



05 March 2019

Dear Mr. Neil West:

Re: Coastal Invasive Species Committee Support for Invasive English Holly Removal on Vancouver Island.

The Coastal Invasive Species Committee (Coastal ISC) is pleased to offer a letter of support for the efforts to contain and control invasive English holly (*Ilex aquifolium*) on Vancouver Island.

In Elliot Church's 2016 master's thesis "**Invasive English holly (*Ilex aquifolium* L.) in Clear-Cut and Forest Units in a Western Washington Managed Forest. E. Church., 2016.**" Mr. Church states that English holly (*Ilex aquifolium* L.) is a dioecious, shade-tolerant evergreen shrub or small tree native to Europe, Western Asia and North Africa that is becoming a prominent invasive in west-side Pacific Northwest (PNW) forests, with potentially negative impacts on native biodiversity and forest succession. English holly is dioecious, and spreads via bird-dispersed berries in its native range (Peterken and Lloyd 1967) and in the PNW (Zika 2010). It also spreads vegetatively forming dense monotypic stands in its native range (Peterken and Lloyd 1967; Peterken and Newbould 1966; also in the PNW, Stokes *et al.* 2014).

Long cultivated in the PNW (Jones and Reichard 2009), English holly's invasive capabilities have been demonstrated (Stokes *et al.* 2014), and it appears to be rapidly spreading in low elevation western Washington forests (Stokes *et al.* 2014, Olmsted 2006). Shade-tolerant, invasive trees pose a special case: due to relatively slower growth and a long lag time, their presence in forest habitats may go unnoticed or seem benign until the population enters a rapid expansion phase (Frappier *et al.* 2003; Wangen and Webster 2006; Webster and Wangen 2009). Shade-tolerant woody invasive plant species make up a significant part of the diverse suite of invasive species threats to sustainable management of commercial forestlands in North America (Moser *et al.* 2009).

Coastal ISC believes that English holly has the potential to begin rapidly spreading on Vancouver Island, with conditions almost identical to the Pacific Northwest forest region of the US. Currently, there are 270 sites of English holly, representing 301 ha on Vancouver Island area, identified in the BC Invasive Alien Plant Program (IAPP) database. Coastal ISC is collaborating with BC Parks on Newcastle (Saysutshun) Island Marine Park to remove the invasive English holly, which is posing both an ecological habitat damaging threat, and a human health hazard threat. The Snuneymuxw First Nation, BC Parks and Coastal ISC and other local stewards have been working on projects to protect the health of Newcastle Island from invasive species for over 14 years. The Coastal ISC invasive plant management strategy identifies English holly as a priority invasive plant for management in the region. The project aligns with the Coastal ISC mission to work in partnership with other stakeholders to better understand and protect the region's ecosystems and adapt to the impacts of climate change.

Please see attached documents regarding Coastal ISC and a technical information sheet on English Holly.

Regards

Don Hare

Executive Director

Coastal Invasive Species Committee

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Coastal ISC Mission:

The Coastal ISC takes a leadership role to reduce the negative impacts of invasive alien species by:

- **Outreach and education:** Working with community members, local governments, First Nations, industry, land managers, and others to exchange information and raise awareness about the impacts from, and management of, invasive alien species.
- **Collaboration:** Promoting efficient, cooperative management of invasive alien species.
- **Advice:** Providing advice and building capacity to manage invasive alien species.
- **Management:** Providing services to manage invasive alien species.
- **Support:** Seeking funding and other support to achieve the vision.

From the Coastal ISC Priority Invasive Plant List

English Holly

Ilex aquifolium



Management Strategy: CONTROL

Family: Aquifoliaceae (Holly).

Other Common Names: None.

Origin: Eurasia.

Growth Form / Reproduction: Evergreen shrub or small tree. Seed (berries) dispersed by birds, also spreads by suckering or layering; can re-sprout from stumps.

Legal Status: None.

Impacts:

Agricultural: Grown for Christmas decorations in the florist trade.

Ecological: Can form dense thickets in deciduous, coniferous or mixed forests. Tall shrubs create deep shade difficult for some native plants to grow in.

Human: Prickly leaves can hinder recreational use. Berries are poisonous (an emetic). Grown as an ornamental plant.

Habitat: Moist forests at low elevations. Prefers shade but can tolerate sun. Grows best on sandy or gravelly well-drained soils.

Status and Distribution: Common in Comox Valley and Strathcona, limited in Capital and Cowichan Valley. Reported in the CDFmm, CWHxm, CWHvh and CWHvm.

Management Strategy: Hand-pull small seedlings. Cut mature trees at ground level, being sure to remove all plant material including berries which contain seeds. Monitor cut stumps for regrowth. Foliar herbicides are not effective because of waxy leaves but direct application to cut stumps can be effective.



CRISP Priority Invasive Plants: Status List Updated October 26, 2015 (July 2016)

This priority invasive plant status list for the Capital Region was developed by partners of the Capital Region Invasive Species Partnership (CRISP). This list helps guide priorities in the region including reporting, education, invasive management and planning. Local jurisdictions of the Capital Region may have their own species status (within their jurisdiction), priorities and special concerns.

Invasive species are defined as non-native plants and animals introduced from outside of their native range that cause, or are likely to cause, economic, social and/or environmental damage.

CRISP Priority Invasive Plants: Status List Updated October 26, 2015 (July 2016)

Control Species:			Group	Description	Name
Scientific Name	English Name	Special Concern	P	Species not known to occur in the region, but likely to establish if introduced. Eradicate if found.	Prevent
<i>Aegopodium podagraria</i>	Goutweed		E	Priority species known to occur in limited distribution and low density. Eradicate if found.	Eradicate
<i>Allium vineale</i>	Field Garlic		CN	Established infestations found in portions of the region. Contain existing infestations and prevent spread to un-infested areas.	Contain
<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass		CL	Established infestations common and widespread throughout the Capital Region. Focus control in high value conservation areas.	Control
<i>Anthriscus caucalis</i>	Burr Chervil				
<i>Arctium lappa</i>	Great Burdock				
<i>Arctium minus</i>	Common Burdock				
<i>Centaurea cyanus</i>	Bachelors Buttons				
<i>Cirsium arvense</i>	Canada Thistle				
<i>Cirsium vulgare</i>	Bull Thistle				
<i>Clematis vitalba</i>	Traveler's Joy				
<i>Conium maculatum</i>	Poison Hemlock	☠ high priority			
<i>Cotoneaster horizontalis</i>	Cotoneaster				
<i>Crataegus monogyna</i>	Common Hawthorn				
<i>Crataegus laevigata</i>	English Hawthorn				
<i>Crataegus x ambigua</i>	Russian Hawthorn				
<i>Cyclamen hederifolium</i>	Cyclamen				
<i>Cytisus scoparius</i>	Scotch Broom				
<i>Dactylis glomerata</i>	Orchard Grass				
<i>Daphne laureola</i>	Spurge Laurel	☠			
<i>Foeniculum vulgare</i>	Sweet Fennel				
<i>Hedera helix</i>	English Ivy	☠ mild			
<i>Hyacinthoides hispanica</i>	Spanish Bluebell	☠ ☠			
<i>Hyacinthoides non-scripta</i>	English Bluebell				
<i>Hypericum perforatum</i>	Common St. John's Wort				
<i>Ilex aquifolium</i>	English Holly	☠			
<i>Lamium galeobdolon</i>	Yellow Archangel				
<i>Leucanthemum vulgare</i>	Oxeye Daisy				
<i>Ligustrum vulgare</i>	European Privet				
			☠	Human health hazard	Toxic
			☠	Animal health hazard	Toxic

*BC: indicates species that are on the BC Prohibited List. All reports (and management) need to be forwarded to the Province.
Regularly Updated BC Prohibited List: https://www.for.gov.bc.ca/HRA/invasive-species/Proposed_Prohibited_Noxious_Weeds_June2014.pdf