City of Cashmere

Chelan County Flood Control Zone District

May 15, 2018

Cashmere Levee Management Plan

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Introduction

The Cashmere Levee Management Plan is a local approach that intends to balance the needs of flood risk reduction with the habitat needs of salmonids and other aquatic species found within the Wenatchee River system. The intent of this Plan is to provide guidance for local representatives in planning levee maintenance activities, as well as a framework for evaluating the potential impacts of vegetation on levee stability. Encroachments, deferred maintenance, and vegetation can harm the structural integrity of levees, increase the risk to protected areas, obscure visibility, impede access for maintenance and inspection, and/or hinder emergency flood fighting operations. The Cashmere Levee Management Plan will provide basic guidelines to establish an appropriate balance between maintaining flood risk reduction structures (levees) and habitat considerations.

Purpose

This Plan is driven by the City of Cashmere and the Chelan County Flood Control Zone District's desire to ensure all Public Law 84-99 (PL 84-99) levees meet the Army Corps of Engineers (USACE) inspection criteria to retain PL 84-99 program eligibility. Eligibility in this program is important in that it provides for cost sharing of repair activities as a result of an emergency. In order to be eligible, the levee must meet certain standards based on an inspection of levee components, including slope protection, adequate drainage, rip rap, and erosion. Specifically, this Plan will provide a maintenance, vegetation management, and capital improvement plan. Not only should levees be properly operated, they must also be properly maintained in order to reduce flood risk to communities living and working behind these levees.

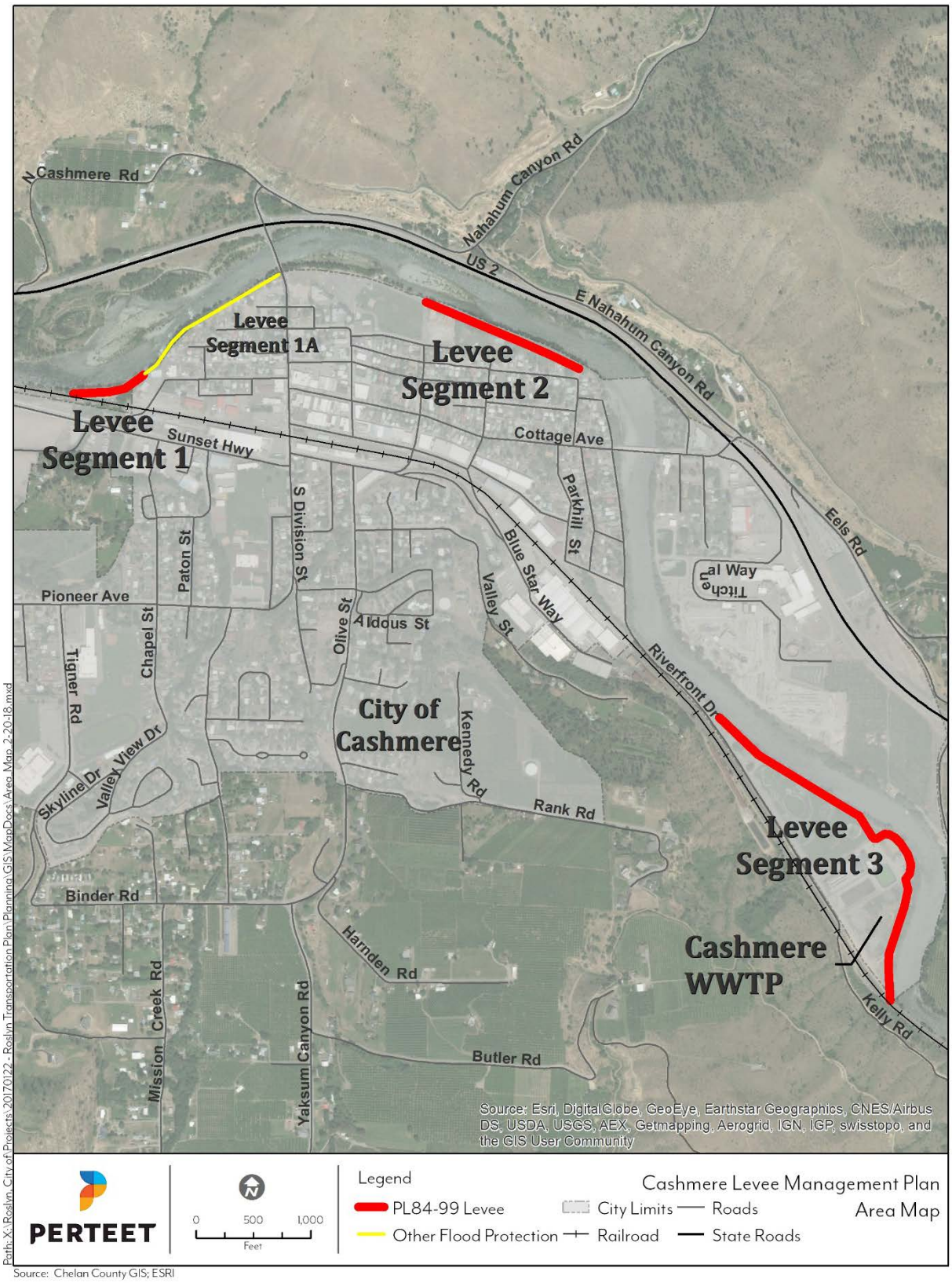
Levee History

The City of Cashmere is protected by three levees which were constructed in the early 1950s by the Washington State Department of Transportation (WSDOT) and USACE for the construction of US 2 Highway through Cashmere (Figure 1). To construct US 2 Highway, WSDOT and USACE had to shift and realign the Wenatchee River south to its current location. Levee Segments 1 and 2 currently protect over $8 million of residential, commercial, and industrial development from Wenatchee River flooding, including a Chelan PUD substation (USACE 2016c, 2016d). The original alignment for Levee Segment 1 continued downstream to the Division Street bridge. Levee Segment 3 currently protects the City's $18 million waste water treatment plant (WWTP), railroad mainline, and Kelly Road. Due to the change in alignment of the river, sediment is deposited along Riverside Park and downstream under the Cottage Avenue bridge. To mitigate the sediment deposition, WSDOT agreed to periodically dredge the river to remove sediment and relieve stress on the levee system. Dredging last occurred in 1993.

PL 84-99 PROGRAM OVERVIEW

Under PL 84-99, the USACE is authorized to provide emergency assistance for levee-related flood response. This program is a necessity for smaller communities throughout the nation with limited funds and resources if an emergency event were to occur. As a result of program participation, emergency assistance can be requested from the USACE by the State to supplement state and local efforts during a flood event. Assistance can be in the form of technical assistance or direct assistance related to preparedness, response activities, and rehabilitation of levees that are in the program. Levees within the PL 84-99 program generally protect life, critical infrastructure, residential areas, and public facilities (USACE).

Figure 1. Area Map.


Cashmere Rd
Nahahum Canyon Rd
US 2
E Nahahum Canyon Rd
Levee Segment 1A
Levee Segment 2
Levee Segment 1
Sunset Hwy
Cottage Ave
Parkhill St
Eels Rd
S Division St
Paton St
Blue Star Way
Valley St
Pioneer Ave
Olive St
Alldous St
Chapel St
Tigner Rd
Riverfront Dr
City of Cashmere
Kennedy Rd
Valley View Dr
Skyline Dr
Rank Rd
Levee Segment 3
Binder Rd
Cashmere WWTP
Harnden Rd
Creek Rd
Mission
Yaksum Canyon Rd
Butler Rd
Kelly Rd
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
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Feet
Legend
PL84-99 Levee
Other Flood Protection
City Limits
Railroad
Roads
State Roads
Cashmere Levee Management Plan
Area Map
Path: X:\Roslyn, City of\Projects\20170122 - Roslyn Transportation Plan\Planning\GIS\MapDocs\Area_Map_2-20-18.mxd
Source: Chelan County GIS; ESRI

Preparedness Assistance

Preparedness activities can occur before, during, or after a disaster. Prior to a disaster, activities include coordinating, planning, training, and conducting response exercises. During and after a disaster, activities include providing guidance and direction related to setting priorities, supporting the Emergency Operations Center, providing equipment and supplies, and developing an operations or recovery plan.

Response Assistance

During a disaster response, USACE can provide direct and technical assistance to local and state agencies. The USACE District Commander must issue a Declaration of Emergency to authorize flood response assistance. This assistance is intended to supplement state and local entities in the flood fight efforts and are intended to be temporary in nature. Technical assistance can include providing qualified personnel to provide flood fighting guidance, inspect levees, or provide data such as hydraulic or hydrologic analysis or geotechnical evaluations. Direct assistance can include providing equipment and supplies, assisting with rescue operations, or directing flood fighting operations. Response assistance may only occur during imminent threats and will terminate when floodwaters recede to bankfull, unless flood conditions are expected to return within 72 hours.

Rehabilitation and Inspection Program

Rehabilitation activities include restoring levees that were damaged during a flood to pre-disaster condition at 20% cost to the local system owner, and 80% cost paid by USACE. This program is essential to smaller communities like the City of Cashmere who do not have the ability to fund expensive restoration projects. In many cases, the cost to restore a levee may exceed the city's annual operating budget. This is one of the major reasons why the City of Cashmere desires to remain eligible for the PL 84-99 program. However, to be eligible for rehabilitation assistance, the levees must be maintained to meet a certain standard. The USACE performs recurring Continuing Eligibility Inspections to identify deficiencies, maintenance issues, and a segment rating. Levees which have been rated as Unacceptable are considered inactive and are not eligible to receive emergency rehabilitation assistance. Eligible levees must meet specific conditions for rehabilitation to occur (USACE 2001).

Continuing Eligibility Inspections occur every two years. Levees are inspected for three general items and 15 embankment items (Tables 1 and 2), and each is given a rating of Acceptable, Minimally Acceptable, Unacceptable, or Not Applicable. After the inspection, the USACE

prepares an inspection report with the overall levee rating and recommendations to address deficiencies.

Table 1. General Inspection Items.

- Operations and maintenance manuals
- Emergency supplies and equipment
- Flood preparedness and training

Table 2. Levee Embankment Inspection Items.

- Unwanted Vegetation Growth
- Closure structures
- Settlement
- Animal control
- Revetments other than riprap
- Sod cover
- Slope stability
- Depressions/rutting
- Culverts/discharge pipes
- Under seepage relief wells/ Toe drainage system
- Encroachments
- Erosion/bank caving
- Cracking
- Seepage
- Riprap revetments and bank protection

CASHMERE LEVEE SYSTEM

Levee Segments 1, 2 and 3 are in the USACE PL 84-99 program and are maintained by the City of Cashmere (Table 3). Levee Segment 1A was removed from the PL 84-99 program due to a lock of access, and is not eligible for any USACE assistance and is not maintained by the City. Levee Segments 2 and 3 are entirely within the incorporated city limits of Cashmere. Levee Segment 1 is only partially within city limits, with the westernmost portion of the levee within the unincorporated county.

Table 3. Levee Inventory.

Levee Segment Name	National Levee Database System ID	National Levee Database Segment ID	Segment Length (miles)	Overtopping Recurrence
Cashmere Levee Segment 1	5505000055	5504000057	.13	0.5% annual chance (200-yr)[1]
Cashmere Levee Segment 1A	NA	NA	NA	NA
Cashmere Levee Segment 2	5505000056	5504000056	.27	0.5% annual chance (200-yr)[1]
Cashmere Levee Segment 3	5505000057	5504000059	.65	10% exceedance with sufficient freeboard[2]

[1] USACE 2016a, 2016b
[2] USACE 2011

Levee System Status

After the 2016 Continuing Eligibility Inspections, Levee Segments 1 and 2 received an overall segment rating of Minimally Acceptable (Table 4). The levees received this rating because the inspection found items that required some type of maintenance. For Levee Segment 1 these items include vegetation and fallen riprap, and for Levee Segment 2 these items include vegetation, encroachment, erosion, settlement, and missing riprap. Levee Segment 3 received an Unacceptable rating after the 2011 inspection, making it ineligible for PL 84-99 rehabilitation program assistance. The levee received the Unacceptable rating due to a lack of riprap on the riverward slopes, leaving the levee vulnerable to erosive river forces. The levee also had a number of maintenance issues identified, including vegetation, missing sod cover, and erosion. After receiving the Unacceptable rating, Levee Segment 3 will not receive further inspections until it undergoes significant repairs or reconstruction to address the deficiencies. After the repairs or reconstruction are completed, a re-inspection can be requested. The most recent levee inspection reports are available from the City of Cashmere or Chelan County Flood Control Zone District.

To return Levee Segment 1A to the PL 84-99 program and be eligible for USACE assistance, full access to the levee needs to be restored, and a re-inspection of the levee requested from USACE.

Table 4. Levee Segment Status.

Levee Segment Name	Inspection Year	Segment Rating	Eligible for PL 84-99 Rehabilitation Assistance
Cashmere Levee Segment 1	2016	Minimally Acceptable	Yes
Cashmere Levee Segment 1A	NA	NA	No
Cashmere Levee Segment 2	2016	Minimally Acceptable	Yes
Cashmere Levee Segment 3	2011	Unacceptable	No

PERMITTING

[PLACEHOLDER] Levee maintenance may require a permit from local or state agencies. Local permits may include a shoreline permit, shoreline exemption, or floodplain development permit, depending on the scope of work to be completed. Work that meets the definition of "normal maintenance and repair" or other exemptions as defined in WAC 173-27-040 may qualify for a shoreline exemption from the City or County, depending on where the work is taking place. Normal maintenance of a levee, as described in this plan, that does not include flood damage repair, expansion of the prism, face, or toe, or the addition of material for armor. In addition to a shoreline exemption, normal maintenance of a levee will generally not meet the National Flood Insurance Program definition of development, and will be exempt from a floodplain development permit.

State permits that may be applicable to levee maintenance may include a Hydraulic Project Approval (HPA) from Washington State Department of Fish and Wildlife and a Section 401 water quality certification from the Department of Ecology.

Federal permits that may be applicable to levee maintenance may include the Army Corps of Engineers Nationwide Permit.

VEGETATION MANAGEMENT

Vegetation on levees can benefit the river ecosystem through creation of habitat and shade. However, vegetation may pose a risk to the structural integrity of the levee. For example, trees may threaten levee safety because roots could serve as a path for seepage, or trees could topple over in a storm or high water event and damage sections of a levee. Vegetation can also impede levee maintenance efforts and restrict the ability to inspect the levee surface and structure (Whatcom County; USACE 2014b).

The Cashmere levees have not had vegetation maintained for numerous years, resulting in the growth of large trees and other vegetation. During the 2014 and 2016 Continuing Eligibility Inspections, vegetation on Levee Segments 1, 2, and 3 was deemed unacceptable by USACE inspectors. The USACE recommends that levee vegetation comply with ETL 1110-2-583, Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures (2014). No recommendations are proposed for Levee Segment 1A until full access is restored and a USACE re-inspection requested.

Prior to 2014, an unacceptable score for vegetation caused the entire levee segment to be rated Unacceptable. In 2014, the USACE released an “Interim Policy for determining eligibility status of flood risk management projects for rehabilitation program pursuant to Public Law 84-99.” Under the interim policy, vegetation on levees is no longer a direct criterion for determining eligibility in the Rehabilitation Program. The USACE will continue to inspect levees but will not withhold rehabilitation funding if vegetation standards are not met. The vegetation rating will be informational only, allowing the individual sponsors to select a vegetation management strategy that meets their specific needs.

Vegetation Management Strategy Summary

To guide vegetation management into the future and balance levee protection with the needs of the riparian habitat, the City of Cashmere proposes to adopt the following strategies, which are discussed in further detail in the sections below.

1. Within the Vegetation Management Zone:

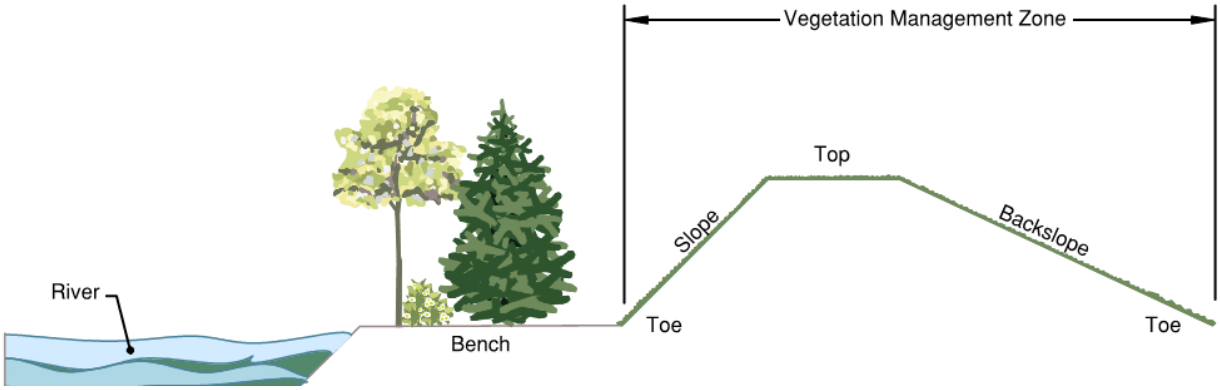
a. Trees along the top of the levee will be removed.
b. Saplings will be removed and mature trees will be thinned along the levee slope.
c. The healthiest trees which contribute the greatest to the riparian habitat will not be removed.

2. Riparian vegetation below the toe of the levee will be preserved.
3. Hazardous trees will be removed on any portion of the levee system.
4. Invasive species will be removed on any portion of the levee system.

Vegetation Management Zone

The Vegetation Management Zone (VMZ) encompasses the levee prism (Figure 2), which is the top of the levee to the toe, including the riverward facing slope and landward facing slope (backslope). The prism includes the structural components of the levee, which when damaged can cause instabilities in the levee. Levee Segment 2 has a bench at the toe of the levee which has created a riparian area for trees to grow and provides some separation of the levee from the river. The bench is not within the VMZ.

Figure 2. Typical Levee Prism.



Tree Management Considerations

As a result of the 2014 USACE Interim Policy and subsequent levee inspections, the City began a discussion with the USACE on the removal of vegetation from the levees. During the first tree survey on Levee Segments 1 and 2, the USACE marked over 150 trees they recommended for removal, encompassing almost all of the trees along the levees. Realizing this was not a feasible option, the City continued discussions with the USACE. During the October 23, 2016 follow-up tree survey, the number of trees recommended for removal was significantly decreased. The tree survey did not include Levee Segment 3 due to the overall condition of the levee.

The follow-up tree survey was conducted by City of Cashmere, Chelan County Flood Control Zone District, and USACE. During this tree survey, USACE inspectors recommended a thinning approach instead of total tree removal as was previously recommended. USACE inspectors identified ten trees for removal on Levee Segment 1 and 27 trees for removal on Levee Segment 2 (Figures 3 and 4). The trees were all located within the levee prism. The trees identified for removal were marked with spray paint and photo documented. USACE inspectors recommended removal of trees over a series of years to reduce visual and habitat impacts. USACE also recommended removing saplings and cutting back the thick shrubs and grasses that were blocking access to or view of the levees.

The USACE inspectors identified trees for removal based on a rapid visual inspection. All trees located on the top of the levee were identified for removal. On the riverward side of the levee, trees along the slope to the toe of levee were identified for thinning. Trees located below the toe of the levee were not identified for removal. Along the levee slope, thinning will primarily occur where trees are grouped in bunches as to minimize riparian and visual impacts. Thinning trees can have a beneficial impact on the remaining trees, by reducing competition for light and nutrients and allowing the existing trees to grow larger and increase their canopy size (Emmingham 1983). It is recommended that an arborist be retained to select the best trees for thinning, to allow the healthiest and most beneficial trees to remain. Although the USACE recommends tree stump and root system removal to avoid future voids and seepage routes in the levee due to rot, unless recommended otherwise, removed trees will be cut close to the ground with the root system left in place. If the tree does not pose a pullout or scour hazard to the levee, it may be retained as a wildlife snag instead of being completely removed. The remaining tree stumps and snags will be visually inspected each year for signs of rot and will be removed if the inspection identifies potential risk to the levee system.

Trees and shrubs along the backslope of Levee Segment 2 were also identified for removal. The backslope of this levee has been incorporated into many adjacent backyards, and some residents have landscaped the backslope, including planting shrubs and trees. Trees located along the top of the levee will be removed. In addition, further assessment of the impacts of vegetation on the levee drainage is required, as vegetation may impact the ability of water to drain from the inside of the levee after a flood event.

Grass and Shrub Management Considerations

Grasses and shrubs within the VMZ will be removed or thinned where large sections of the levee are not visible or not accessible due to overgrowth. Because grasses and shrubs do not have as great an impact on levee stability as trees, removal and thinning will be limited only to the extent required to achieve visibility and accessibility of the levee for certification inspection. Removal and thinning will be accomplished by mechanical or hand removal, depending on

accessibility. Mechanical removal may include mowers and chainsaws, and hand removal may include weed wacking and pruning.

Hazardous Tree Removal

While vegetation can provide many benefits to both habitat and levee integrity, in some situations the risk associated with a tree on the levee prism may justify its removal. Site-specific tree risk assessments will be needed for determining whether potential hazardous trees on the levee warrant removal to preserve the integrity of the levee. Once a tree on a levee falls, the pit created by the rootball is susceptible to erosion and will likely result in damage to the levee if it is not stabilized. Cutting the tree before it falls will reduce the need for a future, more invasive and expensive repair project.

Hazardous trees can be either a tree that is unhealthy, unstable, or at the end of its life cycle, or a tree that poses a risk to the levee system. Hazardous trees that pose a risk to the levee should be removed as soon as possible after identification.

The levee trees should be inspected annual by looking at the following signs of a potential hazardous tree:

1. Is the tree unhealthy or dying?
    - Look for symptoms, including branch dieback, leaf spots, color changes, or defoliation, damaged bark, and conks (mushrooms) growing on the tree.
        - If the tree does not pose a pullout or scour hazard to the levee or a health hazard to the remaining vegetation, it may be retained as a wildlife snag.
2. Is the tree unstable or showing signs of instability?
    - Look for damage to the trunk, such as cracks or cavities, scouring around the root system, or leaning.
    - Is the tree located below the levee toe?
        - If the tree is below the toe, will it cause damage to the levee if it falls? If not, only remove the tree if it shows signs of disease.
3. Are there signs of erosion, seepage, or slope instability in the area supporting the tree?

If any of the following signs are found and there is any question as to the hazard level of the tree, the tree should be inspected by an arborist who can make treatment or removal recommendations, including whether the root system should be removed or left in place (PNW-ISA 2017).

Invasive Species

The majority of the Cashmere levee system is on land owned by the City of Cashmere. City maintenance crews manage invasive species throughout the City, including on the levees. The City will notify the County if invasive species become present on the County portion of Levee Segment 1.

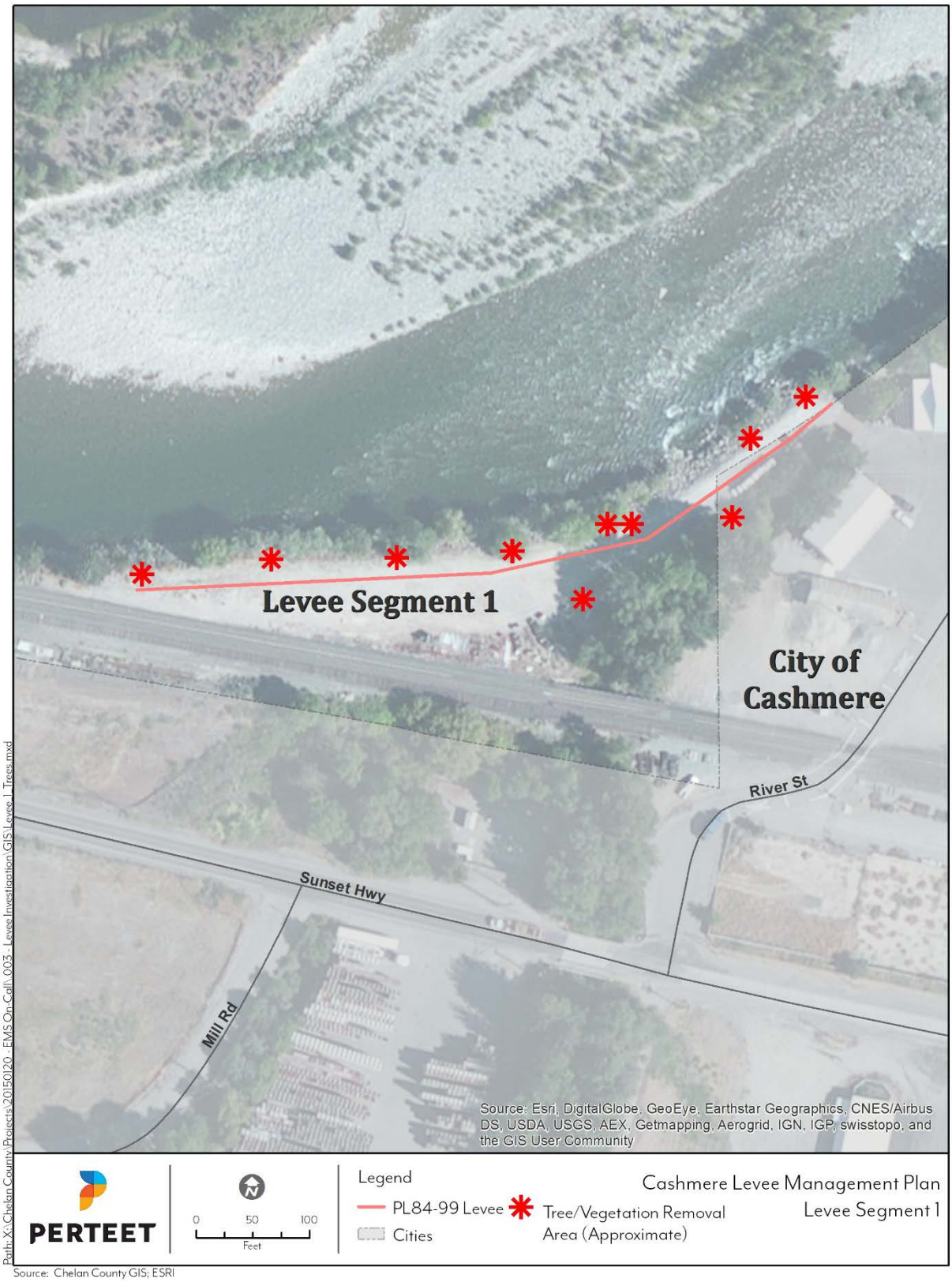
Vegetation Management Plan

The Vegetation Management Plan, detailed in Table 5, identifies mature tree removal activities during the first four years that will require a contractor. After trees are removed, maintenance will be primarily focused on removal of saplings and maintaining shrubs and grasses to permit visibility and accessibility to the levees.

Table 5. Vegetation Management Plan.

Vegetation Management Plan	
Levee Segment 1	
Annual	Maintain grasses and shrubs to prevent overgrowth. Remove saplings. Monitor for hazard trees, rotten tree stumps, and invasive species.
Year 1	Remove five (5) large trees. Trim or remove grasses and shrubs.
Year 2	Remove five (5) large trees. Trim or remove grasses and shrubs.
Levee Segment 2	
Annual	Maintain grasses and shrubs to prevent overgrowth. Remove saplings. Monitor for hazard trees, rotten tree stumps, and invasive species.
Year 1	Remove five (5) large trees and grasses and shrubs. Remove landscaping elements along top of levee.
Year 2	Remove five (5) large trees. Trim or remove grasses and shrubs.
Year 3	Remove ten (10) large trees. Trim or remove grasses and shrubs.
Year 4	Remove seven (7) large trees. Trim or remove grasses and shrubs.
Levee Segment 3	
Annual	Maintain grasses and shrubs to prevent overgrowth. Monitor for hazard trees and invasive species.

Figure 3. Levee Segment 1.


Levee Segment 1
City of Cashmere
River St
Sunset Hwy
Mill Rd
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
PERTEET
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Feet
Legend
PL84-99 Levee
Cities
Tree/Vegetation Removal Area (Approximate)
Cashmere Levee Management Plan
Levee Segment 1
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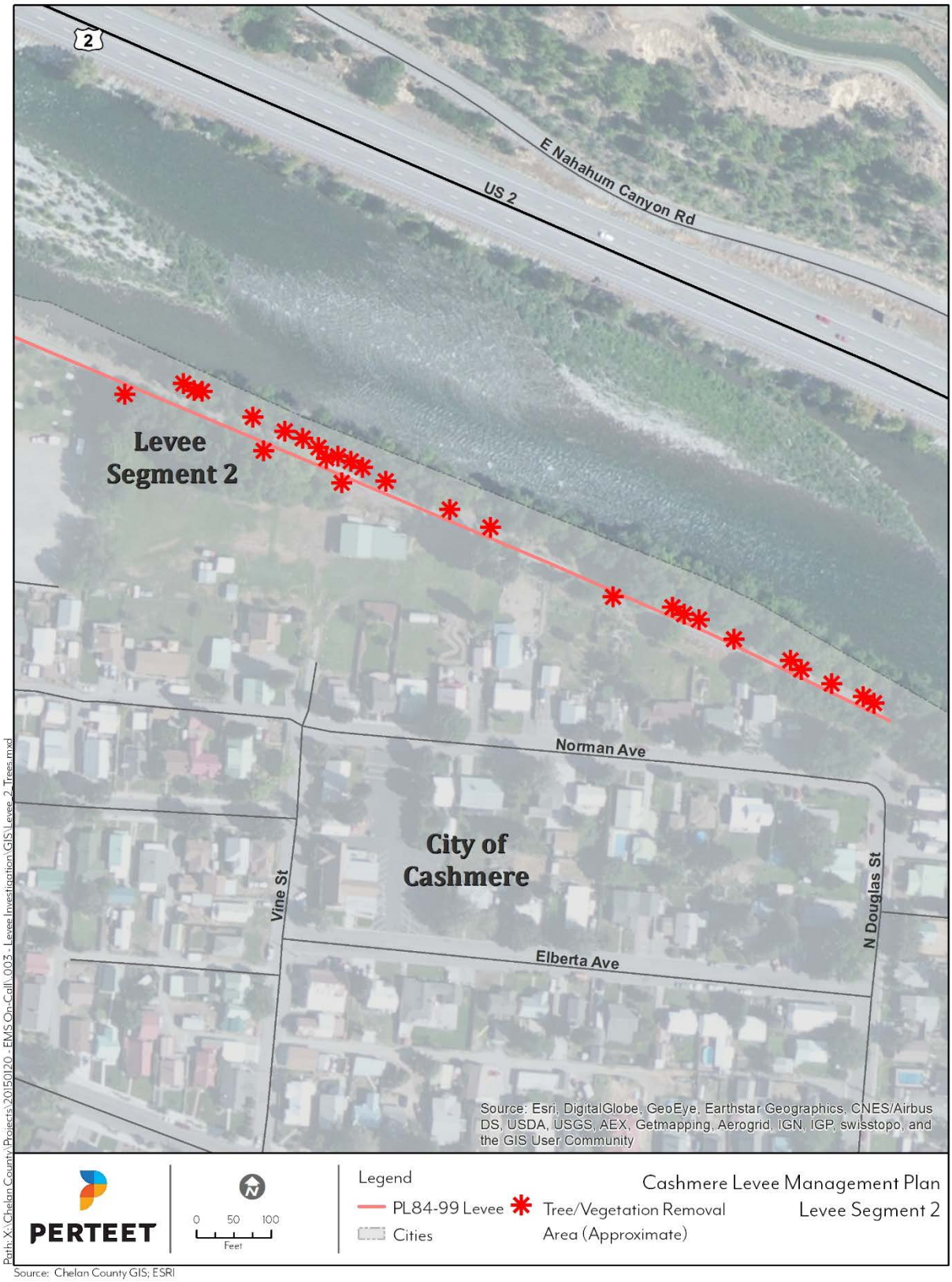
Source: Chelan County GIS; ESRI

Figure 4. Levee Segment 2.


2
US 2
E Nahahum Canyon Rd
Levee Segment 2
Norman Ave
City of Cashmere
Vine St
N Douglas St
Elberta Ave
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
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PL84-99 Levee
Cities
Tree/Vegetation Removal Area (Approximate)
Cashmere Levee Management Plan
Levee Segment 2
Path: X:\Chelan County Projects\20150120 - EMS On-Call\003 - Levee Investigation\GIS\Levee_2_Trees.mxd
Source: Chelan County GIS; ESRI

MAINTENANCE, DEFICIENCIES, AND CAPITAL IMPROVEMENT PLAN

Regular maintenance to Levee Segments 1 and 2 is necessary for ensuring the continued eligibility in the PL 84-99 program. Many of the problems that can be fixed by regular maintenance may grow into costly and complicated issues if they are not addressed, jeopardizing the eligibility of the levee for restoration funding and reducing the protection provided by the levee.

Levee Segment 3 is currently in a condition that will require significant repairs and reconstruction to become eligible in the PL 84-99 program. The levee serves as the right bank of the Wenatchee River, and reconstruction would involve work below the ordinary high water mark and in-water, complicating the project by requiring significant environmental permitting and increasing the cost. In addition, the levee repair would most likely need to be funded by local funds.

An alternative approach recommended by the USACE inspectors is to construct a new levee set back from the existing levee. Setback levees have numerous benefits both financially and environmentally. Because setback levees generally improve habitat conditions and help to reduce downstream flooding, there are more opportunities to receive grant funding for the project. A setback levee to replace Levee Segment 3 would allow the existing vegetation to remain and increase the protection to the City's WWTP. A setback levee to replace Levee Segment 3 is the preferred alternative.

No recommendations are proposed for Levee Segment 1A until full access is restored and a USACE re-inspection is requested.

Maintenance and Operations Plan

Maintenance includes those items that can be addressed on an annual basis and are considered minor issues. Inspection and identification of maintenance issues will be led by the City of Cashmere staff. The City will notify the County if issues are identified on the County portion of Levee Segment 1. Annual inspections and maintenance of Levee Segments 1, 2 and 3 include:

- Inspect culverts in Levee Segment 2. Perform video inspection every five years as required.
- Check for erosion or settlement.
- Monitor for fallen riprap.
- Check for animal activities.
- Implement Vegetation Management Plan.

In addition to annual maintenance performed by the City and County, WSDOT provides periodic dredging of the river channel to remove sediment deposited due to the change of alignment in the river system as a result of highway construction. According to Cashmere staff, the dredging is performed as routine maintenance to allow the river to flow unimpeded past the City, relieve stress from the levee, and avoid direct force of the river on the levee. Dredging last occurred in 1997.

Deficiency Repair Plan

Deficiencies are those items identified within the PL 84-99 Continuing Eligibility Inspections requiring repairs. These items have a high priority for implementation in order to correct problems which may jeopardize program eligibility and require more expensive repairs if not addressed. Because construction of a new setback levee is the preferred alternative for Levee Segment 3, no deficiencies are identified for the segment. Table 6 details the deficiencies identified on Levee Segments 1 and 2.

Table 6. Deficiency Repair Plan.

Deficiency Repair Plan
Levee Segment 1
Repair riprap which has fallen towards toe along Mission Creek. Recommendation includes regrading the levee slope and replacing the fallen riprap.
Levee Segment 2
Educate and work with the landowner who built stairs, landscaped, and installed an irrigation system along the backslope of levee. Improvements need to be removed. This development also restricts adequate drainage south of levee.
Foot traffic from trail to river has created erosion and is beginning to undermine the paved trail. Recommendations include regarding and stabilizing slope, and applying gravel to levee surface or constructing stairs to direct foot traffic.
Restore missing riprap at station 9+00.

Capital Improvement Plan

Capital Improvements are major projects requiring significant investment. With continued annual maintenance, no capital improvements should be required to Levee Segments 1 and 2. The Capital Improvement Plan includes constructing a setback levee to replace Levee Segment 3.

Funding Sources

Very few funding sources are available for levee construction and repairs. If a project has a measurable habitat enhancement component, as many levee setback projects do, there may be additional habitat focused funding sources come available. Known funding sources are outlined in Table 7.

Table 7. Funding Sources.

Funding Sources	
Local	
City	Annual operating budget
County	Flood Control Zone District annual assessment
State	
Department of Ecology	Floodplains by Design: Provides bi-annual funding for capital projects which have both a flood reduction and habitat enhancement component. Funding is tied to the state capital budget.
Federal	
Army Corps of Engineers	Section 205: Provides funding to non-federal project sponsors to plan and construct flood reduction projects, including levees. The program will pay up to $100,000 for feasibility study, and 50% of the costs over $100,000, and 65% of the cost of design and construction. The project sponsor is responsible for the remaining 35%. After the levee is constructed, the project sponsor must assume operation and maintenance of the levee. PL 84-99: Provides funding to repair and rehabilitate levees damaged by flooding to their pre-disaster status. The program requires a 20% match. The program also provides disaster response activities to reduce or prevent damage to the levee system during flooding.

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