractors for Nelson Hydro inspect and test all the poles in the pre-determined zone. All procedures and standards described later in this section must be followed during the Pole Test/Treat Program. Strength calculations, which outline the mathematical calculations necessary to determine pole structural integrity, are also undertaken to determine the type of treatment, if any, required to extend the pole service life.

### **3.3.4. Above-Ground Inspections**

#### **3.3.4.1. External Inspections**

A visual inspection of the above-ground portion of the pole or a pole stub. If apparent damage renders the pole unserviceable or unsafe, the pole must be recommended for replacement. The purpose of the ground external inspection is to identify and document the following defects:

- Shell rot: Poles will be evaluated for replacement based on the extent of shell rot and the circumference of the pole.
- Checks: Although checks do not significantly reduce pole strength, they serve as avenues for decay spores to enter the pole. Checks that run across boltholes create an unsafe condition and will be documented. Checks that do not run through an entire pole or across boltholes are standard and do not create a pole hazard.
- Breaks/Cracks: These are separations of wood fibers across the axis of a pole (lateral damage), usually because of being struck by a vehicle or machinery. Lateral damage renders the pole unsafe and necessitates its replacement.
- Woodpecker damage: Generally, small woodpecker holes, particularly those that follow checks, do not significantly reduce the strength of a pole. A very large woodpecker hole or several smaller woodpecker holes clustered in a specific area can substantially compromise the structural integrity of a pole. Such damage often signals underlying issues such as insect infestation or deterioration of the wood, which can further weaken the material.
- Lightning damage: Affected poles will be evaluated for replacement based on the extent of surface damage and the circumference of the pole.
- Fire damage: Fire damage on the lower body is generally caused by grass or bush fire and is usually only superficial. Signs of such fire damage will be evaluated for replacement, depending on the extent of surface damage and the circumference of the pole.
- Insect Infestation: Poles infested with insects will be inspected by boring and probing to determine the extent of the infestation and assess the associated structural risk.

It is vital to assess these signs carefully, as they may indicate the need for pole repair or replacement to ensure safety, stability and uninterrupted service to nearby communities.

#### **3.3.4.2. Internal Inspections**

A visual inspection of the above-ground portion of a pole or stub to detect decay inside a pole. These inspections are conducted to identify and document defects as follows:

**Probing:** Probing is used to detect decay in checks and pockets. It is usually done with a screwdriver or stiff wire. Rot should be suspected when wood yields after firm pressure is exerted on the wood within deep cracks and pockets. Suspicious areas will be investigated by boring. Care must be taken during probing to avoid jabbing into the surface of the pole or stub, as this may damage fungus-resistant wood and allow rot to start in less resistant areas.

**Sounding:** A process used to detect internal decay of a pole or stub. A hammer is used to strike the surface of the pole from the ground line to as high as can be reached. This process will be repeated for each quadrant of the pole. A sharp ring indicates sound wood, whereas a hollow sound or dull thud indicates hollow heart or decay. Seasonal checks, internal checks, and shell rot can affect the sound. Suspicious areas will be further investigated by boring.

**Boring:** The condition of the inner wood is determined by boring. When boring, the following shall be recorded:

- The rate of penetration of the drill. Sudden collapse of the wood being drilled indicates decayed wood or hollow heart;
- Powdery wood particles indicate insect infestation or dried out decay; and,
- Discoloured wood particles (such as severe darkening) almost always indicate the early stages of internal decay. In the late stages of decay, the wood may become soft, spongy, stringy, or crumbly. Care must be taken not to mistake sound wet wood for decayed timber, and studying colour is a good identifier. Additionally, sound lumber typically has a clean, fresh, resinous scent. A musty or mushroom smell usually indicates decay.

**Shell thickness:** If internal decay is found above-ground by drilling, the shell thickness shall be measured through two additional drilled holes, and the shell thickness measurements shall be recorded. Measurement data will be used to determine if internal fungicide treatment is a viable treatment option. Pole replacement is a common operational decision that often coincides with the replacement of other structural components due to aging.

### **3.3.5. Below-Ground Inspections**

Below-ground inspections involve excavating around a pole, typically down to 30 cm, to visually determine the condition of the butt area. Below-ground inspection provides valuable insight into developing a proper mitigation strategy for a wood pole. Probing or sounding of a wood pole to detect and verify internal decay is equally important. Drilling into the pole is required for internal treatment.

If the pole is rotted through at the ground line or is not buried deep enough in the ground, it is considered unsafe and will not be excavated. Where poles are set entirely in concrete, they are inspected using the above-ground inspection procedures only and will not receive a below-ground inspection.

#### **3.3.5.1. External Below-Ground Inspections**

The pole is excavated, and the lower butt of the pole is checked for the presence of shell rot. If found, it is shaved off the pole using a scraper, wire brush, hatchet, or spud (a small shovel).

#### **3.3.5.2. Internal Below-Ground Inspections**

Pockets and checks are probed, and any decay is removed. If there is no visible decay, but internal decay is suspected, drilling is done to confirm. If the effective circumference is equal to or greater than the required circumference, drilling at the bottom of the excavation is done to check for decay further down the pole.

## **3.4. Wood Pole Maintenance Treatment Options and Methods**

[IPMR Section 58(2)(e)(i)(ii)(iii)]

Nelson Hydro uses the principles of IPM to control wood rot and wood pests in its transmission and distribution poles. Results from the pole test and monitoring program are used to develop a maintenance cycle based on two IPMP options for damaged poles, which include:

- Pole replacement, or
  - If a stub pole is found, it is automatically rejected and scheduled for full replacement, as stubbing is no longer a Nelson Hydro process.

- Wood preservative treatments (internal and external).

### **3.4.1. Treatment/Injury Thresholds: How Treatment Decisions Are Chosen and Applied**

[IPMR Section 58(2)(d)(i)]

The results of the inspections are used to determine the required pole servicing action based on the injury threshold.

Before undertaking treatment on a utility pole, it is necessary to evaluate its serviceability. The strength of a pole is related to its physical properties – the larger the diameter and shell thickness, the stronger the pole.

The decision to carry out treatment or reject/replace depends on the strength and circumference of the pole, the pole loading (including equipment on the pole), and whether rot or other damage is present (i.e., based on the results of the monitoring program). This relationship is illustrated in Table 3-2.

**Table 3-2. Criteria for Determining Treatment Options**

| Treatment Technique                                              | Criteria for Decision Making                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pole Replacement</b><br><br><b>(Non-chemical)</b>             | <p>Poles are generally replaced as a result of pole maintenance inspections or when other parts of the structure are replaced due to age, including cross-arm timbers, insulators, and wires. Poles will only be replaced when necessary to reduce costs and support environmental objectives.</p> <p>Poles are recommended for replacement when:</p> <ul style="list-style-type: none"> <li>• The strength of the pole is inadequate.</li> <li>• Extensive physical damage above-ground is evident.</li> <li>• The effective shell thickness above-ground is less than the required value.</li> <li>• Internal decay is evident at the band or bolt locations.</li> <li>• The pole is unsafe to climb; or,</li> <li>• The pole has been formerly stubbed.</li> </ul>                                        |
| <b>Treatment with Wood Preservative</b><br><br><b>(Chemical)</b> | <p>The injury thresholds for the application of wood preservatives are:</p> <ul style="list-style-type: none"> <li>• The presence of insects in the wood would require immediate treatment.</li> <li>• External treatment at the eight-year treatment cycle frequency, if necessary. Before wood preservative treatment, routine environmental checks (i.e., pole cavities, nests or other wildlife features) must not be present at the pole location.</li> <li>• Internal treatment is performed at the eight-year treatment cycle interval, unless the pole is located inside a no-treatment zone or a sensitive area. (i.e., riparian zone), or a wildlife feature or nest is found. Nelson Hydro will assess treatment risk and consult with an environmental QP to mitigate risk as needed.</li> </ul> |

### 3.4.2. Chemical Treatment Rationale

If a pole is within the regional zone according to the eight-year cycle interval, it is likely to be selected for a wood preservative treatment, unless there is an environmental restriction. There are numerous benefits to treating wood poles rather than replacing them, including lower costs, extended pole life, fewer service outages, enhanced public and worker safety, reduced potential environmental damage, conservation of trees, and lower landfill waste and transportation costs.

### 3.4.3. Non-Chemical Treatment Options

[IPMR Section 58(2)(e)(i)(ii)(iii)]

Nelson Hydro is currently using one non-chemical treatment option, which involves pole replacement. Stubbing is another known practice that can be used to physically reinforce the ground line area of a wood

pole. **Table 3-3** below provides a description, rationale and the benefits and limitations of these non-chemical treatment options/methods.

**Table 3-3. Description and Rationale, Benefits and Limitations of Non-Chemical Treatment Options/Methods**

| Description & Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Benefits/Limitations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Pole Replacement</b></p> <p>Pole replacement involves removing an old pole due to damage or rot and replacing it with a new, pre-treated wood pole. The decision to replace a wood pole is based on the results of the shell rot and core rot formulas (i.e., the wood pole is below critical shell thickness, or the decay pocket is sufficiently large).</p>                                                                                                                                                                                                                                                      | <p>Poles are treated as long as possible before replacement for many reasons (see 2.5.1. Treatment Rationale). Additionally, holes must be dug for pole replacement, which results in greater soil and environmental disturbance, increased resource consumption, service interruptions, and heightened safety risks to workers and the public associated with pole replacement. Consequently, treatment with preservatives means fewer safety hazards to the public and workers.</p> <p>An ancillary benefit of replacing a pole is that it may allow a new pole to be placed in a better location, such as a spot with easier access, fewer environmental issues, or lower traffic, thereby enhancing public safety.</p> |
| <p><b>Stubbing (no longer carried out on the Nelson Hydro System)</b></p> <p>Stubbing is the physical reinforcement of the ground line area of a wood pole using a shorter steel column, or stub, which is fastened to the pole. Although stubs can be made of wood or steel,</p> <p>The primary objective for stubbing wood poles is to delay replacing the pole (usually effective for several years). It must be noted that stubbing does not involve the use of pesticides; therefore, stubbing does not affect the presence of decay fungi or insects. It is strictly a physical reinforcement of the wood pole.</p> | <p>The significant advantages of stubbing are that it has no adverse effects on fish, wildlife, or the environment, and poses no hazards to workers or the environment, other than the need to use power tools during installation. Stubbing allows a delay in replacing the pole for several more years, thereby saving money and trees.</p> <p>The disadvantage of stubbing is that it requires specialized installation equipment.</p>                                                                                                                                                                                                                                                                                  |

#### 3.4.4. Chemical Treatment Methods

[IPMR Section 58(2)(e)(i)(ii)(iii)]

The chemical methods/techniques proposed under this IPMP include liquid internal treatments, solid internal treatments, and external treatments with insecticides for ant control. A description, rationale for use, and the benefits and limitations of each of these application methods/techniques are shown in Table 3-4 (Solid Internal Treatments), Table 3-5 (Liquid Internal Treatments), and Table 3-6 (External Treatments). Nelson Hydro does NOT use wood preservative patches applied to the wood pole as an

external treatment option. The traditional use of patches or bandages occurs only when external shell rot is present in a wood pole. The treatment method is designed to act as an external barrier, preventing fungi from penetrating the wood or causing further decay of the exterior pole surface.

**Table 3-4. Description and Rationale / Benefits and Limitations of Wood Preservative Solid Internal Treatment Application Methods/Techniques**

| Description & Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Benefits/Limitations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Internal Treatments: Solid</b></p> <p>Internal solid treatments consist of inserting a preservative in the form of solid rods or powder into the wood pole.</p> <p>Solid rods containing active ingredients, such as disodium octaborate or copper, boric acid, and disodium octaborate tetraborate, are most commonly used and placed only in sound wood.</p> <p>Applicators drill holes in the pole above and below the ground line, insert the rods into the holes, and seal the holes with plastic or wood-treated dowels.</p> <p>These products are primarily used for fungal control, although they also control carpenter ants. The mode of action is through the disruption of feeding and digestion.</p> <p>When the moisture content of the wood increases above 25% to 30% (where fungal development begins), the rods will slowly dissolve and form boric acid, which is toxic to fungi and some insects, such as carpenter ants. Boric acid is water-soluble and will migrate to all areas with high moisture content.</p> | <p>The rods have a very low toxicity to aquatic organisms, and are the product of choice near bodies of water and sensitive riparian areas.</p> <p>Internal treatments using solid rods are highly effective, as the released boric acid migrates to areas of high wood moisture where decay fungi and insects are typically located. Within the Nelson Hydro service area, the dry climate is conducive to the slow breakdown of the rods, extending their effective wood preservative life to more than 6 years. Rods also pose less health risk to workers compared to fumigants, and boron application is easier than fumigation. With solid rods, there is no opportunity for spills.</p> <p>A disadvantage to rods is that they are about 33% more expensive than wood fumigant.</p> |

**Table 3-5. Description and Rationale / Benefits and Limitations of Wood Preservative Liquid Internal Treatment Application Methods/Techniques**

| Description & Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Benefits/Limitations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Internal Treatments: Liquid</b></p> <p>Liquid formulations protect wood poles internally against fungal and insect attacks. Following inspection, all wood poles receive internal liquid treatments, even if no decay is noted during the inspection, as a preventative measure against fungi that may gain entry through the drilled holes. However, if the pole is located within a no-treatment zone (NTZ)*, the pole will only be tested, not treated.</p> <p>Method: A qualified applicator (experienced in using wood preservative pesticides) drills several holes in the pole above and below the ground line. The holes are filled with wood preservative using a low-volume pressurized sprayer wand attached to a canister. The holes are sealed with plastic or wood-treated plugs.</p> <p><b>Metam-sodium, Chemical name: Sodium N-methyldithiocarbamate</b> is a fumigant-type wood preservative pesticide that controls internal decay caused by fungi. The metam-sodium forms a gas (methylisothiocyanate), acting as a fungicide in the presence of acidic wood and moisture. As a gas, the methylisothiocyanate travels rapidly vertically above and below the injection point.</p> <p><b>Boron, present as disodium octaborate tetrahydrate</b>, a water-soluble inorganic borate salt, is used to control termites, carpenter ants and powder post beetles (and fungi) within the wood pole. The diluted product is injected under low pressure into drilled holes near the insect colony, and the drilled holes are then sealed to prevent further pest entry. Depending on the wood species and its moisture content, the active ingredient can penetrate the wood to varying depths. The insects are killed by ingesting the disodium octaborate tetrahydrate.</p> | <p>The fumigant moves vertically above and below the application point (with a small amount of lateral movement), making the treatment effective against internal decay.</p> <p>The treatment is contained within the poles, so there is no effect on people or the environment. The treatment lasts long because the chemicals are trapped inside the wood pole and cannot escape.</p> <p>The preservatives generally only become active when the moisture content of the wood is optimal (approximately 30%), allowing fungi to breed.</p> <p>Internal preservatives are more cost-effective than solid preservatives.</p> <p>Limitations include the requirement for special handling and multistage process. The preservatives can have adverse effects on aquatic life, and they are less effective below ground because the moisture content is too high. In addition, drill bits are used repeatedly without being sterilized and could possibly carry pest organisms from pole to pole.</p> |

\* NTZ is an area of land that must not be directly treated with a pesticide. The required NTZs for wood pole treatments are shown in Table 3-7.

**Table 3-6. Description and Rationale / Benefits and Limitations of Wood Preservative External Treatments using Insecticides or Fungicides**

| Description & Rationale                                                                                                                                                                                                                                                            | Benefits/Limitations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>External (surface) Treatments: Insecticides</b></p> <p>Insecticides containing copper naphthenate can be used to protect against wood decay caused by fungi, mildew, and wood-boring insects, such as termites, carpenter ants, and beetles.</p>                             | <p>Providing utility poles with long-term resistance to decay fungi and insect damage.</p> <p>Considered to have a low mammalian toxicity compared to other preservatives.</p> <p>High versatility and can be applied by brushing, dipping, spraying, or pressure-treatment.</p> <p>Disadvantage: Copper can accumulate in soil and water, becoming toxic to aquatic life if leached in significant amounts. There are some odour and handling concerns for workers.</p>                                                                                                                                                             |
| <p><b>External (surface) Treatments: Fungicides</b></p> <p>Fungicides or preservative pastes are typically applied to the outer surface of the pole (often below ground level) and wrapped to retain the chemical, allowing it to penetrate the wood and prevent fungal decay.</p> | <p>Proper fungicide treatments can add 10-20 years to a pole's service life, reducing pole replacement costs. This is a targeted method focused on the ground line only, reducing waste and excess chemical application. Maintenance treatments are far less expensive than pole replacement. Many fungicides are designed to work with the original wood preservatives (e.g., creosote, pentachlorophenol)</p> <p>Disadvantages: limited fungicide penetration and the need for repeated treatment every 10 years. Application could lead to chemical leaching into the soil or groundwater, posing a risk to ecosystem health.</p> |

**Table 3-7. Identification of the wood preservatives proposed for use, their active ingredients, and examples/methods/techniques required for application**

| Active ingredient(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Trade Name ( PCP #)                                                        | Equipment Required                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| EXTERNAL TREATMENT: WRAPS or PASTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                            | Brush or applicator tool, stapler, shovel, scraper or wire brush for surface prep |
| copper, present as elemental copper naphthenate                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CobraWrap (23582)                                                          |                                                                                   |
| copper naphthenate and borax                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CuRap 20 Wood Preservative Paste (22083)                                   |                                                                                   |
| INTERNAL TREATMENTS: LIQUID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                            | drill, hand drill, hand pump sprayer, plug                                        |
| boron, present as disodium octaborate tetrahydrate                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Tim-Bor Professional (24091)                                               |                                                                                   |
| Metam-sodium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Woodfume (17110)                                                           |                                                                                   |
| boron, present as disodium octaborate tetrahydrate                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | GenBor RTU (28154)                                                         |                                                                                   |
| boron present as disodium octaborate tetrahydrate                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Can-Bor (29941)                                                            |                                                                                   |
| INTERNAL TREATMENTS: SOLID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                            | drill, hammer, plug                                                               |
| disodium octaborate (boron)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Impel Rods II (Boron Rods for Remedial Treatment of Utility Poles) (23398) |                                                                                   |
| disodium octaborate tetraborate + elemental copper present as copper hydroxide + boric acid                                                                                                                                                                                                                                                                                                                                                                                                                            | CobraRod (25580)                                                           |                                                                                   |
| EXTERNAL TREATMENTS: INSECTICIDES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                            | hand pump sprayer                                                                 |
| copper, present as elemental copper naphthenate                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Genics CuNap (28527)                                                       |                                                                                   |
| FUNGICIDES: No Information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                            |                                                                                   |
| Any Fungicide proposed for use under this IPMP must be a registered product and approved for use through Health Canada. See process below. Information in this IPMP shall be updated by the confirmation holder upon the addition of new approved products.                                                                                                                                                                                                                                                            |                                                                            |                                                                                   |
| Table Notes: all products listed are valid and registered through Health Canada <a href="https://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php">https://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php</a> as of the IPMP development date.                                                                                                                                                                                                                                                                                             |                                                                            |                                                                                   |
| If a product does not appear in the Health Canada Pest Management Regulatory Agency (PMRA) database, it is not legally registered for use in Canada and cannot be sold or approved for field use in Canada. Health Canada also provides a free tool called CHEMINDEX, which can provide CAS registry numbers, chemical names, and, most importantly, synonyms (aliases) for more than 200,000 substances. Bendiocarb insecticide product is no longer certified for use in Canada and was phased out in December 2001. |                                                                            |                                                                                   |

### 3.5. Post-Treatment Evaluations

[IPMR Section 58(2)(f)(i)(ii)(iii)]

All applications of wood pole preservation pesticides will be conducted under contracts issued to qualified remediation and application service companies possessing a valid Pesticide User Licence. All applications of pesticides will be made by certified pesticide applicators in the appropriate certification category or supervised by certified applicators with the specific license category. A representative sample of the wood poles that are tested and treated with wood preservatives will be visually inspected by Nelson Hydro to determine:

- The efficacy of the work that the contractor has undertaken;
- Compliance with the commitments made in this IPMP and with the *IPMA* and *IPMR*;
- If required NTZs and buffer zones were maintained; and
- If any adverse environmental impacts have occurred.
- If corrective actions are required.

## 4. Operational Information

[IPMR Section 58(3)(a)]

The operational information included in this section includes:

- Qualifications and responsibilities of persons applying wood preservative pesticides;
- Procedures for safely transporting wood preservative pesticides;
- Procedures for safely storing wood preservative pesticides;
- Procedures for safely mixing, loading and applying wood preservatives pesticides;
- Procedures for the safe disposal of empty wood preservative pesticide containers and unused pesticides; and,
- Procedures for responding to spills of wood preservative pesticides and emergency response procedures.

### 4.1. Qualifications and Responsibilities of Persons Applying Wood Preservative Pesticides

[IPMR Section 35(1)(d),36(c),37(1) (c), 46 (1)]

All pesticide applications will be conducted or supervised by a person who is a pesticide applicator certificate holder endorsed for the class of pesticide and its application use under this IPMP. Any individual or company (i.e., a contractor) that provides a service to Nelson Hydro by applying commercial or industrial wood preservative pesticides must have a valid B.C. Pesticide User License. Potential contractors will provide a list of their wood preservative pesticide products to Nelson Hydro, which will be reviewed annually to verify products conform to the active ingredients listed in this IPMP. The product list must also be checked against the official Canadian online database, which is supposed to list all pesticide products registered for use in Canada (See Table 3-). Nelson Hydro is committed to the use of registered products that meet Canadian safety standards.

The IPMP product list, including active ingredient(s), trade name, and PCP number, should be updated in Table 3-7 if product changes are required.

The responsibilities of the Certified Pesticide Applicator are to:

- Maintain a consistent presence at the location to provide continuous oversight;
- Have available proof of certification and ensure that the certificate holder's certificate is readily accessible at or near any location where the certified individual is conducting work under the regulation [Am. 2022];
- Perform the service, or supervise no more than four assistant applicators [Am. 2016] at one time, maintaining continuous contact, auditory and/or visual, with the assistants;
- Be within 500 meters of all persons being supervised;
- Comply with the standards contained in Division 7 of the IPMR; and,
- Maintain updated safety documentation that includes product SDS, the location and contact numbers of nearby medical treatment centers, Nelson Hydro emergency contact persons and a plan for emergency transport. At least one crew member should have Level II First Aid training with Transportation Endorsement in addition to other specific Nelson Hydro safety certifications.

## 4.2. Procedures for Safely Transporting Wood Preservative Pesticides

[IPMR Section 58(3)(a)(i)]

Transporters of wood preservative pesticides should be familiar with all legislation governing their transport and carry documentation such as Pesticide Service Operations Records, this IPMP and the IPMP approval or notice of permit. The *Transportation of Dangerous Goods Act* (TDGA) regulates the transportation and handling of some herbicides. Personnel shall follow the procedures below for safely transporting wood preservative pesticides:

- Limit the number of wood preservative pesticides that will be carried in any one vehicle. The quantity shall be no more than necessary for each project, except for transportation between storage facilities.
- Ensure wood preservative pesticides are transported in a secure and lockable compartment to prevent spillage, unauthorized access, and removal. The compartment shall be separate from food, drinking water, safety gear, spill containment equipment, and people.
- Inspect all wood preservative pesticide containers for defects before transporting. Keep wood preservative pesticides in their original containers and with their original labels. If original labels are unavailable, the wood preservative pesticides shall be placed in appropriate containers with the trade name, active ingredient concentration, and pesticide registration number affixed to the outside of the container. Refer to the Canadian Workplace Hazardous Materials Information System (WHMIS) regulations for guidance.
- Ensure that the vehicle is equipped with a first aid kit, fire extinguisher, spill contingency plan and emergency spill kit. The operator should have relevant training in safe spill clean-up techniques and the use of fire extinguishers.
- Ensure that all documents and placards are carried in, or placed on, transport vehicles if required under the *TDGA* or the *BC Pesticide Control Act*, the *IPMA* or the *IPMR*; and,
- Read and understand the pesticide labels and the product SDS for all pesticides being transported.

Refer to the online Canadian Centre for Occupational Health and Safety database for information on chemical safety.

Before transporting preservative pesticides, conduct a thorough walk-around inspection of the equipment, machinery, and storage compartments, ensuring valves are closed, containers are upright and secured, and pumps are shut off. Address any emergency repairs prior to mobilization.

### **4.3. Procedures for Safely Storing Wood Preservative Pesticides**

[IPMR Section 58(3)(a)(ii)]

Personnel shall follow these procedures for safely storing wood preservative pesticides:

- Ensure that wood preservative pesticides are stored in accordance with the *IPMA*, IPMR and the WorkSafeBC document Standard Practices for Pesticide Applicators.
- Keep wood preservative pesticides in their original containers and with original packaging. If the original packaging is unavailable, the pesticides shall be placed in appropriate containers with the trade name, active ingredient concentration, and pesticide registration number clearly affixed to the outside of the container.
- Ensure that storage facilities are locked when left unattended, ventilated to the outside atmosphere, are entered only by persons authorized to do so, and that there is a placard affixed and maintained on the outside of each door leading into the storage area bearing, in block letters that are clearly visible, the words "WARNING – CHEMICAL STORAGE – AUTHORIZED PERSONS ONLY"; and,
- Keep storage facilities separate from work and living areas, and away from food, flammable materials, and water sources.

### **4.4. Procedures for Safely Mixing, Loading and Applying Wood Preservative Pesticides**

[IPMR Section 58(3)(a)(iii)]

Personnel shall follow these procedures for safely mixing, loading and applying wood preservative pesticides:

- Ensure that Certified Pesticide Applicators carry out all mixing, loading and application of pesticides, and that all manufacturers' recommendations, as specified on the wood preservative pesticide labels, are adhered to;
- Ensure that all mixing, loading and application of wood preservative pesticides is undertaken in a safe manner. A minimum setback of 15 meters from no treatment zones, waterbodies, fish or wildlife habitat and other environmentally sensitive areas;
- Ensure that containers used to mix, prepare or apply wood preservative pesticides are not washed or submerged in any body of water and re-purposed;
- Ensure that eye wash station(s), protective clothing, safety spill kits, spill response plans, the applicable IPMP and copies of each pesticide product's SDS are available with the contracting spray crew. The SDS will provide additional safety details such as the Product Label and Identifier, emergency telephone numbers and the recommended first aid supplies in the event of worker

exposure.

- Follow all directions and restrictions on pesticide labels, including adhering to the recommended re-entry times for treatment areas.

#### **4.5. Procedures for the Safe Disposal of Empty Wood Preservative Pesticide Containers and Unused Wood Preservative Pesticides**

[IPMR Section 58(3)(a)(iv)]

Personnel shall follow these procedures for safely disposing of empty wood preservative pesticide containers and unused pesticides:

- Ensure that all wood preservative pesticide waste is disposed of in a manner consistent with the requirements of the *B.C. Waste Management Act* and the Special Waste Regulations, as appropriate.
- Ensure empty wood preservative pesticide containers are returned to the distributor through their recycling program. It is recommended that containers be triple-rinsed or pressure-rinsed to render them non-hazardous for handlers. After the container is rinsed and rendered unusable (due to punctures or crushing), it prevents unsafe reuse. It is recommended that containers be dropped off at an approved recycling depot.
- Ensure that all leftover wood preservative pesticides are stored for future use in a manner consistent with the requirements specified above, and comply with WHMIS (i.e., clear, durable, legible, and non-removable product labels affixed to containers) under normal conditions of transport and use.

#### **4.6. Procedures for Responding to Wood Preservative Pesticide Spills**

[IPMR Section 58(3)(a)(v)]

Personnel shall follow these procedures to respond to wood preservative pesticide spills. Additional information can be referenced in Nelson Hydro's six-step Spill Response Plan. If contractors under this IPMP have a spill response plan, it must meet or exceed the requirements of Nelson Hydro. General procedures, which include the following:

- Spill response equipment shall be present or readily accessible near storage (including mobile storage), mixing, and loading sites. It shall consist of the following items: personal protective equipment, absorbent material, neutralizing material, a long-handled broom, a shovel, and a waste-receiving container with a lid.
- A copy of an approved spill response plan shall be at or near each work site, and all personnel working on the project shall be familiar with its contents;
- All personnel shall be protected from pesticide contamination by wearing appropriate protective clothing and safety gear;
- Any person exposed to a pesticide shall be moved away from the place of the spill and first aid administered, if required;
- The source of the spill shall be stopped and contained, and the supervisor shall ensure that operations cease. A hand shovel can be used to create a dam or soil ridge around the spill area.
- Absorbent material shall be spread over the spill, if applicable, to absorb any liquid;

- Contaminated soil or other material shall be removed from the spill site and properly disposed of at a Class 2 disposal facility.
- A 45-gallon drum or an UN-rated bulk bag are temporary storage options for contaminated soils or absorbent materials used for small clean-ups. Maintain an adequate supply of new plastic garbage bags to properly contain saturated spill pads.
- The person responsible for the project shall contact Nelson Hydro for spill site documentation, shipping instructions and landfill disposal requirements; and,
- When more than 5 litres or 5 kg of the concentrate wood preservative pesticides are spilled, the person responsible for the project shall immediately report to the B.C. Provincial Emergency Program by telephoning **1-800-663-3456** or, where that is not practical, to the local police or nearest detachment of the RCMP.

An approved representative of Nelson Hydro shall be notified of the spill details as soon as practicable by the contractor's project supervisor. A formal incident report must be submitted within 24 hours of the incident. In the event of a worker injury, contact WorkSafeBC immediately.

## 5. Environmental Protection Strategies and Procedures

All pest management activities undertaken under this IPMP (both chemical and non-chemical) to manage Wood Poles Maintenance will incorporate the following environmental protection measures:

- Strategies to protect community watersheds;
- Strategies to protect domestic and agricultural wells and water intakes, bodies of water and streams;
- Strategies to protect fish and wildlife and associated habitat;
- Treatment procedures near riparian areas and strategies for modifying setbacks for protection of transitional upland on the fringe of riparian zones, important for vegetation diversity and herptiles;
- Strategies to prevent pesticide contamination of food intended for human consumption;
- Pre-treatment inspection procedures for identifying treatment area boundaries, overlap or proximity to cultivated or pasture lands within the Agricultural Land Reserve (ALR). Refer to Nelson Hydro's Vegetation Management Best Practices for details of the mapping software applications used to outline work. See **Error! Reference source not found.** for a Territory Map with ALR polygons displayed.
- Procedures for monitoring weather conditions and strategies for modifying pesticide application methods for different weather conditions; and,
- Procedures for pre-treatment inspections to ensure protection of human health and the environment during the treatment period.

In this IPMP, all NTZs will comply with the standards contained in Division 7 of the IPMR. Note that the *Riparian Areas Protection Regulation* (RAPR) is not a mandated regulation applying to the East and West Kootenay regions. In the Kootenays, Riparian protections often fall under Development Permit Areas for environmentally sensitive zones, Official Community Plans (OCPs), and the *Fisheries and Water Sustainability Acts* for permitting in and around watercourses.

### 5.1. Strategies to Protect Community Watersheds from Adverse Effects of Pesticide Use

[IPMR Section 58(3)(b)(i)]

A community watershed is defined under the *B.C. Forest & Range Practices Act* (FRPA) [SBC 200 Chapter 69] as all or part of the drainage area that is upslope of the lowest point from which water is diverted for human consumption by licensed waterworks. Community watersheds must also be designated under the Government Actions Regulation.

Before the application of wood preservative pesticides, Nelson Hydro shall implement the following strategies to protect community watersheds:

- Locations of community watersheds will be verified by accessing information from the Ministry of Environment (MOE), local governments, and OCPs, or by exploring iMapBC, a free B.C. web mapping tool and provincial geographical database with hundreds of data layers (e.g., land ownership, soils, ecology, and water resources atlas). See Table 3-1 for web links to online resources.

- Wood preservative pesticides will not be stored within a community watershed for more than 24 hours before use. They will be removed from the community watershed within 7 days of their use, unless they are stored in a permanent structure.
- Wood preservative pesticide use will be discontinued if pesticide residues or pesticide by-products are detected at a community watershed water intake, and further use will not be undertaken until the B.C. Ministry of Health Services (Medical Health Officer) has been satisfied that all required measures have been implemented to preserve water quality; and,
- Before using pesticides, community watershed maps will be consulted to determine if proposed treatments are within a community watershed or are within 100 meters upslope of any water intake, or 30 meters down slope of any water intake.

## 5.2. Strategies to Protect Domestic and Agricultural Wells and Water Intakes, Bodies of Water and Streams from Adverse Effects of Pesticide Use

[IPMR Section 58(3)(b)(i)]

Before using wood preservative pesticides, Nelson Hydro shall ensure that strategies are developed and implemented to identify and protect domestic and agricultural wells, water intakes, bodies of water, and streams. A desktop search using iMapBC or the Provincial Groundwater Wells and Aquifer database will identify sensitive wells, intakes and waterbodies, which can be shown on a standard Nelson Hydro work site map and provided to contractors. To protect domestic and agricultural water sources and bodies of water during the use of wood preservative pesticides, Nelson Hydro and its contractors shall maintain the NTZ and pesticide free zones (PFZ) as shown in Table 5-1 below.

**Table 5-1. No Treatment Zones for Streams, Wells and Intakes**

| Product                             | Fish Bearing Stream | Non-Fish Bearing Stream-Wet | Non-Fish Bearing Body of Water-Dry<br>(provided pole is >10m from fish-bearing body of water) | Water Well<br>(surface or drilled) | Point of Diversion<br>(water intake) |
|-------------------------------------|---------------------|-----------------------------|-----------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------|
| <b>Solid Internal Preservative</b>  | 1 m NTZ             | 0 m NTZ (above water line)  | 0 m NTZ (above and below groundline)                                                          | 10 m NTZ                           | 5 m NTZ upslope                      |
| <b>Liquid Internal Preservative</b> | 3 m NTZ             | 1 m NTZ                     | 0 m NTZ (above and below groundline)                                                          | 10 m NTZ                           | 10 m NTZ upslope                     |
| <b>External Brush-on Treatment</b>  | 3 m NTZ             | 1 m NTZ                     | 1m NTZ                                                                                        | 10 m NTZ                           | 10 m NTZ upslope                     |
| <b>Groundline Bandages</b>          | 3 m NTZ             | 1 m NTZ                     | 1 m NTZ                                                                                       | 10 m NTZ                           | 10 m NTZ upslope                     |

Notes: See IPMR Section 79(1)(2)(3)(4)

**Pesticide-free zone (PFZ)** – an area of land that must not be treated with pesticides and must be protected

from pesticides moving into it. PFZs are measured by the horizontal distance from the high-water mark. PFZs will be identified and marked/flagged prior to any herbicide application.

**No-treatment zone (NTZ)** – an area of land that must not be treated with pesticides. NTZs will be identified and marked/flagged prior to any herbicide application.

**Body of water** – any watercourse or waterbody, such as a stream, river, wetland, or lake, but not including a human-made, self-contained body of water or structure of water.

**Stream** – a watercourse that contains water on a permanent or seasonal basis, is scoured by water, or contains observable deposits of mineral alluvium, and which has a continuous channel bed that is 100 m or more in length or flows directly into a fish stream or a fish-bearing lake or wetland, or licensed waterworks.

**Wetland** – a swamp, marsh, bog, or other similar area supporting natural vegetation, distinct from adjacent upland, and characterized by its unique vegetation and hydrological conditions. This also includes riparian habitat or a strip of vegetation which benefits from the seasonal high-water period (a transitional zone between terrestrial and aquatic environment)

It must be noted that liquid internal preservatives will only be applied to that portion of the wood pole that is permanently above the waterline, and that solid internal wood preservatives may be applied to wood poles in locations that may be below the water table during certain times of the year, provided that the streams are non-fish-bearing. Consulting a qualified aquatics professional is recommended.

### 5.3. Strategies to Protect Fish and Wildlife, Riparian Areas, Wildlife Habitat, and Species at Risk From Adverse Effects of Pesticide Use

[IPMR Section 58(3)(b)(ii)]

Nelson Hydro and its contractors shall implement the following strategies to protect fish and wildlife, riparian areas, wildlife habitat and species at risk before control methods (chemical and non-chemical) are implemented under this IPMP. Where wildlife habitat features or *Species at Risk* (SAR) are suspected in a treatment area, it is recommended that Nelson Hydro consult a qualified professional (QP) wildlife biologist. Protection strategies include:

- Exercising caution when working around water bodies so as not to threaten their integrity;
- Routine field inspection and monitoring along powerlines, noting high-risk poles. Identify and map poles where evidence of cavity boring, woodpecker drumming or nest building is visually or audibly observed. Watch for signs of Osprey nesting, which are common on distribution poles. There are raptors in BC listed as SAR, and active and inactive osprey nests are protected under the *BC Wildlife Act*.
- Before the application of wood preservative pesticides, the boundaries of any required NTZ shall be established, and applicable public or private land notifications shall be conducted (See Section 6.2 of the IPMR)
- During below-ground inspections, if water fills the excavation, only solid rods (i.e. boron rods) will be used in above-ground portions of the pole, in compliance with the NTZs listed in Table 7; and,
- Poles sitting in water will be inspected and assessed for relocation rather than chemical treatment. All work in and around waterbodies must be approved and permitted by the Nelson Hydro Operations Manager.

- Identifying water bodies around poles that could connect to fish-bearing waters. This type of area is designated as an NTZ, where pole replacement and relocation are the only options.

Endangered wildlife species are protected under the federal *Species at Risk Act* (SARA). Woodpeckers and various other cavity-nesting wildlife species (e.g., owls or small passerines) are protected under the *Migratory Birds Convention Act* (MBCA). They may inhabit wooden utility poles that require remedial treatment. Power poles are an attractant to birds. Some nests are explicitly protected year-round under the MBCA. When protected species are identified, it is essential to involve a QP to oversee and implement appropriate mitigation measures.

Woodpecker holes that are small, particularly those that follow checks, do not significantly reduce the strength of a pole. A large woodpecker hole or several smaller woodpecker holes in proximity will substantially affect the structural integrity of the pole. Generally, if only woodpecker damage is causing the loss of structural integrity, the cavities could be filled with a rubber epoxy compound (non-pesticidal) or the pole could be replaced. The filling of the cavities also serves to prevent the collection of moisture, reduce the risk of internal decay, and mitigate the safety risk for maintenance workers climbing poles. Nelson Hydro does not consider this a formal process; instead, it emphasizes minimizing inadvertent disturbances to woodpecker cavities, recognizing the importance of protecting these natural habitats during their operations. Pole replacement activities would be scheduled in the offseason when cavities are inactive.

In many cases, the presence of woodpecker holes also indicates an insect infestation and/or unsound wood, which may necessitate the use of wood preservation pesticides. Where pole decay is noted, the entire pole surface is treated only if the site is not within an NTZ or if wildlife features are not present. An environmental QP will be consulted to provide environmental management options for work near environmentally sensitive areas or near wildlife SAR and active nesting sites.

#### **5.4. Bird Guidance for Operations During Breeding Seasons**

Nelson Hydro recognizes birds as a large wildlife group contributing significantly to regional, continental, and global biodiversity. Federal and Provincial legislation protects bird populations and their nests during species-specific breeding seasons. Under the updated Migratory Bird Regulations (2022), Environment Canada provides recommendations to avoid potentially destructive activities and inadvertent disturbance ('incidental take') during key nesting periods, as well as to minimize or mitigate impacts on nests. Such nests could be internal pole cavities or stick nests in risky pole-top locations. Nesting calendars developed by Environment and Climate Change Canada for migratory birds, as well as nesting windows for non-migratory birds (e.g., most raptors in the southern BC region), will guide wood pole maintenance activities conducted by Nelson Hydro.

Furthermore, a Kootenay-Boundary Wildlife Habitat Feature (WHF) Order protects specific high-priority features (bird nests, bat nursery roots, and/or hibernacula in trees) associated with wildlife species of regional management concern. A QP (with bird expertise) will be retained when needed to assist with determining nesting activity, protected WHFs and mitigate Nelson Hydro's risk level as a result of a particular construction operating phase, or other activity such as vegetation maintenance or wood preservative pole treatments.

Nelson Hydro operations follow the Best Management Practices for Nesting Birds (Nelson Hydro BMP, 2021), which outline initiatives and procedures that support ecological operations. The Canadian Electricity Association has developed a beneficial management standard to assist utilities in creating programs to reduce the risk of incidental take and avian injury (See Table 3-1 for web links to both documents).

## **5.5. Strategies to Prevent Contamination of Food for Human Consumption from Adverse Effects of Pesticide Use**

[IPMR Section 58(3)(b)(iii)]

Wood preservative applications are generally not conducted in close proximity to areas where food for human consumption is grown or produced (e.g., fruit trees, berry patches, vegetable gardens, and organic farms or bee yards). These regions will be identified and mapped as designated PFZs and avoided during invasive plant treatment near wood poles.

Treatment is never undertaken in standing water, such as cranberry bogs. In the vicinity of certified organic farms, the grower is responsible for maintaining appropriate buffers between their organic crops and power poles. As recommended by the Certified Organic Associations of B.C. (Standard #3, Land and Resource Management), Buffer strips, 8 meters wide (containing a hedge row or trap crop, where feasible), shall be located between certified organic crops and the wood pole.

### **5.5.1. Best Practices for Operations in the Agricultural Land Reserve**

The ALR is B.C.'s provincial zone that preserves agricultural land for the future. Emphasizing ecological land stewardship, Nelson Hydro will consider best management practices where practicable for Wood Pole Maintenance occurring in overlapping areas or within 100m of ALR zones. The Agricultural Land Commission (ALC) has developed landscape buffer specifications intended for farmland, which are to be established on non-farm properties (ALC, 1993). Awareness of these landscape buffers is crucial when working near ALR-designated lands. Vegetation fencing and more comprehensive shelterbelts (i.e., hedgerows) are intended to screen for noise, views, dust, sprays, and other farm and wildlife shelters. These landscape buffers should follow similar pest control limitations as riparian buffers.

ALR sites are sensitive areas and, as such, align with buffer guidelines under the IPMR. Consideration will be given to drift reduction strategies (i.e., coarse droplets, low boom height, specialized nozzles) if invasive plant treatments are required around wood poles near ALR sites. Operations within the ALR will be communicated to landowners, occupants, and the ALC well in advance of any planned wood pole activities. When targeting noxious weeds or invasive species with chemicals around wood poles, all necessary approvals will be obtained in writing to treat regulated weeds. This will ensure the use of registered herbicide products is safe for grazing areas and cultivated lands, taking into account cattle fencing and guards. The use of specialized wood pole preservatives in the ALR should be communicated to the ALC prior to any applications, as permitting may be required.

## **5.6. Pre-Treatment Inspection Procedures for Identifying Treatment Area Boundaries**

[IPMR Section 58(3)(b)(iv)]

Procedures shall be implemented to identify treatment area boundaries (i.e., poles requiring testing and treatment) before wood preservative applications.

A pre-treatment meeting shall be conducted with the contractor to ensure that poles requiring testing and treatment are identified, and that the location of environmentally sensitive areas and required NTZs are known. All crew members shall be instructed in the flagging/marking requirements (which may include the use of Riparian Zone and PFZ flagging tape), as well as the methodology and procedures for pesticide application and handling and the posting of Treatment Notices by the contractor at locations that meet regulatory requirements.

## **5.7. Procedures for Maintaining and Calibrating Wood Preservative Application Equipment**

[IPMR Section 58(3)(b)(v)]

Calibration of application equipment for wood preservative pesticide application is not required.

For liquid internal wood preservatives, SDS directions specify drilling a certain number of holes and applying a particular volume of product into the drilled holes using low-pressure application equipment. The number of rods to be inserted for solid internal wood preservative use is specified on the label of the wood preservative product. For the use of the pesticide active ingredient copper naphthenate for insect control, low-pressure equipment is used to apply a specified percentage concentration of the active ingredient to cracks and crevices on the wood pole and to ant trails at the base of the pole.

## **5.8. Monitoring Weather Conditions and Adjusting Application Methods**

[IPMR Section 58(3)(b)(vi); 71(7)]

Weather conditions are not monitored during the application of wood preservative pesticides. The only pesticide active ingredients applied as a spray are copper naphthenate for insect control. Although there are no restrictions on the respective product labels for variable weather conditions, these specific pesticides will only be applied when the wind speed is less than 8 km/h. For invasive plant treatment around poles, the IPMR states that broadcast spraying or foliar spraying outdoors is prohibited when wind speeds exceed the specified speed.

## **5.9. Wood Preservative Treatment Signs**

Wood pole maintenance using wood preservative pesticides is generally undertaken in locations where public, bystander, or wildlife contact with the products used is unlikely to occur. Wood preservatives are commonly applied to the entire pole surface or injected and inserted into the wood pole (internal liquid and solid treatments, respectively). After the injection, the drill holes are sealed.

All inspected and treated wood poles will be marked with a tag identifying the treatment date. (Note: Nelson Hydro will maintain a database indicating the treatment method used on each pole.) Tags will be placed approximately 2 meters above the ground line on the roadside of the pole. All tags will be attached to the pole at eye level with screw shank aluminum roofing nails.

Poles that have been recommended for rejection/replacement will have a red 3" x 3" (7.5 cm x 7.5 cm) red plastic tag and a red XXX ribbon around the pole. The banding serves as a visual reminder for line crews not to climb the pole, as there is a delay period between identifying the pole deficiency and the scheduled replacement.

## 6. Reporting, Notification and Consultation

[IPMR Section 37(1)(a) to (e) (2) (3); S10 (5.1)]

### 6.1. Reporting

Accurate record keeping enables Nelson Hydro and the Administrator, as per the Integrated Pest Management Act, to monitor the quantity of pesticides used and ensure compliance with the Act and its regulations, as well as the commitments outlined in this IPMP and the contents of the Pesticide Use Notice.

Nelson Hydro will ensure that the required records described below are maintained.

#### 6.1.1. Confirmation Holder Use Records

[IPMR Section 37 (1) (a) to (e); (3)]

Each contracting firm applying wood preservative pesticides for Nelson Hydro must maintain daily records of pesticide use. However, a confirmation holder using a wood preservative, or authorizing its use, must keep records that differ slightly from those of a broadcasted herbicide treatment. The use of wood preservatives is referenced in Section 35(4) of the IPMR.

- Under this subsection of the IPMR, a licensee using wood preservatives must keep records described in subsection (1) a to h for each treatment location and day of use. Record fields include: Name of the pest targeted and purpose for the pesticide use;
- Date and time of the pesticide use;
- Name and address of the person the service is performed for
- Location Description, specific to the name and address of the owner or manager of the treatment location (if not performed as a service);
- License number, permit or confirmation where the service was authorized for another licensee or confirmation holder;
- Name and certificate number of the pesticide applicator certificate holder who used the pesticide or supervised the use;
- Treatment Method for each pesticide
- Wood Preservative Trade Name, PCP and federal registration number; and,
- Application Rate and the total quantity used.

Appendix B has a web link to pesticide recordkeeping and reporting (explanatory information) required by the IPMA Regulation in the Province of BC.

#### 6.1.2. Annual Summary of Use Report for Confirmation Holders

In accordance with Section 39 of the IPMR, Nelson Hydro will submit to the Regional Administrator, IPMA, by January 31 each year, the required information for operations conducted under this IPMP in the previous calendar year. Summary details will include:

- The name and address of the confirmation holder, and their confirmation number;
- Trade names and active ingredients of the pesticides applied, including their PCP and federal

registration numbers;

- Locations and set out the total area treated in the calendar year [Am. 2022];
- Methods used to apply the wood preservative pesticides;
- Quantity of each active ingredient applied (kg); and,
- Methods of non-pesticide pest controls used and the estimated total area to which wood preservative pesticides were applied.

An online fillable form web link is included in Appendix B for reporting annual confirmation holder information. Please note that a specific naming format is required when submitting the Annual Use Report. Instructions are provided with the electronic form. Maps must all be submitted electronically to the Ministry of Environment and Climate Change Strategy.

## 6.2. Notifications

[IPMR Section 59(1)(a-k) (2)]

Online links to fillable PDF forms, including the Notice of Intent to Treat for confirmation holders, are included in **Error! Reference source not found..** Nelson Hydro commits to providing the following notifications with respect to this IPMP:

### 6.2.1. Notification of IPMP Confirmation

Nelson Hydro will, within 7 days of the plan confirmation date, make available, for the term of the confirmation, a copy of the confirmation and the IPMP, along with relevant maps, at their local offices to allow public inspection. Per Section 59 (1) (j), the term of the applicable pest management plan must not exceed 5 years.

### 6.2.2. Annual Notice of Intent to Treat

Nelson Hydro will forward, in writing, to the MOE, at least 21 days prior to treatment in each year during which the IPMP is in effect, an Annual Notice of Intent to Treat (NIT) for the following year. The NIT will be submitted to each Regional Office of MOE within whose geographic boundaries pesticide applications are being proposed. The NIT will identify:

- Name and business location of confirmation holder(s);
- Proposed treatment methods;
- Wood preservative Pesticides proposed for use and their method of application; and,
- Estimated area proposed for treatment.

As per Section 42 of the IPMR, for an annual NIT, Nelson Hydro will prepare and retain a map and/or diagram showing the treatment locations for the applicable calendar year, which indicates the following for each treatment location:

- The maximum number of hectares or poles per year intended to be treated under the applicable pest management plan [Am. 2022], and
- The geographic features that require a PFZ or a no-treatment zone.

### 6.2.3. Requests to Amend the IPMP

Nelson Hydro will forward the amendments requested for the IPMP to the MOE in writing. Amendment requests to add new application techniques or similar changes will not require further consultation, provided the amendment request is within land owned or controlled by Nelson Hydro.

Amendments to add new active ingredients will require further public consultation.

#### **6.2.4. Notification of Contraventions**

[IPMR Section 47(1)(e); 54(c)]

Section 72(1)(d) of the IPMR requires that a confirmation holder give written notice to the Administrator (delegate overseeing pesticide regulation) on a contravention of the *IPMA* or IPMR that involves the release of a pesticide into the environment. The licensee must give written notice as soon as practicable [Am. 2016]. Nelson Hydro commits to abiding by this requirement.

#### **6.2.5. Public Notification Prior to Treatment**

[IPMR Section 64(1)(2)(a-d)]

Notifying individuals, communities, and organizations in the agreed-upon manner and at the agreed-upon time during the public consultation process will be completed prior to the commencement of treatments. Nelson Hydro will maintain a record of all public notifications for each treatment area.

Section 10(6) of the IPMR requires a treatment notice(s) of pesticide use to be given to any person approaching an outdoor public use area that complies with Section 63(1) and (2). [BC Reg 234/2016]. The definition of outdoor public use area was amended in the 2016 IPMR to include (b) private commercial land to which members of the public may reasonably be expected to access. Treatment notices must remain in place up to 48 hours after the pesticide use. [Am. 2016]

Section 10(5.1) of the IPMR requires the licensee or a certificate holder to provide treatment notification before using a pesticide in an outdoor area of private residential land, in compliance with Section 63. Specifically, notice must be given to occupants, tenants, and the owner, land manager or agent. [Am. 2016]

#### **6.2.6. Employee Notification Prior to Treatment**

Nelson Hydro will provide internal notification to all potentially affected employees (service personnel) in advance of all pesticide treatments. Internal notification enables Nelson Hydro employees and contractors to review SDS documents for pesticide products and wear appropriate PPE when entering treatment areas to conduct other work. Employee notification is not typically conducted in advance of control methods, such as mechanical cutting or manual removal, around wood poles.

### **6.3. Consultations**

[IPMR Section 61(1)(2) (a-j);(3)]

#### **6.3.1. Public Consultation Plan**

Prior to submitting a Pesticide Use Notice to the MOE for IPMP confirmation, Nelson Hydro will conduct a public consultation process. The objectives of conducting public consultations when this IPMP is at the draft stage are:

- To increase public awareness of the IPMP process and the principles of IPM, which are embodied

in the IPMP.

- To ensure that the public has an opportunity to identify concerns, and for Nelson Hydro to address those concerns, before the IPMP is finalized and submitted, and a Pesticide Use Notice is submitted for confirmation.
- To ensure a transparent and accountable review process for the IPMP.
- To educate the public on the need to conduct vegetation management on Nelson Hydro rights-of-way, including transmission corridors, distribution networks and their access roads; and,
- To explain how the planning process described in the IPMP recognizes the need to protect human health and the environment.

The public will be consulted on the IPMP development through notices in local community newspapers, which will be circulated within the geographic boundaries of the IPMP area.

Section 61(1) of the IPMR states that a Pesticide Use Notice must be submitted to the Administrator at least 45 days in advance. This notice consists of two parts, the first of which must be published within a two-week period in newspapers that are circulated in the relevant communities and/or the nearest communities. As outlined in Section 61(2), the notice must include the following information:

- The heading "DEVELOPMENT OF A PEST MANAGEMENT PLAN" in block letters;
- A reference number or another identifier unique to the proposed IPMP;
- The applicant's name, address, email address and telephone number;
- A statement that the use of pesticides is intended within the area to which the IPMP applies;
- A description with reference to the communities of the area to which the IPMP applies;
- The proposed duration of the IPMP;
- The trade name and active ingredient of the pesticides proposed to be used under the IPMP;
- The proposed manner of applying the pesticides identified in the IPMP;
- A location of copies of the proposed IPMP and maps of the proposed treatment area;
- The following paragraph, "A person wishing to contribute information about a proposed treatment area(s), relevant to the development of the IPMP, may send copies of the information to the applicant at the address above or email address above within 30 days of publication of this notice".

During the public consultation process, the draft IPMP will be accessible to the public, as stated in the public notifications.

### **6.3.2. Public Consultation Report**

[IPMR Section 38(1)(2)(3)]

Nelson Hydro will submit to the Administrator, *IPMA*, a Public Consultation Report that contains:

- A summary of public consultations, including the names and addresses of those who provided input, the nature of their concerns and/or recommendations, and the Nelson Hydro response to the input from the public; and,
- A record of when, where and how the notice of the pending IPMP submission was published or

when the notice was given of the public consultation, as applicable. [Am.2022]

### **6.3.3. First Nations Consultation**

The City of Nelson acknowledges that it resides and operates within the unceded traditional territories of the Sinixt, the Syilx, and the Ktunaxa peoples. The engagement will follow the Indigenous Engagement Guide for *Integrated Pest Management Act* Proponents.

### **6.3.4. First Nations Consultation Report**

To assist the Ministry in evaluating the effectiveness of First Nations consultations and Nelson Hydro's response to any concerns raised, Nelson Hydro will compile a report detailing the consultation process and outcomes. This report will be submitted to the MOE Administrator of the *IPMA*, in conjunction with submitting the Pesticide Use Notice application.

## 7. References

- Agricultural Land Commission. (1993, March). *Landscape Buffer Specifications* [https://www.alc.gov.bc.ca/assets/alc/assets/library/land-use-planning/landscape\\_buffer\\_specifications\\_1993.pdf](https://www.alc.gov.bc.ca/assets/alc/assets/library/land-use-planning/landscape_buffer_specifications_1993.pdf)
- B.C. Integrated Pest Management Regulation, Reg. 604/2004 (M422/2004 and M423/2004), deposited December 29, 2004, effective December 31, 2004, under the ***Integrated Pest Management Act***, S.B.C. 2003, c. 58, ss. 36, 38 and 39.
- Last amended March 2024; [Integrated Pest Management Regulation](#)
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## Appendix A Nelson Hydro Service Territory Map and ALR Polygons

## Appendix B Notice of Pesticide Use Record and Intent to Treat

The *IPMA* Regulation requires that these records be kept up to date. The records may be kept at or near the treatment location during the use. Still, within 60 days of use, they must be kept at the business location identified on the licence or permit application or Pesticide Use Notice. The records must be retained for a minimum of 3 years from the date of pesticide use.

Additional Explanatory Information for Pesticide Use can be found online at:

[Pesticide recordkeeping and reporting - Province of British Columbia](#)

Notice of intent to treat (NIT):

Confirmation holders must submit a Notice of Intent to Treat to the Ministry of Environment and Climate Change Strategy at least 21 days before the first pesticide use in a calendar year.

Submit this form electronically to:

[IPMReporting@gov.bc.ca](mailto:IPMReporting@gov.bc.ca)

INSERT:

1. PDF of Pesticide Use Record [Form Ref: EPD-IPM-08.03]
2. PDF of NIT for Confirmation Holders [Form Ref: EPD-IPM-06.03]

## Annual Use Report for Confirmation Holders [Form Reference Code: EPD-IPM 02.2]

Click below to access a fillable online form to be completed by confirmation holders:

Annual Reports must be submitted to the ministry email above, following instructions found here:

[https://www2.gov.bc.ca/assets/gov/environment/pesticides-and-pest-management/pesticide-use/forms/annual\\_use\\_report\\_confirmation.pdf](https://www2.gov.bc.ca/assets/gov/environment/pesticides-and-pest-management/pesticide-use/forms/annual_use_report_confirmation.pdf)

Note: A Ministry File Transfer Service (FTP site) is available if a large file size prevents email submission.