#### 07 June 2010

#### 1. History

(Note: Acronyms are defined in Appendix G at the end of this document.)

In mid 2008 Jefferson County adopted a Critical Area Ordinance (CAO, JCC 18.22). In 2009 Jefferson County's Department of Community Development (DCD) advised TVHA to secure a new geo-technical report and to utilize the report to create a comprehensive vegetation management plan (VMP) for the TVHA Common Area (Common Area) that would be in compliance with the new CAO.

To achieve this, the Board created a Vegetation Management Committee (VMC) whose "Mission Statement / Action Plan" addressed the creation of a VMP consistent with the CAO and other governing documents The plan was also to consider TVHA Common Area Policy (CAP, adopted January 2006), TVHA Tree Removal and Trimming Policy (TRTP, adopted January 2008) and TVHA Fire-Wise Policy (TVHA-Fire-Wise, adopted March 2008). Additionally, in early 2010 the Board sought input from Timberton homeowners to ascertain what residents wanted to see in the Common Areas, specifically regarding vegetation management and the overall aesthetics of Timberton Village.

In compliance with DCD requests, in early 2010 the Board hired the Stratum Group (P.O. Box 2546, Bellingham, WA 98225), to provide geo-technical expertise, to assess the 41.71 acre Common Area and the slope stability of:

- Tract A Parcel # 900500300
   Tract B Parcel # 900500301
- Tract C Parcel # 900500302
  Tract D Parcel # 900500303
- Tract E Parcel # 900500304
  Tract I Parcel # 900500307
- Tract J Parcel # 900500308
  Tract K Parcel # 900500309

Additionally the Stratum Group was to note changes from historic reports and to advise TVHA as to Best Management Practices for ensuring vegetation management would maintain slope stability. The geo-technical report was received in late March 2010. Additionally, the Board asked the Jefferson County Noxious Weed Control Board (NWCB) to give input regarding the Best Management Practices (BMP) of noxious weed control.

#### 2. <u>Purpose</u>

This VMP was written to give guidance to the TVHA Board regarding maintenance of vegetation within the Common Area, to give guidance to those seeking TVHA Architectural Review Committee (ARC) permits to address vegetation within the common area and to give the TVHA ARC criteria and protocols for evaluating applications in a fair and impartial manner. It replaces TVHA's CAP, TRTP and TVHA-Fire-Wise Policy.

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The hierarchy of considerations when evaluating vegetation management in the Common Area is:

- Legal, governing documents:
  - 1. CAO (See <u>www.timberton.org</u> Links tab)
  - 2. SBCA CC&Rs (See <u>www.plsbca.org</u> CC&R link)
  - 3. TVHA CC&Rs (See <u>www.timberton.org</u> Documents tab)
  - 4. TVHA Plat Maps Notes (See Appendix B)
- > Other essentials:
  - SBCA Design Standards (See <u>www.plsbca.org</u> ARC link)
  - Stratum Group's geo-tech Report (See Appendix A)
  - Washington State Department of Ecology (DOE) "Plant Selection Guide" (Appendix D) in Publication N.93-30, "Slope Stabilization and Erosion Control Using Vegetation" and N.93-31 "Vegetation Management: A guide for Puget Sound Bluff Property Owners". (These documents may be found at www.ecy.wa.gov Publications tab)
  - Port Ludlow Fire and Rescue's (PLFR) Chief Ed Wilkerson's comments regarding fire safety.
  - Jefferson County Noxious Weed Control Board (NWCB) Fact Sheets (See <u>www.co.jefferson.wa.us/WeedBoard</u>)
  - And last, but never least, is the understanding that it is essential to the smooth working of any community to remember we are all fallible, imperfect human beings who happen to be neighbors; common sense and polite behavior should always prevail.

To insure compliance with this VMP and all governing documents any Common Area vegetation removal *or addition* by any homeowner requires that the homeowner submit an ARC application (See <u>www.plsbca.org</u> ARC link) in accordance with the Timberton ARC Application Procedures (See Appendix C).

This plan serves as a guide for vegetation issues only, and only within the Common Area.

#### 3. Principles

It is the responsibility of the Board to maintain the Common Area; however both the law and our governing documents allow property owners to address vegetation maintenance within the Common Area. (See SBCA CC&Rs Section 14.3: View Easement, which states in part that homeowners may petition "for the preservation, maintenance and enhancement of the view from each lot within South Bay"). In doing so residents have a right to have view maintenance activities carried out under the TVHA and SBCA ARC processes, but they should do so in a manner that does not destroy or

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render unsightly the affected plants nor diminish the overall character of Timberton Village. Should a homeowner feel their rights have been impacted adversely by a decision to deny a Common Area ARC application, and choose litigation to resolve the matter; the courts will look to the legal governing documents for guidance. Therefore, the Board should review applications with those laws (specifically the CAO) and legal governing documents (SBCA and TVHA CC&Rs and TVHA Plat Maps) in mind.

Additional guidance from TVHA homeowners indicates that a balance should be maintained in our common areas between natural vegetation and controlled vegetation. Emphasis should be given to native, fire-safe, deep rooted plants and those that provide color. The addition or removal of vegetation within Common Areas should be reviewed in accordance with the "Plant Selection Guide" (Appendix D) from the State of WA Department of Ecology (DOE) which suggests a list of plants to enhance slope stabilization and erosion control in their Publication N.93-30, "Slope Stabilization and Erosion Control Using Vegetation" and Publication N.93-31 "Vegetation Management: A guide for Puget Sound Bluff Property Owners". (These documents may be found at <u>www.ecy.wa.gov</u> Publications tab).

As the Board does not always have the ability to rewrite governing documentation so as to eliminate conflicts, when conflicts between *or within* documents occurs, the more restrictive legal governing language shall prevail.

#### 4. Common Area ARC Applications for Vegetation Alteration

When a homeowner wishes to alter the Common Area by either removing *or adding* vegetation their decision and their ARC application shall take into consideration the following:

- All CAO regulations must be adhered to especially regarding critical areas noted in the geo-tech report's recommendations (see Appendix A).
- > All SBCA CC&Rs must be adhered to, especially:
  - Section 4.2.1: "Lot, Common Area, and Limited Common Area Architectural Control. No Improvements, alterations, repairs, excavation, grading, removal of trees with base trunk diameter exceeding six inches (6"), landscaping or other work which in any way alters the exterior appearance of any Lot, Common Area or Limited Common Area within South Bay, or the improvements located thereon, from its natural or Declarant improved condition (existing as of completion of Declarant's construction thereon or improvements thereto) shall be made or performed without prior approval of the Architectural Review Committee, except as otherwise expressly provided in this Declaration. Other than as constructed by Declarant, no building, structure or landscaping shall be commenced, erected, planted, maintained, painted, improved, altered, or made without the prior written approval of the Architectural Review Committee..."
  - Section 14.3: "View Easement. A blanket non-exclusive easement is reserved and granted to Declarant and the Master Association upon, across, over, and

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under the Master Association land, Common areas, Limited Common Areas and Recreational Facilities for the preservation, maintenance and enhancement of the view from each Lot within South Bay. The Board shall have the right to take whatever action is necessary or desirable, at its sole discretion, to preserve, maintain and enhance the view on any Lot, Master Association Land, Common Areas, Limited Common Areas, or Recreational Facilities, including, but not limited to, the right to top and/or remove trees and brush from the property subject to this easement."

- > All TVHA CC&Rs must be adhered to, especially
  - Timberton Village Section 3.1.3: "The right of the Timberton Village Homeowners Association to regulate the use of the Timberton Village Limited Common Areas through the Timberton Village Rules and to prohibit access to those areas, such as drainage areas, not intended for use by Members. The Timberton Village Rules are intended to enhance the preservation of the Timberton Village Limited Common Areas for the safety and convenience of the users thereof and shall serve to promote the best interests of the Owners Residents and Occupants of Timberton Village;"
  - Timberton Village Section 4.11: "Landscaping. Whenever possible, native shrubs and plants will be utilized for landscaping and planting on those portions of the development not used for residential use."
- > All TVHA Plat Map notes must be adhered to (See Appendix B)
- > All SBCA Design Standards (See <u>www.plsbca.org</u>), must be adhered to, especially:
  - Section 1.15 which states, "A view shall mean a vista observable from the residence of a property. The view can be either unobscured or partially obscured by an adjoining building or natural vegetation. The view may change in time by the natural growth of vegetation."
  - Section 5.2.2 which states, "Trees and Vegetation. Removal of trees with trunk diameter exceeding six inches (6") measured at breast height requires approval of the SBCA-ARC. Special attention shall be paid toward the Supplemental Declarations, which may contain additional restrictions. Trees that are diseased or dangerous to people or property may be cut down with prior approval of the SBCA-ARC. The SBCA-ARC will request the applicant to obtain the opinion of a Licensed Arborist."
  - Section 5.2.3 View Maintenance. Property owner may maintain views in accordance with the following guidelines: bushes or low growing vegetation may be trimmed as necessary. Trees with base trunk diameter exceeding six inches (6") at breast height may be pruned in accordance with SBCA-ARC approval and where necessary in the opinion of a licensed Arborist. Property owners may not enter upon other property to perform these activities without the written permission of that property owner and that of the SBCA-ARC. Lot owners should make a sincere effort to resolve view maintenance problems on an owner-to-owner basis. If such efforts fail, and the problem involves trees or vegetation,

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then the matter shall be referred to the Village-ARC for resolution. Payment of costs, if any, for pruning, trimming or removal of trees or vegetation, will be the responsibility of the requesting owner, unless the owner of the trees or vegetation involved accepts a share of the cost. The affected lot owner will control any work done on his or her property. Lot owners may be able to maintain or improve their own views by trimming or removing trees on their own property subject to prior approval of the SBCA.

Regarding requests to remove or trim trees for view maintenance, homeowners are encouraged to:

- Consider selective removal to establish view corridors; a view that is framed by trees is usually considered more desirable than one where all trees are removed. Denuding large areas of trees can create drainage, slope stability, and aesthetic problems, and will therefore not be allowed.
- Look to other means to maintain their view including thinning, windowing, or limbing up.
- Refrain from topping trees as this requires ongoing maintenance, and may weaken the tree and so present a safety concern. (See Appendix E: International Society of Arboriculture's "Why Topping Hurts Trees")
- Submit a joint plan for view maintenance with adjoining property owners whenever possible as assessing the "big picture" across several properties may offer better solutions than focusing on view needs on a lot by lot basis.

The homeowner filing an ARC application to remove or trim a tree must:

- If requested by the ARC, obtain and pay for the opinion of a Licensed Arborist, a list of which may be obtained from the TVHA ARC.
- > Notify and / or discuss with their neighbors that an application is in process.
- > Agree to pay for all costs associated with the work to be done.

Once an application has been approved by TVHA, and SBCA and DCD (if applicable) the homeowner must:

- Hire and pay for a licensed, bonded, and insured company to accomplish the work if requested to do so by the ARC or the Board, and always if the tree(s) being removed pose any danger to individuals or property. A list of pre-approved companies may be obtained from the TVHA ARC. The property owner or the property owner's representative (other than the company doing the work) must be on site while the work is being done, and is responsible for ensuring that the work is conducted as approved by the TVHA Board and SBCA ARC.
- Immediately remove from the area or chip and spread over the ground all trunk sections and branches from any tree pruned or cut down. Larger trunk sections need to be cut up and removed, if appropriate. (See Appendix B)
- Understand that the applicant may be required to replace the tree(s) with other more suitable tree(s) or shrub(s) to mitigate concerns regarding the removal. The

Comprehensive Vegetation Management Plan (VMP)

geological report states that "Maintaining brush coverage of the slopes versus having grass or bare slopes will minimize the rate of soil creep." To that end, any approved tree or brush removal shall be mitigated by replanting native groundcover, shrubs and/or trees (preferably low-growing so as to not block future views) as listed in the Department of Ecology "Plant Selection Guide" (Appendix D) in order to enhance slope stability and prevent erosion.

Homeowners, who have been maintaining common areas as of the date of approval of this plan may continue to maintain that area in a manner consistent with what has been done. However any additional modifications to the Common Area must go though the ARC process.

#### 5. Fire Safety

Addressing fire safety within the common area requires an ARC application.

Regarding homeowner concerns for control of vegetation for fire safety, when reviewing ARC applications, weight should be given to the statement Port Ludlow Fire and Rescue's (PLFR) Chief Ed Wilkerson agreed was appropriate:

The Firewise Program (See <u>www.firewise.org</u>) is a common sense standard that assists homeowners in protecting their investment. It is recommended that, at a minimum of 30 to 50 feet from dwellings, vegetation should consist of native, fire resistant shrubs, grasses and plantings that are consistent with Firewise principles or controlled by cutting to a level of four to six inches in height and the debris removed from the area.

#### 6. <u>Slope Stability</u>

Decisions regarding Common Area vegetation will use the Stratum Group's geotechnical report (See Appendix A) as the primary reference for how plants and trees will be managed to maintain slope stability in areas that require such consideration.

#### 7. Noxious Weed Removal

All ARC requests relating to noxious weed control or removal should follow BMP guidelines as described by the Jefferson County NWCB's "Fact Sheet" for each type of weed addressed. (See Appendix F: Common Noxious Weed Information, and <u>www.noxiousweeds@co.jefferson.wa.us</u>)

#### 8. Procedures

Homeowners should submit applications in accordance with the Timberton ARC Application Procedures. (Appendix C). Applications addressed under this plan will be administered by the TVHA ARC following the guidelines noted herein. Applications will be reviewed in Board meeting prior to action.

#### 9. General Policies

All homeowners should understand:

- The Common Area belongs to the Timberton Village Homeowners Association. Any vegetation alteration in the Common Area requires an ARC application.
- When a homeowner applies to the TVHA to address vegetation within the common area – whether planting or removing vegetation – that homeowner accepts the responsibility to pay for and maintain that vegetation in accordance with the guidelines outlined in the permit issued.
- Homeowners wishing to plant vegetation within the Common Area may not plant vegetation that may, with time, impact another homeowner's view.
- All homeowners selling property within TVHA must disclose to prospective buyers the limits of their lot and the Common Area owned by TVHA and what vegetation has been added to the Common Area for which the homeowner is responsible to pay the maintenance.
- Whenever a homeowner enters the Common Area to attend to vegetation they agree by their action to hold harmless TVHA for any and all injuries to themselves or their equipment.

#### 10. Vegetation Management Areas

For the purposes of this VMP the Common Area is maintained on a twice-monthly-basis or as needed. The Common Area has been organized as follows and is currently maintained as shown:

# **TVHA Vegetation Management Areas Legend**

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Common Areas maintained by TVHA (exclusive of paved roads and Shows photo angle

 Width of maintenanc



Trees and other native vegetation.



Common Area maintained by volunteers

Comprehensive Vegetation Management Plan (VMP)

#### **Overview Map Not Showing Maintenance Areas**



Timberton Dr. Map



Heritage Dr., McKenzie Ln. and Leighbrook Ln. Map



**Timber Meadow Drive** 



#### Timber Ridge Drive



Photos



Photo #1 - Looking SE across Timberton Drive



Photo #2 - Looking E



Photo 3 McKenzie Ln. between lots 6 & 7 (small lawn behind trees)



Photo 4 between lots 20 & 21 on Leighbrook Lane



Photo 5 between lots 25 & 26 on Leighbrook Ln.



Photo 6 Looking N between McKenzie & Leighbrook on Heritage Ln.



Photo 7 Timber Meadow Dr. and Tract D between lots 27 & 28



Photo 8 Timber Meadow Dr. and Tract D between lots 27 & 28



Photo #9 East side lot 31 Tract E



Photo #10 looking SSW towards lot 31



Photo #11 looking N



Photo #12 looking E



Photo #13



Photo #14 Timber Ridge Dr.

**Comprehensive Vegetation Management Plan (VMP)** 



Photo #15

#### 11. Looking Forward

Some of the feedback from residents indicated a desire for the VMP to go farther toward addressing aesthetics as well as maintenance issues. The committee which has developed this plan agrees with this aspiration and encourages future VMCs to pursue such endeavors. Future alterations of the VMP may require or attract different individuals to this committee as the Association moves toward an attempt to improve on the "look" of Timberton Village through landscaping changes.

#### 12. Appendices

Appendix A: Stratum Group Geology Hazard Report

Appendix B: TVHA Plat Map notes

- Appendix C: Timberton ARC Application Procedures.
- Appendix D: DOE Plant Selection Guide
- Appendix E: International Society of Arboriculture's "Why Topping Hurts Trees"
- Appendix F: Common Noxious Weed Information
- Appendix G: Acronyms

### Appendix A: Stratum Group's Geology Hazard Assessment

See the Stratum Group's, TVHA Port Ludlow, WA, Geology Hazard Assessment, dated May 6, 2010.

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#### Appendix B: TVHA Plat Map notes

(Found at: <u>http://www.co.jefferson.wa.us/assessors/parcel/Plat&SurveySearch.asp</u> then enter Section 17 of Township 28 North, Range 1 East, Quarter Section SW)

Timberton Phase I Plat Map Notes:

#### DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS THAT WE THE UNDERSUMED DANERS OF INTEREST IN THE LAND HEREBY SUBDIVIDED, OF OUR OWN FREE WILL AND CONSIDIL, HEREBY DECLARE THIS PLAT TO BE THE GRAPHIC REPRESENTATION OF THE SUBDIVISION WADE HEREBY, AND DO HEREBY DEDICATE TO THE USE OF THE PUBLIC FORTION OF THE SUBDIVISION WADE HEREBY, AND DO HEREBY DEDICATE TO THE USE OF THE PUBLIC FORTION IN FEE SIMPLE ALL STREETS AND AVENUES HEREDN AND DEDICATE THE USE THEREOF FOR ALL PUBLIC PURPOSES, AND ALSO THE RIGHT TO MAKE ALL NECESSARY SLOPES FOR OUTS AND FILLS UPON THE LOTS SHOWN THEREON IN THE ORIGINAL REASONABLE GRADING OF SAD STREETS AND ALENUES.

FURTHER, THE UNDERSIGNED DWNERS WAVE FOR THEMSELVES, THER SUCCESSORS AND ASSIGNS, ANY AND ALL CLAIMS FOR DAMAGES AGAINST JEPFERSON COUNTY, WHICH WAY BE OCCASIONED BY THE ESTABLISHMENT, CONSTRUCTION, OR MAINTENANCE OF PUBLIC ROADS WITHIN THAT PORTION OF THIS SUBDIVISION DEDICATED TO JEPFERSON COUNTY.

#### DECLARATIONS, COVENANTS AND RESTRICTIONS

A DECLARATION OF COMMANTS

THE "TIMBERTON VILLAGE PHASE I" FINAL PLAT IS SUBJECT TO THE TIMBERTON VILLAGE MASTER DECLARATION OF DOVENANTS, CONDITIONS, RESTRICTIONS, ASSESSMENTS, CHARGES, SERVITURES, LENS, RESERVATIONS AND EASEMENTS, RECORDED UNDER JEFTERSON DOUNTY ALDITOR'S FILE NO. **JEC.722**, AS AMENDED FROM TIME-TO-TIME.

B. GECLARATION OF EASEMENTS.

1. STORM WATER CONVENTICE FACILITIES, COSTA PACIFIC HOMES HEREBY GRANTS, CONVEYS AND QUIT CLAINS TO THE TIMBERTON VILLAGE HOME GAMER'S ASSOCIATION, A WASHINGTON NONPROFIT CORPORATION, FOR THE BENEFIT OF ITS MEMBERS AND PROPERTY LOCATED WITHIN "TIMBERTON VILLAGE PHASE I" AS PLATTED, NOW AND IN THE FUTURE, A PERPETUAL NON-EXCLUSIVE EASEMENT OVER, UNDER, THROUGH AND ACROSS THE PROPERTY DESIGNATED ON THE PLAT OF "TIMBERTON VILLAGE PHASE I" AS "PHINATE STORM ORAINAGE EASEMENT" AND "STORM ORAINAGE EASEMENT" FOR THE PLACEMENT AND MAINTENANCE OF A STORM WATER CONVENTION ESTSTEM AND TRANSPORT OF STORM WATER RUNDET, TOGETHER WITH THE RICHT TO ENTER ONTO SUCH PROPERTY AT ALL. TIMES TO FACULTATE THE PURPORTS SET FORTH HEREIN.

2. UTILITIES EASEMENT, COSTA PACIFIC HOMES HEREDY RESERVES, GRANTS, CONVEYS AND QUIT CLAMS TO PUGET SOUND PONER AND LIGHT COMPANY, LUCIOW WATER CO., POPE RESOURCES, US WEST, THE TIMBERTON WILLACE HOME COMMER'S ASSOCIATION, AND A CABLE TV COMPANY TO BE DESIGNATED BY COSTA PACIFIC HOMES, AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, A PERPETUAL NON-EXCLUSIVE EASEMENT UNDER AND UPON ALL LOTS AND TRACTS SHOWN ON THE FINAL PLAT, EXCEPT SUCH LAND DIRECTLY DEMEATIN ANY BULLONGS LOCATED THEREON, FOR THE PURPOSE OF INSTALLATION, PLACEMENT, CONSTRUCTION RENEWAL, OPERATION, LISE AND MAINTENANCE OF UNDERBORDUND CONDUCTS, CABLE, PIPELINE, AND WIRES. TOCENER WILL OPERATION, LISE AND MAINTENANCE OF UNDERBORDUND CONDUCTS, CABLE, PIPELINE, AND WIRES. TOCENER WITH THE NECESSARY FACILITIES AND OTHER SOLENMENT APPURITIANT THERETO, FOR THE PURPOSE OF PROVIDING SERVICE TO THE PLAT OF TIMEERTON VILLAGE PHASE F AND OTHER PROPERTY, WITH DELECTRIC, MATER, STAKER, TELEPHONE, DRAINAGE AND CABLE TELEVISION SERVICE. TOGETHER WITH THE RIGHT OF ACCESS TO SAID PROPERTY AND TO ENTER UPON ALL LOTS AND TRACTS LOCATED WITHIN TIMBERTON VILLAGE PHASE F TO PACIFIC FILLE PURPOSE SET FORTH HEREIN.

3. SANITARY SENSER CASEMENT, CUSTA PACIFIC HOMES RESOURCES HEREBY GRANTS, CONVEYS, AND GUT CLAMS TO THE TIMBERTON VILLAGE HOME OWNER'S ASSOCIATION, IT SUCCESSORS AND ASSIONS, FOR THE GENERIT OF ITS MEMBERS AND ALL PROPERTY WITHIN "TIMBERTON VILLAGE PHASE I" A PERFETUAL NON-EXCLUSIVE EASEMENT UNDER, ACROSS, THROUGH AND UPON ALL PROPERTY DESIGNATED ON THE FOML PLAT AS "SANITARY SEWER EASEMENT UNDER, ACROSS, INSTALLATION, CONSTRUCTION, RENEWAL, REPLACEMENT, OPERATION, USE AND MAINTENANCE OF SEMER SYSTEM COMPONENTS, INCLUDING, BUT NOT UNITED TO, SEMER MAINS, PRELINES, FUMPS, FACLITIES, AND DIVIER COMPONENT APPORTMENT THERETO, SERVING THE PLAT OF "TIMBERTON VILLAGE PHASE I" AND OTHER PROPERTY. TOGETHER WITH THE RIGHT TO ENTER ONTO SUCH PROPERTY AT ALL TIMES TO FACLITATE THE PURPOSES SET FORTH HEREIN.

C COMMON AREAS

COSTA PACIFIC HOMES HEREBY GRANTS, CONVEYS, AND QUIT CLAMS TO THE TIMBERTON VILLAGE HOME DANKER'S ASSOCIATION, A WASHINGTON MONPROFIT CORPORATION, TRACTS & AND B. (COMMON AREA/OPEN SPACE) AS SHOWN ON THE TIMAL PLAT, SUBJECT TO ALL EASEMENTS OR RESTRICTIONS EITHER (1) PREVIOUSLY CREATED OR (2) DREATED OR RESERVED ON THE TIMBERTON VILLAGE PHASE IF FINAL PLAT, OR (3) DREATED OR RESERVED IN THE TIMBERTON VILLAGE MASTER OR SUPPLEMENTAL DECLARATION.

Comprehensive Vegetation Management Plan (VMP)

#### NOTES



SHEET

TARGERION

DRAFE

1. SET 1/2" REBAR AND CAP (ESW INC. L.S. NO. 15661/20281) AT ALL CORNERS.

 LEGAL DESCRIPTION AND EASEMENTS ARE FROM PLAT CERTIFICATE SUPPLIED BY JEFFERSON TITLE COMPANY INC. ORDER NO. 45372-RB, DATED MARCH 21, 1995 AND SUPPLEMENTAL REPORTS DATED APRIL 12, 1995, APRIL 19, 1995 AND JULY 6, 1995.

3. BASIS OF BEARINGS IS PROJECT.

4 TRACT A IS OWNED AND MAINTAINED BY THE TIMBERTON VILLAGE HOME GAINER'S ASSOCIATION FOR COMMON AREA AND OPEN SPACE AND IS SUBJECT TO A STORM ORAINAGE AND MAINTENANCE EASEMENT TO JEFFERSON COUNTY FOR A DETENTION POND. TRACT A IS ALSO SUBJECT TO SAINTARY SEVER EASEMENTS AND STORM DRAINAGE EASEMENTS OVER ITS. ENTIRETY. TRACT A IS FURTHER SUBJECT TO SLOPE AND DRAINAGE EASEMENTS ALONG CREEKSDE DRIVE.

5. TRACT B IS DWNED AND MAINTAINED BY THE TIMBERTON VILLAGE HOME OWNER'S ASSOCIATION FOR COMMON AREA AND OPEN SPACE AND IS SUBJECT TO A STORM DRAINAGE AND MAINTENANCE EASEMENT TO JEFFERSON COUNTY FOR A DETENTION POND.

6. DEVELOPMENT OF INDIVIDUAL LOTS SHALL BE CARRIED OUT IN CONFORMANCE. WITH THE TEMPORARY EROSION AND SEDMENTATION CONTROL PLAN ON FILE WITH THE JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT.

 SUBJECT TO THE RIGHT TO CONSTRUCT AND MAINTAIN NECESSARY OUT AND FILL SLOPES, CULVERTS, SPECIAL DITCHES AND APPURTENANCES WHERE THE SAME MAY EXTEND BEYOND THE UMITS OF PARADISE BAY ROAD PER INSTRUMENTS FILED UNDER RECORDING NOS, 140063 AND 140064.

8. SUBJECT TO AN EASEMENT TO OLYMPIC POWER COMPANY OVER A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 17 TO ERECT AND MAINTAIN POLES, TOWERS, ETC. PER INSTRUMENT FILED IN VOLUME 79, PAGE 317, ON AUGUST 16, 1912. THE DESCRIPTION CONTAINED IN THIS INSTRUMENT IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.

9. SUBJECT TO AN AGREEMENT AND THE TERMS AND CONDITIONS THEREOF RECARDING ROADWAY DEVELOPMENT COSTS PER INSTRUMENT FILED UNDER RECORDING NO. 380016.

10. SUBJECT TO AN EASEMENT TO PUGET SOUND POWER AND LIGHT COMPANY OVER THE ROAD RIGHTS-OF-WAY TO BE FLAFTED AND A STRIP TO FEET WIDE AND ADJOINING THE ROAD RIGHTS-OF-WAY PER INSTRUMENT FLED UNDER RECORDING NO. 380291.

11. IN ACCORDANCE WITH JEFFERSON COUNTY ORDINANCE #2-0401-91 AS AMENDED, ADDRESSES WILL BE APPLIED FOR AT THE TIME OF BUILDING PERMIT APPLICATION.



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**Comprehensive Vegetation Management Plan (VMP)** 

#### Timberton Phase II Plat Map Notes: (to read this, zoom to 300%) $\geq$



24

AWING NAME OS LPT

ESM Consulting Engineers, L.L.C. Civil Engineering • Land Surveying • Project Management • Land Planning 720 So. 348th Street • Federal Way, WA 98003 Phone: (253) 838-6113 • (253) 927-0619

528-01-980-001 DATE: 02-23

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		Federa (263)	a Way, Washingto 838-6113	on 96003	Project Manager Public Works Land Planning
ADDRESSES					

Comprehensive Vegetation Management Plan (VMP)

#### TIMBERTON VILLAGE PHASE III

A PORTION OF THE SW 1/4 OF SECTION 17, TOWNSHIP 28 NORTH, RANGE 1 EAST, W.M. JEFFERSON COUNTY, WASHINGTON

#### DECLARATION OF EASEMENTS

PORT LUDLOW ASSOCIATES LLC HEREBY DECLARES, GRANTS, CONVEYS, RESERVES, AND QUIT CLAIMS THE FOLLOWING EASEMENTS WITHIN THIS PLAT, SUBJECT TO MATTERS OF RECORD:

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#### DECLARATION OF EASEMENTS CONTINUED

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**Comprehensive Vegetation Management Plan (VMP)** 

#### **Appendix C: Timberton ARC Application Procedures**

#### TIMBERTON ARC APPLICATION PROCEDURES

This document is to help homeowners to become familiar with Timberton Village ARC/South Bay procedures and permits they will need to fill out when considering any changes on their property or in the common area. The appropriate form should be forwarded to the village ARC where a representative will be available for assistance as needed. The ARC will give its recommendation to the board for action. The TVHA board meets on the 1st Monday of each month so please allow 2 weeks minimum for the ARC review. The board will take action and if required will forward the permit to the South Bay ARC. This process will take a minimum of 5 weeks or more. COULD

There are three TVHA/South Bay forms. These forms must be filled out and submitted before any work is to be commenced. Forms are available at the FROM ARC South Bay Club in hard copy and can also be printed directly from the TVHA or South Bay web site. The three forms are:

CHAIR

- 1. Building Modification Permit Application
- 2. Landscape Permit Application
- 3. Common Areas and Limited Common Areas Permit Application

1

#### **Building Modification Permit Application**

- A. Painting home in different/new color (see color palette)
- B. All exterior additions or modifications that require a County Building permit
- C. Installing or replacing
  - permanent emergency generator
  - hot tub
  - solar panel
  - roofing
  - siding
  - skylight \*
  - · other not shown above check South Bay ARC Permit requirements
  - requirements
  - · Deck Muditicathe
- D. Replace or add exterior lights with different fixture

\*Needs discussion from the board

#### Landscape Permit Application

- A. Modify existing landscape, such as:
  - Modify existing retaining walls
  - Trim or remove a tree with a trunk diameter greater than 6"at 5 feet above the ground

B. For modifications not shown above check TVHA CC&Rs

#### **Common and Limited Common Areas Permit Application**

The following projects require an application filled out completely (include drawings and pictures where necessary) and submitted to the village ARC. The village ARC will review and make recommendations to the village board for action. The village board will forward the application to the SBCA-ARC if required.

Any work in the common areas and work involving tree cutting or trimming and vegetation management or control requires Village Board approval and must comply with TVHA Vegetation Management Plan and county ordinance 18:22.

Any work involving tree cutting or trimming on trees over 6" in diameter at 5 feet above the ground requires SBCA-ARC approval.

*NOTE 1. – No ARC Application or notification is required for the following to be done on own property. This does not apply to Association owned common areas.* 

- a. Plant annuals in existing flowerbeds
- b. Trim or remove wind felled trees
- *c. Trim live trees with a trunk less than 6" in diameter at 5 feet above the ground*

*NOTE 2 – Written notification, BUT NO application, is required to be sent to the ARC Committee by the homeowner when doing the following:* 

- a. Paint the house the same color
- b. Replace heat pump same size and location
- c. Replace propane tank same size and location
- *d.* Replace light fixture same type and location
- e. Installation of a satellite dish attached to the house

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#### Appendix D: Washington State DOE's Plant Selection Guide

From: <u>www.ecy.wa.gov</u>

The following table will help you select the best plants for your erosion control or slope stabilization project. Due to the amount of information involved, the table is split into two sections. Half of the information on each plant is in the first table, half in the second. To read the second half of a plant's characteristics, simply click on its name. When you are finished, click the name again to return to your place in the first half of the table.

Name	Form & Habit	Rooting Characteristics	Planting Condition	Comments
<b>Red Alder</b> (Alnus rubra)	Deciduous tree; seeds prolifically on bare soil	Fibrous, Moderately deep	Bareroot seedlings up to 3' tall; larger plants in containers	Fast grower in poor mineral soils; typical 40-50 year lifespan; large limbs become brittle; provides food for birds
Pacific Willow (Salix lasiandra)	Deciduous multi- stemmed tree; does not spread	Fibrous, Moderately deep and widespread	Rooted plants to 10' tall in containers; cuttings 18" - 24"; whips 4'	Fast grower in saturated or shallowly flooded areas; 25 year lifespan - large limbs become brittle, tend to break off; stumps produce long, fast growing whips; easily rooted
Scouler Willow (Salix scouleriana)	Deciduous tree or shrub; does not spread	Fibrous, Moderately deep and widespread	Rooted plants to 10' tall in containers; cuttings 18" - 24"; whips 4'; whips not recommended	Of the willows listed here, this species tolerates the driest conditions
Sitka Willow (Salix sitchensis)	Deciduous tree or shrub; does not spread	Fibrous, Moderately deep and widespread	Rooted plants to 10' tall in containers; cuttings 18" - 24"; whips 4'; whips not recommended	Fast grower in moist to saturated soils; widely used for streambank stabilization
Douglas Fir (Pseudotsuga menziesii)	Coniferous tree; does not spread	Tap - Modified Tap, Shallow to deep and	12" - 18" bareroot seedlings; larger	Generally not considered a primary species for slope face

		widespread	plants in containers	stabilization; high root strength but typical shallow rooting characteristics in thin coastal soils; can be planted in stands in slope crest greenbelts; good eagle and osprey perch and nest trees; potential for wind throw in thin or disturbed soils
Northern Black Cottonwood (Populus trichocarpa)	Deciduous; does not spread	Fibrous, Shallow to deep, and widespread, extensive	Rooted plants to 10' tall in containers; cuttings 18" - 24"; whips 4' tall	Fast grower in moist to saturated soils; also widely used for streambank stabilization; potential wind throw
Red-Osier Dogwood (Cornus stolonifera or Cornus sericea)	Deciduous shrub; does not spread	Fibrous, shallow	Rooted plants to 6' tall in containers; bareroot & cuttings 18" - 24" tall	Attractive shrub that produces bright red stems
Black Twinberry (Lonicera involucrata)	Deciduous shrub; does not spread	Fibrous, shallow	Rooted plants to 6' tall in containers; bareroot 18" - 24" tall	Produces yellow twin flowers and black twin berries; some success reported from cuttings
Ninebark (Physocarpus capitatus)	Deciduous shrub; does not spread	Fibrous, shallow	Rooted plants to 6' tall in containers; bareroot 18" - 24" tall	Produces masses of tiny white flowers which change to reddish seed clumps
Cascara (Rhamnus purshiana)	Deciduous tree/shrub; does not spread	Tap - Moderately deep	Rooted plants to 6' tall in containers; bareroot 18" - 24" tall	Shiny black berries are favored by Cedar Waxwings
Salmonberry (Rubus spectabilis)	Deciduous shrub; spreads by	Fibrous, Shallow	Rooted plants to 4' tall in containers;	Spreads quickly once established; berries provide food for a

	underground runners to form thickets		bareroot 6"-8" tall; cuttings 18"-24"	variety of songbirds
Hooker Willow (Salix hookeriana)	Deciduous shrub; does not spread	Fibrous, Moderately deep	Rooted plants to 6' tall in containers; bareroot & cuttings 18"-24" tall; whips 4'; whips not recommended	A horticultural variety, "Clatsop," has been developed by the Soil Conservation Service for its vigor, disease resistance & attractive foliage; salt spray tolerant
Red Elderberry (Sambucus racemosa)	Deciduous shrub; does not spread	Fibrous, Shallow	Rooted plants to 6' tall in containers; bareroot 18"-24" tall	Produces red, non- edible berries; some success reported from woody cuttings
Douglas' Spiraea (Spiraea douglasii)	Shrub; spreads by seed & underground runners to form seed	Fibrous, Shallow	Rooted plants to 6' tall in containers; bareroot & cuttings 18"-24" tall	Spreads quickly & aggressively in most sites
Snowberry (Symphoricarpos albus)	Deciduous shrub; spreads by underground runners to form thickets	Fibrous, Shallow	Rooted plants to 24" tall; bareroot 6"-18" tall	Tolerates high winds and often grows on vegetated slopes overlooking salt water
Salal (Gaultheria shallon)	Evergreen shrub; spreads by underground runners to form thickets	Fibrous, Shallow	Rooted plants 4" to 12" tall	Widely available; difficult to establish; slow growing; tolerates salt spray
Ocean Spray (Holodiscus discolor)	Deciduous shrub; does not always spread aggressively	Fibrous, Moderate	Rooted plants to 2' tall in containers; bareroot 6"-12" tall	Produces attractive sprays of creamy-white flowers; will root spread
Vine Maple (Acer circinatum)	Deciduous shrub; does not always	Fibrous, Moderate	Rooted plants to 4' tall in containers;	Large specimens widely available; spreads by root and seed

	spread aggressively		balled & burlapped plants to 10' tall	
Kinnickinick (Arctostaphylos Uva-ursi)	Low-growing shrub; spreads to form a dense, evergreen carpet	Fibrous, Shallow	Rooted plants in containers	Widely available evergreen ground cover; tolerates salt spray
Thimbleberry (Rubus parviflorus)	Deciduous shrub; spreads by underground runners to form thickets	Fibrous, Shallow	Rooted plants in containers	May be difficult to find in some native plant nurseries
Indian Plum (Oemleria cerasiformis)	Deciduous shrub; spreads by underground stems to form open stands	Fibrous w/horizontal, underground runners, Shallow	Rooted plants to 4' in containers; bareroot 6'-8' tall	Male and female flowers are on separate plants; only female flowers produce the attractive "plums"
Evergreen Huckleberry (Vaccinium ovatum)	Evergreen shrub; does not spread	Fibrous, Shallow	Rooted plants to 2' tall in containers	Attractive but slow growing; difficult to establish; tolerates salt spray
Nootka Rose (Rosa nutkana)	Deciduous shrub; spreads by underground runners to form thickets	Fibrous, Shallow (not extensive)	Rooted plants to 2' tall in containers; bareroot to 18" tall; cuttings 12"-18"	Thickets of spring stems create a formidable barrier; produces attractive, pink flowers followed by large, red hips; tolerates salt spray
Red Currant (Ribes sanquineum)	Deciduous shrub; does not spread	Fibrous, Shallow (not extensive)	Rooted plants to 4' tall in containers; bareroot to 18" tall	One of our finest ornamental natives; produces clusters of white to red flowers
Wax Myrtle (Myrica californica)	Evergreen shrub; does not spread	Fibrous, Moderate	Rooted plants to 10'	Tolerates salt spray; high wildlife usage
Native Plant	Annual and	Fibrous, Shallow	Seed	Woody plant seeds also

Seed Mixes	perennial grass and forb		available (success typically low); very
	mixes		slow to establish; avoid
	available		exotic commercial
			mixes; seed mixes
			typically used in
			conjunction with other
			vegetation plantings;
			typically short-term
			erosion control
			technique

# **Other Attributes**

Name	Mature Size	Water Requirements	Light Requirements	Soil Requirements	Recommended Spacing
<b>Red Alder</b> (Alnus rubra)	Height: 80'+ Spread: 40'	Moist conditions, No data	Full Sun	Any soil	10'+
<b>Pacific Willow</b> (Salix lasiandra)	Height: 40'+ Spread: 25'	Wet conditions, Usage high?	Full Sun	Any soil - tolerates shallow flooding during the growing season	6'+ for rooted plants, 2' for whips or cuttings
<b>Scouler Willow</b> (Salix scouleriana)	Height: 30' Spread: 15'	Dry-moist conditions, Usage high?	Full Sun	Any soil	6'+ for rooted plants, 2' for whips or cuttings
<b>Sitka Willow</b> (Salix sitchensis)	Height: 30' Spread: 25'	Moist conditions, Usage high?	Full Sun	Any soil	6'+ for rooted plants, 2' for whips or cuttings
<b>Douglas Fir</b> (Pseudotsuga menziesii)	Height: 200'+ Spread: 50'	Dry-moist conditions, Usage moderate	Full Sun	Any soil	10'+
Northern Black Cottonwood (Populus	Height: 100'+ Spread:	Moist conditions, Usage high	Full Sun	Any soil - tolerates shallow	6'+ for rooted plants; 2' for whips or

trichocarpa)	40'			flooding during the growing season	cuttings
Red-Osier Dogwood (Cornus stolonifera or Cornus sericea)	Height: 20' Spread:20'	Moist-Wet, No data	Full Sun Sun/Shade	Any soil - tolerates shallow flooding during the growing season	3'+ for rooted plants, 2' for cuttings
Black Twinberry (Lonicera involucrata)	Height: 10' Spread: 8'	Moist, No data	Full Sun	Any soil	4'+
Ninebark (Physocarpus capitatus)	Height: 15' Spread:10'	Moist, No data	Full Sun Sun/Shade	Any soil	4'+
<b>Cascara</b> (Rhamnus purshiana)	Height: 25' Spread: 15'	Moist, No data	Full Sun	Any soil	4'+
Salmonberry (Rubus spectabilis)	Height: 8' Spread: 6'	Moist, No data	Sun/Shade Full Shade	Any soil	4'+
Hooker Willow (Salix hookeriana)	Height: 20' Spread: 15'	Moist-Wet, No data	Full Sun	Any soil	3'+ for rooted plants; 2' for cuttings
Red Elderberry (Sambucus racemosa)	Height: 15' Spread: 10'	Moist, No data	Full Sun Sun/Shade Full Shade	Any soil	4'+
<b>Douglas'</b> <b>Spiraea</b> (Spiraea douglasii)	Height: 8' Spread: 6"	Moist-Wet conditions, No data	Full Sun	Any soil - tolerates shallow flooding during the growing season	3' for rooted plants; 2' for cuttings
<b>Snowberry</b> (Symphoricarpos albus)	Height: 4' Spread: 3'	Dry-moist conditions, No data	Full Sun Sun/Shade Full Shade	Any soil - tolerates shallow flooding during	2'+

				the growing season	
<b>Salal</b> (Gaultheria shallon)	Height: 3' Spread: 3'	Dry-moist conditions, No data	Sun/Shade Full Shade	Any soil - tolerates shallow flooding during the growing season	2'+
<b>Ocean Spray</b> (Holodiscus discolor)	Height: 10'+ Spread: 6'	Dry-moist conditions, No data	Full Sun Sun/Shade	Any soil - tolerates shallow flooding during the growing season	4'+
<b>Vine Maple</b> (Acer circinatum)	Height: 15'+ Spread: 10'	Moist conditions, No data	Sun/Shade Full Shade	Any soil - tolerates shallow flooding during the growing season	8'+
Kinnickinick (Arctostaphylos Uva-ursi)	Height: 8" Spread: 6"	Dry conditions, No data	Full Sun	Any slightly acid soil	2'
<b>Thimbleberry</b> ( <i>Rubus</i> <i>parviflorus</i> )	Height: 4' Spread: 4'	Moist conditions, No data	Full Sun Sun/Shade	Any soil	3'
Indian Plum (Oemleria cerasiformis)	Height: 10' Spread: 6'	Moist conditions, No data	Full Sun Sun/Shade Full Shade	Any soil	4'+
<b>Evergreen</b> <b>Huckleberry</b> (Vaccinium ovatum)	Height: 6' Spread: 3'	Dry-moist conditions, No data	Sun/Shade Full Shade	Slightly acid	3'+
Nootka Rose (Rosa nutkana)	Height: 6' Spread: 3'	Moist conditions, No data	Full Sun	Any soil, prefers rich soils	3'
Red Currant (Ribes sanquineum)	Height: 8' Spread: 6'	Dry-moist conditions, No data	Full Sun Sun/Shade	Any soil	6'+
Wax Myrtle	Height:	Dry-moist	Full Sun	Slightly acid,	10'+

(Myrica californica)	15' Spread: 8'	conditions, No data	Sun/Shade	with organic matter	
Native Plant Seed Mixes	Height: 1'- 2' Spread: varied	Dry-wet conditions, Medium-high	Species/mix dependent	Species/mix dependent	Apply as recommended

Table 3 based on information from: Myers Biodynamics staff experience; Binns, 1980; Stevens & Vanbianchi, 1993; Kruckeberg, 1982.

# Footnotes

Water Requirements	Light Requirements	Rooting Characteristics	Planting Condition	Comments
<b>Dry</b> - Once established, tolerates dry soil conditions during the growing season	<b>Full Sun -</b> Requires sun throughout the day	<b>Fibrous</b> - Lacks a central root; root mass composed of fibrous lateral roots	Sizes given are those that are generally found in nurseries; other sizes may also be available	Growth rate; ornamental & wildlife value; wind/salt spray tolerance; maintenance; average life span
<b>Moist</b> - Requires moist soil throughout the growing season	<b>Sun/Shade</b> - Requires shade for about 1/2 the day	<b>Tap</b> - With a stout, central main root		
Wet- Tolerates saturated soil year-round	Full Shade- Requires shade throughout the day	Shallow, Moderate, Deep refers to relative rooting depth (influenced by soil and groundwater conditions		
Usage- Relative water uptake by plant [e.g., high or no data]				

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#### Appendix E: International Society of Arboriculture's "Why Topping Hurts Trees"

Topping is perhaps the most harmful tree pruning practice known. Yet, despite more than 25 years of literature and seminars explaining its harmful effects, topping remains a common practice. This brochure explains why topping is not an acceptable pruning technique and offers better alternatives.

#### What is Topping?

Topping is the indiscriminate cutting of tree branches to stubs or lateral branches that are not large enough to assume the terminal

role. Other names for topping include "heading," "tipping," "hat-racking," and "rounding over."

The most common reason given for topping is to reduce the size of a tree. Home owners often feel that their trees have become too large for their property. People fear that tall trees may pose a hazard. Topping, however, is not a viable method of height reduction and certainly does not reduce the hazard. In fact, topping will make a tree more hazardous in the long term.

#### **Topping Stresses Trees**

Topping often removes 50 to 100 percent of the leaf-bearing crown of a tree. Because leaves are the food factories of a tree, removing them can temporarily starve a tree. The severity of the pruning triggers a sort of survival mechanism. The tree activates latent buds, forcing the rapid growth of multiple shoots below each cut. The tree needs to put out a new crop of leaves as soon as possible. If a tree does not have the stored energy reserves to do so, it will be seriously weakened and may die.

A stressed tree is more vulnerable to insect and disease infestations. Large, open pruning wounds expose the sapwood and heartwood to attacks. The tree may lack sufficient energy to chemically defend the wounds against invasion, and some insects are actually attracted to the chemical signals trees release.



New shoots develop profusely below a topping cut.



Topping is cutting branches

back to stubs or lateral

Comprehensive Vegetation Management Plan (VMP)

#### **Topping Causes Decay**

The preferred location to make a pruning cut is just beyond the branch collar at the branch's point of attachment. The tree is biologically equipped to close such a wound, provided the tree is healthy enough and the wound is not too large. Cuts made along a limb between lateral branches create stubs with wounds that the tree may not be able to close. The exposed wood tissues begin to decay. Normally, a tree will "wall off," or compartmentalize, the decaying tissues, but few trees can defend the multiple severe wounds caused by topping. The decay organisms are given a free path to move down through the branches.



The tree will close a well-positioned cut as new wood is produced. Normally it will compartmentalize any internal decay.



#### **Topping Can Lead to Sunburn**

Branches within a tree's crown produce thousands of leaves to absorb sunlight. When the leaves are removed, the remaining branches and trunk are suddenly exposed to high levels of light and heat. The result may be sunburn of the tissues beneath the bark, which can lead to cankers, bark splitting, and death of some branches.

#### **Topping Creates Hazards**

The survival mechanism that causes a tree to produce multiple shoots below each topping cut comes at great expense to the tree. These shoots develop from buds near the surface of the old branches. Unlike normal branches that develop in a socket of overlapping wood tissues, these new shoots are anchored only in the outermost layers of the parent branches.



Stubs left from topping usually decay. The shoots that are produced below

The new shoots grow quickly, as much as 20 feet in one year, in some species. Unfortunately, the shoots are prone to

the cut are weakly attached, and often become a hazard.

breaking, especially during windy conditions. The irony is that while the goal was to reduce the tree's height to make it safer, it has been made more hazardous than before.

#### **Topping Makes Trees Ugly**

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The natural branching structure of a tree is a biological wonder. Trees form a variety of shapes and growth habits, all with the same goal of presenting their leaves to the sun. Topping removes the ends of the branches, often leaving ugly stubs. Topping destroys the natural form of a tree.

Without leaves (up to 6 months of the year in temperate climates), a topped tree appears disfigured and mutilated. With leaves, it is a dense ball of foliage, lacking its simple grace. A tree that has been topped can never fully regain its natural form.

#### **Topping Is Expensive**





Trees that have been topped may become

hazardous and are



The cost of topping a tree is not limited to what the perpetrator is paid. If the tree survives, it

unsightly. will require pruning again within a few years. It will either need to be reduced again or storm damage will have to be cleaned up. If the tree dies, it will have to be removed.

Topping is a high-maintenance pruning practice, with some hidden costs. One is the reduction in property value. Healthy, wellmaintained trees can add 10 to 20 percent to the value of a property. Disfigured, topped trees are considered an impending expense.

If the height of a tree must be reduced, all cuts should be made to strong laterals or to the parent limb. Do not cut limbs back to stubs.

Another possible cost of topped trees is potential liability. Topped trees are prone to breaking and can be hazardous. Because topping is considered an unacceptable pruning practice, any damage caused by branch failure of a topped tree may lead to a finding of negligence

in a court of law.

#### Alternatives to Topping

Sometimes a tree must be reduced in height or spread. Providing clearance for utility lines is an example. There are recommended techniques for doing so. If practical, branches should be removed back to their point of origin. If a branch must be shortened, it should be cut back to a lateral that is large enough to assume the terminal role. A rule of thumb is to cut back to a lateral that is at least one-third the diameter of the limb being removed.

This method of branch reduction helps to preserve the natural form of the tree. However, if large cuts are involved, the tree may not be able to close over and compartmentalize the wounds. Sometimes the best solution is to remove the tree and replace it with a species that is more appropriate for the site.

#### **Hiring an Arborist**

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Pruning large trees can be dangerous. If pruning involves working above the ground or using power equipment, it is best to hire a professional arborist. An arborist can determine the type of pruning that is necessary to improve the health, appearance, and safety of your trees. A professional arborist can provide the services of a trained crew, with all of the required safety equipment and liability insurance.

When selecting an arborist,

Check for membership in professional organizations such as the International Society of Arboriculture (ISA), the Tree Care Industry Association (TCIA), or the American Society of Consulting Arborists (ASCA). Such membership demonstrates a willingness on the part of the arborist to stay up to date on the latest techniques and information.



Professional arborists can determine what type of pruning is necessary to improve the health, appearance and safety of your trees.

- > Check for ISA arborist certification. Certified Arborists are experienced professionals who have passed an extensive examination covering all aspects of tree care.
- Ask for proof of insurance.
- Ask for a list of references, and don't hesitate to check them.
- Avoid using the services of any tree company that
  - Advertises topping as a service provided. Knowledgeable arborists know that topping is harmful to trees and is not an accepted practice.
  - Uses tree climbing spikes to climb trees that are being pruned. Climbing spikes can damage trees, and their use should be limited to trees that are being removed.

This brochure is one in a series published by the as part of its Consumer Information Program. You may have additional interest in the following titles currently in the series:

E-mail inquiries: isa@isa-arbor.com

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ISA. P.O. Box 3129.

Champaign, IL 61826-3129, USA.

E-mail inquires: isa@isa-arbor.com

**Comprehensive Vegetation Management Plan (VMP)** 

Appendix F: Common Noxious Weed Information



## JEFFERSON COUNTY NOXIOUS WEED CONTROL BOARD

201 West Patison Street, Port Hadlock WA 98339

360 379-5610 Ext. 205

noxiousweeds@co.jefferson.wa.us

### **BEST MANAGEMENT PRACTICES**

Himalayan blackberry (Rubus discolor syn. Rubus armeniacus)

and Evergreen blackberry (Rubus laciniatus)

Legal Status in Jefferson County: Class C--there is no legal requirement for controlling Himalayan blackberry and evergreen blackberry. The County Weed Board provides education on their impacts,, recommends control and containment of existing populations and discourages new plantings.

# **BACKGROUND INFORMATION**

## Impacts and History

- Highly invasive and can be found throughout Jefferson County.
- Can be very difficult to control.
- Out competes native understory vegetation and prevents the establishment of desirable native shade intolerant trees such as Pacific madrone, Douglas fir and Western white pine.
- Can limit movement of large animals by forming large impenetrable thickets.

# Description

- **Himalayan blackberry** is a robust, sprawling perennial with stems having large stiff thorns.
- Main canes up to 10 feet long with trailing canes reaching up to 40 feet.



- Trailing canes typically take root at the tips.
- Leaves are large, round to oblong and toothed. Typically come in sets of three (trailing canes) or five (main stems).
- Individual canes can reach a density of 520 canes per square meter.
- Flowers are white to pink about one inch in diameter and borne in clusters of about 5 to 20.
   Himalayan blackberry
- Develops edible black fruit that clings to the center core when picked.
- **Evergreen blackberry** is a robust trailing evergreen shrub that grows into impenetrable thickets.
- Ribbed reddish stems up to 10 feet in length with large curved thorns.
- Young canes arch as they grow longer, eventually reaching the ground and rooting at the nodes.
- Palmately compound leaves with 3 to 5 deeply lacerated leaflets.
- Flowers are white to pink about one inch in diameter borne in clusters.
- Develops edible black fruit that clings to the center core when picked.

#### Habitat

- Blackberry can be found in a myriad of habitats such as vacant lands, pastures, forest plantations, roadsides, creek gullies, river flats, riparian areas, fence lines, and rights-of-way.
- Does not grow well in wetland areas, will grow if cane tip roots.

#### **Reproduction and Spread**

- Reproduces vegetatively by root and stem fragments and by seed.
- Plants begin flowering in spring with fruit ripening in midsummer to early August.
- Daughter plants can form where canes touch the ground.
- Seeds can remain viable in the soil for several years.

#### **Local Distribution**

Both are common throughout Jefferson County—Himalayan blackberry prefers the drier east side and evergreen blackberry thrives in the wetter west end.

# CONTROL INFORMATION

#### **Integrated Pest Management**

• The preferred approach for weed control is Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management



Evergreen blackberry

requirements of each specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts.

• Use a multifaceted and adaptive approach. Select control methods which reflect the available time, funding, and labor of the participants, the land use goals, and the values of the community and landowners. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate.

### **Planning Considerations**

- Plan your control effort including: 1) surveying of the area thoroughly for blackberry, 2) setting priorities for control, 3) selecting the best control method(s) for the site conditions and regulatory compliance issues and 4) monitoring the success of control and implementing follow up control as necessary.
- If an area greater than 7,000 square feet is to be cleared or graded, a stormwater permit will be needed. Consult with Jefferson County Department of Community Development.
- Control practices in critical areas should be selected to minimize soil disturbance and reduce the potential for erosion. Minimizing disturbance also avoids creating more opportunities for germination of blackberry and other weeds.
- Generally work first in least infested areas, moving towards more heavily infested areas.
- Ensure habitat protection by targeting only blackberry and preserving all native and beneficial vegetation.

## **Early Detection and Prevention**

- Blackberry is easily identifiable throughout the year.
- Manually control new infestations as early as possible .
- Monitor the control site and remove any plants returning from root fragments

#### Manual

- Hand pull the stem close to the ground and uproot the root ball. This method is most effective with first year plants.
- Manual control works best after rain or in loose soils where the canes are suppressed because the blackberries are growing in a forest understory.
- Digging up root crowns and major side roots is slow but will control blackberry and is effective on small infestations.
- Using a claw mattock or pulaski/mattock is also effective.
- Recheck work area because large root fragments left can re-sprout.
- If removing dense patches, area should be replanted with native plants and mulched, or reseeded with a suitable grass.
- Because blackberry (both Himalayan and evergreen) are state-listed noxious weeds, control (both manual and chemical) in critical areas is allowed as long as the landowner

consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.

#### Mechanical

- Mowing, including the use of riding mowers and tractor mounted mowers, can be very effective in controlling blackberries but also may harm desirable plants.
- Mowing should not be used where soils are highly susceptible to compaction or erosion, or where soils are very wet.
- Several cuttings a year over several years are necessary to exhaust the roots of their reserve food supply.
- If only one cutting is done per year, cut when the plants begin to flower. If no follow-up is done, the blackberry may re-sprout from the root crown at a greater density, and could overgrow any vegetation planted.
- Cultivation in agricultural areas utilizing cultivation machinery can be effective in controlling blackberry either alone or in conjunction with mowing but is not selective and may require specific sediment and erosion control measures (see Control of Large Infestations/Monocultures).

## Biological

Biological control is the deliberate introduction of insects, mammals or other organisms which adversely affect the target weed species. Biological control is generally most effective when used in conjunction with other control techniques. Biological control methods that may assist in blackberry control include the use of goats and chickens as follows:

- Goats and pigs may be effective on clearing or controlling blackberry re-growth from a year to four years old. On mature stands, goats tend to only strip leaves off of the canes. Animals may prefer alternative forage available, so reduce opportunities for selective browsing. Grazing must be continuous or else regrowth will occur. Care needs to be taken to fence off or protect any native or other valuable vegetation. The Jefferson County Noxious Weed Control Board can provide further information of the use and management of goats for weed control.
- Chickens can potentially decrease the seed bank in cleared areas by grazing on the seeds.

#### Chemical

- Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label. **Follow all label directions**.
- For control of large infestations, herbicide use may be effective, either alone or in combination with mowing. Infested areas should not be mowed until after the herbicide has had a chance to work and weeds are brown and dead.

- For several years following treatment, monitor areas for new plants germinating from the seed bank, or any missed plants.
- Because blackberry (both Himalayan and evergreen) are state-listed noxious weeds, control (both manual and chemical) in critical areas is allowed as long as the landowner consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.

#### **Specific Herbicide Information**

**Glyphosate:** can effectively control blackberry. However, glyphosate is non-selective (it will kill all plants it touches—broad-leaved plants AND grasses), so treatment with glyphosate should be followed by re-vegetation to prevent re-infestation by blackberries or other undesirable vegetation. Glyphosate is most effective on blackberry in September to October when canes are actively growing and after berries have formed. Fall treatments should be conducted before the first frost.

Selective Broadleaf Herbicides (such as triclopyr, 2,4-D and metsulfuron): most effective when blackberry is growing in a grassy area. Read the label of the product you are using to determine the optimal time to spray. Re-treatment the following year may be necessary to control any returning plants. Continue to monitor for new plants for several years after the initial treatment and following any disturbance to the soil such as tilling or construction. Note that products containing triclopyr, such as Crossbow or Garlon, cannot be used in the home landscape. Always read the label!

Specific herbicides that are effective on blackberry include Escort, Cimarron or Ally (metsulfuron), Garlon 4 (triclopyr ester), Garlon 3A(triclopyr amine) or Crossbow (triclopyr and 2,4-D).

Metsulfuron should be applied to fully leafed-out blackberry before fall leaf coloration. Good coverage is essential to achieve control. Triclopyr (amine and ester) and triclopyr + 2,4-D should be applied when actively growing. Foliage must be thoroughly wetted with herbicide. The addition of a suitable surfactant may improve the control results.

The mention of a specific product brand name in this document is not, and should not be construed as an endorsement or as a recommendation for the use of that product. Chemical control options may differ for private, commercial and government agency users. For questions about herbicide use, contact the Jefferson County Noxious Weed Control Program at 360-379-5610 ext 205.

# SUMMARY OF BEST MANAGEMENT PRACTICES

## Small Infestations in Native and/or Desirable Vegetation

- Properly identify targeted blackberries
- Mark desirable vegetation around control area, ensuring that no native plants are removed.
- Small infestations of less that 200 square feet can be effectively and relatively easily hand-pulled or dug up. This is easier when the soil is moist. Isolated plants should be removed in order to prevent them from infesting a larger area.
- Cut above ground portion of blackberry with loppers or pruners. Dig up or pull the remaining root ball.
- Replace any divots created when removing the plants to lessen the amount of disturbed soil.
- Apply appropriate herbicide with wick wiper or by spot spray to the cut stumps to minimize off target injury.
- Monitor site throughout growing season and remove any new plants.
- If using an herbicide in a grassy area, use a selective herbicide to avoid injury to the grass.

# Large Infestations/Monocultures

- Properly identify invasive blackberries.
- Mark native vegetation around the control area, ensuring that no native plants are removed.
- Mow down the blackberry with weed-eaters, brush mowers or machetes.
- Following mowing, either dig up the root-ball if labor is available or treat re-sprouting blackberry regrowth with an appropriate herbicide (See the Chemical section of this BMP).
- Mechanical cultivation is also an option for controlling invasive blackberries in agricultural areas. After initially mowing down the above ground vegetation, deep cultivation of the land can control root balls if done multiple times. Yearly spot control of returning seedlings or re-growth will likely be necessary.
- For large areas, it may be more cost-effective to apply herbicide to the mature blackberry plants and then mow the dead canes.
- When large dense areas of blackberry are removed, the bare areas created need to be stabilized and re-vegetated with native or non-invasive vegetation to prevent erosion

and re-invasion of blackberries and other weeds. Ensure that a high standard of blackberry control has been achieved prior to re-vegetating the site.

- If a non-selective herbicide is used in grassy areas, the area needs to be re-seeded to prevent reinvasion by weeds.
- Infested areas will require follow-up management lasting for several years to control plants re-growing from the seed bank and rhizomes.

# **Riparian and Aquatic Area Control**

- Focus on manual removal for small infestations if possible. Follow procedures listed above.
- For larger areas where herbicide use is warranted, apply with a wick wiper or spot spray using low pressure and large droplet size.
- Blackberry shrubs can be found growing along wetland margins but are typically daughter plants off of a main cane. Control can be achieved by cutting the canes down to the ground. The roots can not withstand the anaerobic soil conditions without the supporting canes.
- Because blackberry (both Himalayan and evergreen) are state-listed noxious weeds, control (both manual and chemical) in critical areas is allowed as long as the landowner consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.
- Any herbicide application over or near water can be done only by a specially-licensed applicator using an approved aquatic formulation.

## **Road Rights-of-Way Control**

- Manually remove infestations if possible.
- If plants are in grassy areas, use a selective broadleaf herbicide; if controlled with a non-selective herbicide, re-seed after control is completed.
- An effective mowing program can control blackberries along a Right of Way. Any blackberries remaining outside the mowed area will quickly re-invade the cleared areas.
- Spot spray blackberries with glyphosate in areas with no desirable vegetation.

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Many thanks to King County's Noxious Weed Control Program for permission to use their material.





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# **BEST MANAGEMENT PRACTICES**

Scotch Broom (Cytisus scoparius)

**Legal Status in Jefferson County**: Class B Noxious Weed (non-native species designated for control only in select areas by Washington State law RCW 17.10 and the Jefferson County Noxious Weed Control Board). The Jefferson County Noxious Weed Control Board requires control in and within 50 feet of gravel pits or stockpiles of rock or soil products that may be transported offsite. State Weed Law defines control as *to prevent all seed production and to prevent the dispersal of all propagative parts capable of forming new plants*. State quarantine laws prohibit transporting, buying, selling or offering Scotch broom for sale, or distributing plants, plant parts or seeds.



# BACKGROUND INFORMATION

#### Impacts and History

- Scotch broom displaces native and beneficial plants, causing considerable loss of grassland and open forest habitat.
- Seeds and other plant parts are mildly toxic to humans, horses and livestock.
- Renders rangeland and grasslands worthless.



- Interferes with re-establishment of conifer seedlings on harvested forests.
- Damages western Washington and Oregon prairies by changing the chemical composition of the soil and shading out prairie species.
- Dense stands can impede movement of wildlife.
- Potential fire hazard that can increase the intensity of grassland and forest fires.
- Scotch broom is difficult to eradicate due to substantial and long-lived seed bank.
- Native to the British Isles and central Europe. Scotch broom was introduced as a garden ornamental in the 1860's. It was planted along roadsides and cut banks to prevent soil erosion and is found throughout most of western Washington, British Columbia, Oregon and California. Also commonly known as Scot's broom.

### Description

- Large, yellow-flowered shrub in the legume family with evergreen stems and small, deciduous leaves.
- Grows 6 to 12 feet tall.
- Branches are erect, 5-angled with prominent ridges, and star-shaped in cross-section. Young stems are green.
   Older branches and trunks are yellowish-brown.
- Flowers are bright yellow, pea-like, sometimes with orange-red markings in the center, and are borne on short stalks in the leaf axils. They are ½ to 1 inch long.
- Leaves are small, oval and can be single at the stem ends but are generally in three leaflets.
- Leaves are often dropped during dry summer months or periods of stress. Plants may be leafless for most of the year.
- Seedpods are black or brown, flattened, hairy on the margins, and are 1 to 2 ½ inches long.

## Habitat

- Tolerant of a wide range of conditions but grows best in dry, well-drained soils in full sun.
- Seedlings can establish under the canopy of mature plants in full shade.
- It is tolerant of low-nutrient soils and a wide range of soil moisture conditions.
- Scotch broom is commonly found in disturbed areas, pastures, agricultural lands, harvested timberlands, roadsides, trails, river banks, parks and vacant lots.





**Comprehensive Vegetation Management Plan (VMP)** 

## **Reproduction and Spread**

- Reproduces primarily by seed.
- Peak bloom time is April to June but some flowers may appear sporadically throughout the year.
- Seeds are produced in late summer, germinate in fall and spring.
- When mature, seedpods split and eject seeds up to 20 feet away.
- Seeds are further dispersed by natural forces such as erosion, flowing water, and ants collecting seeds for food, as well as by human disturbance such as road work and other activities.
- A single plant can produce over 10,000 seeds per year.
- Plants typically start producing seeds after three years and usually live about 17 years, but can survive as many as 25 years.
- Seeds can remain viable in soil from 5 to 60 years.

# **Local Distribution**

Scotch broom is widely distributed throughout Jefferson County, especially along roadsides, on rivers, in parks, and in disturbed vacant lots and un-maintained pastures.

# CONTROL INFORMATION

## **Integrated Pest Management**

- The preferred approach for weed control is Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management requirements of each specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts.
- Use a multifaceted and adaptive approach. Select control methods which reflect the available time, funding, and labor of the participants, the land use goals, and the values of the community and landowners. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate.

# **Planning Considerations**

- Survey area for weeds, set priorities and select best control method(s) for the site conditions.
- Think about the long-term health of the site. Re-vegetation with native plants adapted to the site conditions will reduce re-infestation by Scotch broom and other weeds. However, re-vegetation can limit control options since care needs to be taken not to damage young plants. Make sure re-vegetation plan is compatible with broom management activities.
- Always consider the long-term goals for the site and the community.

- Sites that have other beneficial plants present should be controlled at times when the least amount of damage will be done to the desirable plants.
- Small infestations can be effectively pulled or dug up. Isolated plants should be carefully removed in order to stop them from infesting a larger area.
- For larger infestations, the strategy will depend on the land use of the site. In pastures, good grazing practices and management of grass and forage species will greatly improve control of Scotch broom. Specific suggestions are given in the Best Management section.
- Generally work first in least infested areas, moving towards more heavily infested areas.
- Minimize soil disturbance to avoid creating more opportunities for seed germination.
- Be adaptive: If the Scotch broom doesn't respond to one method, try a different method, change the timing or modify the technique.
- Be persistent. Any plants that go to seed will prolong the infestation problem. When plants become mature, they need to be removed or controlled before they go to seed. Most infestations require control work several times a year.
- Combine control methods.
- Pay attention to seasonal timing and to unexpected results. Different methods will bring variable results depending on site conditions, soil, water, competing vegetation, and site disturbance.
- If an area greater than 7,000 square feet is to be cleared or graded, a stormwater permit will be needed. Consult with Jefferson County Department of Community Development.

## **Early Detection and Prevention**

- Seedlings are likely to appear in fall or spring, mature plants flower mainly from April to June but flowers may appear sporadically throughout the year.
- Small populations can be pulled or dug but the site should be monitored for several years for plants growing from root fragments and from the seed bank.
- After the control is complete, re-vegetate the site with non-invasive vegetation to compete with broom seedlings, but make sure re-vegetation plan is compatible with follow-up weed control activities.
- Prevent plants from spreading from existing populations by washing vehicles, boots and animals that have been in infested areas.
- If animals are being moved from an infested pasture to an un-infested pasture, if possible first hold them for at least five days so that any seeds pass out of the animals' digestive system.
- Do not purchase or introduce these invasive plants into your yard or landscape. According to state quarantine laws it is illegal to buy or sell Scotch broom, or any of its cultivars.

Comprehensive Vegetation Management Plan (VMP)

### Manual

- When digging or pulling, make sure to remove as much root as possible so the plant will not re-sprout. This method can be highly labor-intensive and to be fully effective all mature plants in the site need to be pulled so that no new seeds are produced. Both methods are significantly easier when soils are moist.
- Pulling of medium to large plants is much easier with a Weed Wrench<sup>™</sup>, a solid steel tool for pulling woody plants. Several wrenches are available to borrow from the Jefferson County Noxious Weed Control Program (360-379-5610 ext 205). Weed wrenches may be purchased from The Weed Wrench Company at 877-484-4177 or http://www.weedwrench.com.



- Pulling disturbs the soil and creates ideal conditions for broom seed germination so sites will need to be carefully monitored for new growth.
- Cutting can be an effective control method for older plants that are no longer green at the base. If cutting, it is best to cut the plants when they are stressed during the summer drought in late July to August. Cut stems as close to the ground as possible. Monitor for re-growth and cut again. The disadvantage of this method is that plants are typically in seed during the late summer. Cutting may spread the seeds around so try to cut the plants before the seed pods mature.
- Cutting has been shown to be most effective on plants with a stem diameter greater than 2". Younger, smaller diameter plants that are cut should be monitored closely for regrowth.
- Expect the level of control work to be intensive for the first several years due to seed banks, soil disturbance that occurs when pulling or digging, and regrowth of cut plants.

## Mechanical

- Mechanical control methods can be used to suppress larger infestations with either manually operated brush cutting tools or tractor mounted mowers.
- Plants should be cut between flowering and seed pod maturation to prevent seed spread. However, cutting at this time may not increase plant mortality. A late summer cutting after the broom has gone to seed can exhaust root reserves and decrease resprouting.
- Older plants are less likely to resprout from cut stems (usually about 20 percent over 5 years old will resprout).
- Younger plants are more likely to resprout (about 50 percent).
- Mowing, and other mechanical control techniques alone are generally not as effective as other methods and will either need to be repeated throughout the season or combined with other control methods to prevent re-sprouting, especially with younger plants.

Mowing in the spring followed by a fall herbicide application, once plants have regrown, can be an effective control method.

- Mature plants with a stem diameter of greater than 2" are the most susceptible to mechanical control, and may not require other methods.
- Bulldozing is not a recommended control method. It tends to spread seeds on a site and removes all other vegetation that was competing with the broom.

## Biological

- Several biological control insects have been released in Washington State including Scotch broom bruchid (*Bruchidius villosus*), a beetle whose larvae feed on developing seeds, and Scotch broom seed weevils (*Exapion fuscirostre* or *Apion fuscirostre*). Results for both are still tentative.
- One research study from Oregon found that *E. fuscirostre* attacked 40-60% of pods and that of those pods attacked, 85% of the seeds were destroyed. In California, seed production was reduced by 60%.
- Initial findings from research on *B. villosus* ongoing in Oregon (where the beetle is relatively new) show that 10-25% of seedpods have been attacked. In North Carolina, where the beetle has been established for many years, more than 80% seed reduction is reported.
- It takes many years for biological control insect populations to be large enough to impact the infestation (usually at least 5-7 years, possibly longer).
- Grazing by goats and consumption of seeds by chickens has been shown to reduce the spread of broom infestations.

# Chemical

- Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label. **Follow all label directions**.
- For your personal safety, at a minimum, wear gloves, long sleeves and pants, closed toe shoes, and appropriate eye protection. Follow label directions for any additional personal protection equipment needed.
- For control of large infestations on roadsides and other non-pasture areas, herbicide use may be necessary.
- The best time to use foliar spray on broom is in the spring and again in the fall when plants are actively growing. Basal bark and other non-foliar treatments can be performed any time of the year depending on the herbicide used.
- Infested areas should not be mowed or cut after an herbicide application until herbicide has had a chance to move throughout the plant.

- Re-treatment the following year is necessary to control late-germinating plants. Continue to monitor for new plants for at least ten years after the initial treatment and following any disturbance to the soil such as tilling or construction.
- Because Scotch broom is a state-listed noxious weed, control (both manual and chemical) in critical areas is allowed as long as the landowner consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.

#### **Application Methods**

- Foliar spraying requires a thorough wetting of the actively growing plant parts.
- Basal bark and cut stump application are also effective with triclopyr ester and 2,4-D but these are fairly labor-intensive methods. Wiping concentrated herbicide on a recently cut stump (within moments of cutting) involves more time than foliar spraying but is more target-specific and will damage fewer nearby plants.
- There are tractor-driven booms that wipe on herbicide. This may be particularly effective on young (2 year old) plants that can not be controlled by cutting due to resprouting but are high enough above other plants to allow wiping only the Scotch broom plants.

#### **Specific Herbicide Information**

**Glyphosate (e.g. Aquamaster, Roundup)**: can effectively control Scotch broom. Apply to actively growing plants in spring. Addition of a surfactant will improve results. Glyphosate is non-selective and will damage grass and other vegetation it comes into contact with. Treatment with glyphosate needs to be combined with effective re-vegetation of the site to prevent broom seedlings from re-infesting the area. Re-treatment the following year is necessary to control late-germinating plants.

**Triclopyr (e.g. Garlon 3A, Garlon 4, Crossbow):** apply any time Scotch broom is actively growing. Foliage must be thoroughly wet. With Garlon 3A it is important to use a high volume of water (see PNW Weed Management Handbook for more information). Will not injure most grasses. Retaining the grass will help reduce the germination of Scotch broom seeds in the soil. Garlon 4 and Crossbow can be used for basal bark applications any time of year. Note that products containing triclopyr, such as Crossbow or Garlon, cannot be used in the home landscape. Always read the label!

The mention of a specific product brand name in this document is not, and should not be construed as an endorsement or as a recommendation for the use of that product. Chemical control options may differ for private, commercial and government agency users. For questions about herbicide use, contact the Jefferson County Noxious Weed Control Program at 360-379-5610 ext 205.

**Comprehensive Vegetation Management Plan (VMP)** 

# SUMMARY OF BEST MANAGEMENT PRACTICES

## Small Infestations in Native and/or Desirable Vegetation

- Dig or pull up plants by hand when soil is moist (fall through spring). This method is very effective on seedlings and smaller plants up to 1" in diameter.
- Replace any divots created when removing the plants to lessen the amount of disturbed soil.
- Apply appropriate herbicide by spot spraying to minimize non-target injury.
- Monitor site throughout growing season and remove any new plants.
- If using an herbicide in a grassy area, use a selective herbicide to avoid injury to the grass.
- Do not leave bare soil, use heavy mulch or replant to help compete with broom seedlings. This is especially important if small evergreen trees are being grown.
- Shade makes broom grow more slowly, so competitive plantings will improve long term management of broom populations.

## Large Infestations in Grassy Areas

- Mowing multiple times per season for several seasons can keep broom from setting seed, but is unlikely to kill all of the broom, especially young plants.
- Mature plants of 2" plus diameter can generally be controlled by cutting the plant at the base between flowering and seed set (late July August), but this may not work in all cases.
- Large infestations can be effectively controlled with herbicides.
- Smaller amounts of herbicide will be needed if plants are first cut or mowed as there will be less plant matter to treat. However, plants need to be actively growing when sprayed.
- Eradication of Scotch broom with a single herbicide application is unlikely.
- Suppression of large infestations of broom with a selective herbicide can greatly increase grass production, which in turn increases the suppression of the broom.
- Promote healthy grassy areas by seeding and fertilizing. Use a mix of grass and clover species to improve resistance to broom. Fertilize according to the soil needs.
- Heavily infested areas that are not candidates for other types of control may be managed with bio-control to reduce seed production.

# **Control in Riparian Areas**

- Survey area and document extent of infestation.
- Target only the Scotch broom, retain all native and beneficial plants.
- Focus on manual removal for small infestations if possible.
- Mowing can be effective at killing larger established plants but not younger ones. Mowing must be repeated multiple times over a season to prevent seed set and is not likely to kill plants unless combined with other methods.

- For larger areas where herbicide use is warranted, apply with a wick wiper or spot spray using low pressure and large droplet size or use basal or cut stump methods.
- When large areas of weeds are removed, the cleared area needs to be replanted with native or non-invasive vegetation and stabilized against erosion.
- If a non-selective herbicide is used in grassy areas, the area should be re-seeded to prevent reinvasion by weeds.
- Infested areas will need to incorporate a management plan lasting for several years to control plants germinating from the seed bank.
- Because Scotch broom is a state-listed noxious weed, control (both manual and chemical) in critical areas is allowed as long as the landowner consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.
- Any herbicide application over or near water can be done only by a specially-licensed applicator using an approved aquatic formulation.

# **Control along Road Rights-of-Way**

- Pull small infestations if possible.
- Spot spray with glyphosate if weeds are in areas with no desirable grasses.
- If plants are in grassy areas, use a selective broadleaf herbicide; if controlled with a non-selective herbicide, re-seed after control is completed.
- If plants are on a steep slope make sure to re-plant with vegetation of varying root depth to stabilize slopes.

## **Scotch Broom Disposal Methods**

- **Do not put plants with seed pods in compost or yard waste**. Seeds are very tough and long-lived and can contaminate mulch made from compost. Ideally, control activities should be done before plants go to seed to avoid disposal problems.
- Plants without seeds can be disposed of in household yard waste containers or taken to the Jefferson County transfer station.
- Plants with seeds can be chipped and left on site or burned (after obtaining appropriate burn permits).
- If it is not practical to dispose of the broom as recommended above, leave plants with mature seed pods on-site in order to limit spread to new areas.

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#### **BEST MANAGEMENT PRACTICES**

Tansy Ragwort (Senecio jacobaea)

**Legal Status in Jefferson County:** Class B Noxious Weed (nonnative species designated for control by State Law RCW 17.10 and by the Jefferson County Noxious Weed Control Board). The Jefferson County Noxious Weed Control Board requires control of tansy ragwort on private and public lands throughout the county. State Weed Law defines control as to prevent all seed production and to prevent the dispersal of all propagative parts capable of forming new plants.



# **BACKGROUND INFORMATION**

#### Impacts and History

- Serious threat to livestock. Contains pyrrolizidine alkaloids that are converted to toxic pyrroles in the liver after ingestion. The damage to the liver is irreversible and cumulative. Continued significant ingestion will usually kill the affected animal.
- The most toxic part is the leaves, which are ingested while the animal forages for grasses and other desirable plants growing near tansy ragwort.
- Dried leaves maintain their toxicity but not the bitter taste, and when mixed with hay or other silage it is not possible for the animal to detect or avoid tansy ragwort.
- Cattle and horses are most vulnerable to poisoning but deer, pigs and goats are also at risk.
- Reduces overall pasture productivity and stocking levels in livestock areas.

• First reported in North America in 1913 in British Columbia, reported in Portland, Oregon in 1922 and by the 1950s, had become a serious economic problem west of the Cascades

### Description

- Tap-rooted biennial or short-lived perennial with 2 to 6 foot tall erect stems, branched near the top, with dense clusters of bright yellow daisy-like flower heads.
- Each flower head has 10 to 15 ray flowers (petal-like flowers) surrounding yellow disk flowers and the flower clusters grow near the top of the stem.
- First year plants are dense rosettes with dark green ruffled or lobed leaves on purplish stems.

### Habitat

- Typically found in full sun or partial shade in pastures, on roadsides and horse trails, in forest clear-cuts and on vacant lands.
- More common in disturbed habitats and overgrazed or poorly managed pastures.
- Also common on cleared forestlands, adjacent roadsides and fields, and in unmaintained areas in new developments.

# **Reproduction and Spread**

- Reproduces by seed, usually in the plant's second year. Plants that go to seed die at the end of the season.
- Plants can flower from June to October but typically start to form seeds by mid August.
- Seeds are borne a short distance by wind and longer distances by animals, in hay and on equipment and vehicles. Large plants may produce as many as 150,000 seeds.
- Seeds can be viable for as long as 15 years. Seeds in the upper 2 cm of soil generally are viable for 4 to 5 years. Below 2 cm, the seeds remain dormant longer. Tilling, grazing or other disturbance will cause these dormant seeds to germinate.

## **Local Distribution**

Tansy ragwort is common on roadsides and pastures throughout Jefferson County.

# CONTROL INFORMATION

## **Integrated Pest Management**

- The preferred approach for weed control is Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management requirements of each specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts.
- Use a multifaceted and adaptive approach. Select control methods which reflect the available time, funding, and labor of the participants, the land use goals, and the values of the community and landowners. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate.

# **Planning Considerations**

- Survey area for weeds, set priorities and select best control method(s) for the site conditions and regulatory compliance issues—be aware that tansy ragwort control is required throughout Jefferson County.
- Small infestations can be effectively hand-pulled or dug up. Isolated plants should be carefully removed in order to stop them from infesting a larger area.
- For larger infestations, the strategy will depend on the land use of the site. In pastures, good grazing practices and management of grass and forage species will greatly improve control of tansy ragwort.
- Generally work first in least infested areas, moving towards more heavily infested areas.
- Minimize disturbance to avoid creating more opportunities for seed germination.

# Early Detection and Prevention

- Tansy ragwort is easy to find once it flowers. Monitor pastures, areas used by livestock, horse trails and roadsides for new populations of tansy ragwort in **June and July**.
- Dig up isolated or small populations. If there are more plants than you can remove manually, it may be necessary to treat the area with an appropriate herbicide in the early fall or the following spring.
- Prevent plant spread from existing populations by washing vehicles, boots and animals that have been in infested areas.
- If animals are being moved from an infested pasture to an uninfested pasture, first isolate them for at least five days so that the seeds pass out of the animals' digestive system.

### Manual

- Pulling plants after they have "bolted"—grown a long stem—is usually easier than pulling them in the rosette stage. Typically this is from late May onwards. Because this is a toxic plant, gloves and protective clothing should be worn.
- Plants in flower, or even those with visible flower buds, can form viable seeds **even after they are pulled**. Flower or seed heads should be clipped and bagged and disposed of in the trash. If plants are seeding, it is very difficult to bag the seed heads without dispersing the seeds, so plants should be pulled before seeds mature.
- In areas where mature plants are pulled, there are usually many small rosettes and seeds left in the soil. Carefully search the area for rosettes and dig them up. Roots break off easily and re-sprout with new plants, so use a digging tool. Completely removing plants is easiest when the soil is loose or wet.
- Return to the same location in the following spring and summer to remove plants coming up from seeds already in the soil and continue to monitor the area for several years.

## Mechanical

- Mowing will <u>not</u> control tansy ragwort effectively. Plants are able to re-sprout and flower again in the same season when mowed. Plants that are regularly mowed can persist as short-lived perennials and can flower below the level of the mower.
- Mowing may increase the amount of toxin ingested by the animals because grazing animals are often unable to avoid eating small tansy ragwort plants growing among pasture grasses.

## Chemical

- For control of large infestations herbicide use may be necessary. For tansy ragwort, it is most effective to apply selective broadleaf herbicides in the spring and again in the fall. Herbicide-treated areas should not be mowed for several weeks after application, because it takes some time for herbicides to be absorbed and to become effective.
- Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label. **Follow all label directions**.
- For several years following treatment, monitor areas for new plants germinating from the seed bank.
- Because tansy ragwort is a state-listed noxious weed, control (both manual and chemical) in critical areas is allowed as long as the landowner consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.

### **Specific Herbicide Information**

**Glyphosate:** can effectively control tansy ragwort. However, glyphosate is non-selective (it will kill all plants it touches — broad-leaved plants AND grasses), so treatment with glyphosate should be followed by re-vegetation to prevent tansy ragwort re-infestation.

**Selective Broadleaf Herbicides (such as triclopyr, 2,4-D and dicamba):** most effective when tansy ragwort is growing in a grassy area. Re-treatment the following year is necessary to control late-germinating plants. Continue to monitor for new plants for at least four years after the initial treatment and following any disturbance to the soil such as tilling or construction. **Note** that products containing triclopyr, such as Crossbow, cannot be used in the home landscape. **Always read the label!** 

Specific products that are effective on tansy ragwort include Banvel (dicamba), Weedmaster (a combination of dicamba and 2,4-D), Crossbow (a combination of triclopyr and 2,4-D) or any of the many products containing only 2,4-D.

Apply selective herbicides in the spring, after growth begins but before flowers appear. A 2,4-D+dicamba formulation can be effective at the early flowering stage as well. Fall applications after rains have initiated seed germination can also be effective. Apply herbicide on warm days when winds are low. Check label for specific information on wind and rain guidelines. The addition of a suitable surfactant may improve the control results.

Livestock should be excluded from treated areas for up to 2 weeks because herbicides may make plants more palatable but not less poisonous.

Both dicamba and 2,4-D can harm conifers and have some residual effect in the soil. Do not plant right away after using these products.

The *mention of a specific product brand name in this document is not, and should not be construed as an endorsement or as a recommendation for the use of that product.* Chemical control options may differ for private, commercial and government agency users. **For questions about herbicide use, contact the Jefferson County Noxious Weed Control Program at 360-379-5610 ext 205.** 

#### **Biological**

 Biological control can take up to six years to have a significant impact on the infestation. Population density and the number of flowering plants can be reduced but some plants will always remain when using biological control agents.

- Any biological control plan needs to incorporate another non-chemical control method to be able to prevent all seed production as required by state law.
- Biological control is not recommended or prescribed for small infestations.
- The ragwort flea beetle (*Longitarsus jacobaeae*) larvae mine the roots of the rosettes and kill plants in the spring when they start to bolt. Heavy feeding by adult flea beetles on the leaves can kill rosettes in the fall and winter. Flea beetles are most effective in sunny pastures that do not flood and are below 2400 feet in elevation.
- The larvae of the ragwort seed fly (*Pegohylemia seneciella*) (which resembles a house fly) emerge in June and penetrate and feed on the developing seed heads. They attack up to 40% of the seed heads and consume 75-95% of the seeds. Uneaten seeds often fail to germinate. The seed fly by itself is an ineffective control method.
- The cinnabar moth (*Tyria jacobaeae*) does best in sunny, warm areas at elevations less than 3000 feet where the tansy ragwort densities are greater than 4 per 10 sq. ft. (4/m<sup>2</sup>). It does not do well on the coast and in shady areas under trees or where the plant density is below 1 plant per 20 sq. ft.

# SUMMARY OF BEST MANAGEMENT PRACTICES

#### Small Infestations in Native and/or Desirable Vegetation

- Pull plants by hand if soil is wet; the plants may need to be dug up in dry compacted soil.
- Replace any divots created when removing the plants to lessen the amount of disturbed soil.
- Apply appropriate herbicide with wick wiper or by spot spray to minimize off target injury.
- Monitor site throughout growing season and remove any new plants.
- If using an herbicide in a grassy area, use a selective herbicide to avoid injury to the grass.

## Large Infestations in Grassy Areas

- Mowing is not effective for controlling tansy ragwort. Mowing can be used if the infestation is found later in the year to keep the plants from flowering until an approved control method can be used. Do not mow tansy ragwort that has gone to seed.
- Large infestations can be controlled with herbicides. (See the Chemical section of this BMP).
- Suppression of large infestations of tansy ragwort with a **selective** herbicide will greatly increase grass production, which in turn increases the suppression of tansy ragwort.
- Promote healthy grassy areas by seeding and fertilizing. Use a mix of grass and clover species to improve resistance to tansy ragwort. Fertilize according to the soil needs.
- If grassy area is used for grazing, the area should be managed to promote grass and clover vigor. Graze uniformly and move animals from area to area in a planned

sequence. Avoid grazing when soil is very wet because holes can be opened up to new weed infestations. Some winter grazing by smaller animals can stimulate growth of clover and improve grass health.

- Be sure to monitor for tansy ragwort on edges of pastures and disturbed areas around fences and watering holes. Remove isolated plants before they flower.
- In fields densely infested with tansy ragwort, remove all cattle and horses until the tansy ragwort is reduced to isolated plants.
- If needed, apply a nitrogen fertilizer after the selective herbicide application and then manage grazing so that 4 to 6 inches of grass re-growth remains at the end of the growing season so that grasses can effectively resist re-invasion by the tansy ragwort.
- If utilizing biological control, areas need to be checked to control all flowering tansy ragwort not controlled by the biological control agents.

## **Control in Riparian Areas**

- Survey area and document extent of infestation.
- Focus on manual removal for small infestations if possible.
- Mowing will not control tansy ragwort but it can serve in the interim until more effective control measures can be utilized.
- For larger areas where herbicide use is warranted, apply with a wick wiper or spot spray using low pressure and large droplet size.
- When large areas of weeds are removed, the cleared area needs to be replanted with native or non-invasive vegetation and stabilized against erosion.
- If a non-selective herbicide is used in grassy areas, the area should be re-seeded to prevent reinvasion by weeds.
- Infested areas will need to incorporate a management plan lasting for several years to control plants germinating from the seed bank.
- Because tansy ragwort is a state-listed noxious weed, control (both manual and chemical) in critical areas is allowed as long as the landowner consults with the Jefferson County Noxious Weed Control Board and follows their guidelines.
- Any herbicide application over or near water can be done only by a specially-licensed applicator using an approved aquatic formulation.

# **Control Along Road Rights-of-Way**

- Pull small infestations if possible.
- Spot spray with glyphosate if weeds are in areas with no desirable vegetation.
- If plants are in grassy areas, use a selective broadleaf herbicide; if controlled with a non-selective herbicide, re-seed after control is completed.
- If plants are about to flower, they can be mowed until a more effective control strategy can be used.

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Many thanks to King County's Noxious Weed Control Program for permission to use their material.



**Comprehensive Vegetation Management Plan (VMP)** 

#### Appendix G: Acronyms

- ARC Architectural Review Committee
- (unless otherwise noted this refers to TVHA's ARC)
- BMP Best Management Practices
- CAO Jefferson County's Critical Area Ordinance, 18.22
- CAP TVHA's Common Area Policy
- CC&Rs Covenants, Conditions and Restrictions
- DCD Jefferson County's Department of Community Development
- DOE Washington State's Department of Ecology
- NWCB Jefferson County's Noxious Weed Control Board
- PLFR Port Ludlow Fire and Rescue
- SBCA South Bay Community Association
- TRTP TVHA's Tree Removal and Trimming Policy
- TVHA Timberton Village Homeowners Association
- VMC Vegetation Management Committee
- VMP Vegetation Management Plan