STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
PO Box 47775, Olympia, WA 98504-7775 • 360-407-6300

October 30, 2024

Sager Development Inc.
Attn: William Sager
PO Box 44428
Tacoma, WA 98448

Re: Administrative Order No. **23324** to permanently fill/impact 0.09 acre of non-federally regulated wetlands, which are waters of the state, to construct McKinley Estates in Pierce County, Washington

Dear William Sager:

The Department of Ecology (Ecology) received your Joint Aquatic Resources Permit Application (JARPA) on August 6, 2024, requesting authorization for proposed work in non-federally regulated wetlands, which are waters of the state. Ecology has determined that the proposed work, as conditioned by the enclosed Order, will comply with applicable provisions of Chapter 90.48 RCW and other applicable requirements of state law.

This approval is subject to the conditions contained in the enclosed Order. **You must familiarize yourself with and abide by the conditions in the Order, including all notification requirements.** If you have any questions, please contact Zach Meyer at 360-481-9885 or zachary.meyer@ecy.wa.gov. The enclosed Order may be appealed by following the procedures described in the Order.

Sincerely,

Maria Sandercock**,** Section Manager
Southwest Regional Office
Shorelands and Environmental Assistance Program

Enclosures (2)

By Certified Mail #9489 0090 0027 6085 7509 97

Sent via email to: bill@sagerfamilyhomes.com

e-cc: Eamonn Collins, Wetland Resources Inc, eamonn@wetlandresources.com
Zach Meyer, Ecology
Erin Hanlon Brown, Ecology
ecyrefedpermits@ecy.wa.gov

In The Matter of Issuing an Administrative Order to Sager Development Inc. pursuant to RCW 90.48.120 and WAC 173-201A

Sager Development Inc.
Attn: William Sager
PO Box 44428
Tacoma, WA 98448

Order No.	23324
Corps Reference No.	NWS-2023-672
Site Location	McKinley Estates, located within wetlands at 7803 &7909 East McKinley Ave, Tacoma, Pierce County, Washington.

This is an Administrative Order requiring Sager Development Inc. to comply with Chapter 90.48 RCW and the rules and regulations of the Department of Ecology (Ecology) by taking certain actions which are described below. RCW 90.48.120(2) authorizes Ecology to issue Administrative Orders requiring compliance whenever it determines that a person has violated or creates a substantial potential to violate any provision of Chapter 90.48 RCW.

The U.S. Army Corps of Engineers (Corps) issued a jurisdictional determination on July 3, 2024, concluding that Wetlands A, B, C, D and Swale 1 are not waters of the U.S. On August 6, 2024, Ecology received a request to impact 0.09 acres of non-federally regulated wetlands, which are waters of the state, to construct McKinley Estates in Pierce County. The project is located at 7803 &7909 East McKinley Ave, Tacoma, SW ¼ of Section 27 in Township 20 North, Range 03 East, Pierce County, and WRIA 10.

This Administrative Order authorizes 0.09 acres of Category IV wetland impacts at the project location. Mitigation for this proposal will consist of 4,132 square feet of Category III wetland creation, 8,254 square feet of Category III wetland enhancement, 25,231 square feet of perimeter buffer non-wetland enhancement and 20,386 square feet of perimeter buffer wetland enhancement for a total area of mitigation of 58,003 square feet and all other actions as proposed in the Mitigation Plan – Sager Development Inc. – McKinley Estates dated July 15, 2024 in the approximate location of 7803 and 7909 East McKinley Avenue, Tacoma, Pierce County.

For purposes of this Order, the term “Project Proponent” shall mean Sager Development Inc. and its agents, assigns, and contractors.

In view of the foregoing and in accordance with RCW 90.48.120(2):

IT IS ORDERED that the Project Proponent shall comply with the following:

A. General Conditions:

1. The Project Proponent shall construct and operate the project in a manner consistent with the project description contained in the JARPA received by Ecology on August 6, 2024, or as otherwise approved by Ecology.

2. For purposes of this Order, all submittals required by its conditions shall be sent to fednotification@ecy.wa.gov and cc to zachary.meyer@ecy.wa.gov. Any submittals shall reference Order No. 23324.

3. The Project Proponent shall provide access to the project site and mitigation site upon request by Ecology.

4. Copies of this Order shall be kept on the job site and readily available for reference by Ecology personnel, the construction superintendent, construction managers and forepersons, and state and local government inspectors.

5. Nothing in this Order waives Ecology's authority to issue additional orders if Ecology determines further actions are necessary to implement the water quality laws of the state. Further, Ecology retains continuing jurisdiction to make modifications hereto through supplemental order, if additional impacts due to project construction or operation are identified (e.g., violations of water quality standards, downstream erosion, etc.), or if additional conditions are necessary to further protect the public interest.

6. The Project Proponent shall ensure that all appropriate project engineers and contractors at the project site have read and understand relevant conditions of this Order and all permits, approvals, and documents referenced in this Order.

7. To transfer this Order to a new owner or operator the Project Proponent shall:

    a. Complete a Request for Transfer of Order with a specific transfer date of the Order's obligations, coverage, and liability and submit it to Ecology per condition A.2. Link to form: https://apps.ecology.wa.gov/publications/SummaryPages/ECY070695.html;

    b. Provide a copy of this Order to the new owner or operator; and

c. The transfer is not considered valid until the Project Proponent receives written notification from Ecology that the transfer has been approved.

8. The Project Proponent is responsible for obtaining all other permits, licenses, and certifications that may be required by federal, state, local or tribal authorities.

B. Notification Requirements:

1. The Project Proponent shall provide written notification to Ecology in accordance with condition A.2. for the following activities:

   a. Immediately following a violation of the state water quality standards or when the project is out of compliance with any condition of this Order.

2. If U.S. Army Corps of Engineers (Corps) determines the proposed project requires a Federal permit, the Project Proponent shall inform Ecology immediately in order to receive the appropriate authorization.

C. Wetland Mitigation Conditions:

1. The Project Proponent shall mitigate wetland impacts as described in the Mitigation Plan – Sager Development Inc. – McKinley Estates prepared by Wetland Resources Environmental Consulting, and dated July 15, 2024, or as required by this Order or revised and approved by Ecology.

2. The Project Proponent shall provide a status report on the mitigation construction to Ecology 13 months from the date of permit issuance. Annual status reports on mitigation construction are required until mitigation construction is complete.

3. The Project Proponent shall have a wetland professional at the wetland mitigation site to supervise during construction and planting.

4. Unless otherwise approved by Ecology in writing, the Project Proponent shall begin the compensatory mitigation project before, or concurrent with, impacting wetlands or Ecology may require additional compensation to account for additional temporal loss of wetland functions.

5. Split rail fencing shall be placed on the outer edge of the wetland buffers onsite. Signs should be installed at the intervals necessary so that they are visible from any potential access points and at a maximum interval of 100’.

6. All remaining wetlands onsite shall be appropriately buffered per the Pierce County Critical Area Ordinance requirements.

7. The Project Proponent shall follow the steps below to record a deed notification (see Attachment A: Wetland Notice for Deed Notification for an example) or other approved legal site protection mechanism for the McKinley Estates Mitigation Site:

   a. Send the draft site protection mechanism to Ecology for review prior to recording and make edits based on Ecology's comments.

   b. Record, on the mitigation site property deed, a description of the mitigation area identified in the final mitigation plan and a site map from the final wetland mitigation plan showing the location of wetlands and their buffers.

   c. Record these documents with the County Recording Office, Registrar of Deeds, or other official responsible for maintaining records for, or interest in, real property.

   d. Submit proof of this recorded documentation to Ecology within 180 days of this Order, unless otherwise approved by Ecology.

D. Timing

1. This Order is valid until the Project Proponent meets all its requirements and the Project Proponent has received written notification from Ecology to that effect.

Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

Your right to appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt. The appeal process is governed by RCW 43.21B and WAC 371-08. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do all of the following within 30 days of the date of receipt of this Order:

- File your notice of appeal and a copy of this Order with the PCHB (see filing information below). "Filing" means actual receipt by the PCHB during regular business hours as defined in WAC 371-08-305 and -335. "Notice of appeal" is defined in WAC 371-08-340.
- Serve a copy of your notice of appeal and this Order on the Department of Ecology by mail, in person, or by email (see addresses below).

You must also comply with other applicable requirements in RCW 43.21B and WAC 371-08.

Filing an appeal

Filing with the PCHB

For the most current information regarding filing with the PCHB, visit: https://eluho.wa.gov/ or call: 360-664-9160.

Service on Ecology

Street Addresses:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Addresses:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

Contact information

Please direct all questions about this Order to:

Zach Meyer, Shorelands Technical and Regulatory Lead
Department of Ecology
360-481-9885
zachary.meyer@ecy.wa.gov

More information

- **Pollution Control Hearings Board Website**
  https://eluho.wa.gov/
- **Chapter 43.21B RCW - Environmental and Land Use Hearings Office – Pollution Control Hearings Board**
  http://app.leg.wa.gov/RCW/default.aspx?cite=43.21B

- **Chapter 371-08 WAC – Practice And Procedure**
  http://app.leg.wa.gov/WAC/default.aspx?cite=371-08

- **Chapter 34.05 RCW – Administrative Procedure Act**
  http://app.leg.wa.gov/RCW/default.aspx?cite=34.05

- **Chapter 90.48 RCW – Water Pollution Control**
  http://app.leg.wa.gov/RCW/default.aspx?cite=90.48

- **Chapter 173-201A WAC – Water Quality Standards for Surface Waters of the State of Washington**
  http://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A

Signature

Dated this 30th day of October, 2024 at the Department of Ecology, Lacey, Washington.

Maria Sandercock**,** Section Manager
Southwest Regional Office
Shorelands and Environmental Assistance Program

Attachment A

Wetland Notice for Deed Notification
(See Condition C.7)

McKinley Estates
Ecology Administrative Order #23324

Tax Parcel Number: _____
Legal Description: _____
Legal Owner: _____

NOTICE: This property contains wetlands as defined by Chapter 36.70A030(21) RCW, Chapter 90.58.030 (2)(h) RCW and WAC 173-201A-020. The property was the subject of an Ecology action under Chapter 90.48.260 RCW or Chapter 90.48.120(1) RCW.

Ecology Order #:_____, issued on _____,20___
To (Responsible Party Name):_____
For (Project Name):_____

Restrictions on use or alteration of the wetlands may exist due to natural conditions of the property and resulting regulations. A site map indicating the location of wetlands and their buffers is attached hereto.

EXECUTED this _____ day of _____, 20 ____.

_____

_____

State of Washington)
County of _____)

I certify that I know or have satisfactory evidence that _____ signed this instrument and acknowledged it to be his/her free and voluntary act for the uses and purposes mentioned in this instrument.

GIVEN under my hand an official seal this _____ day of _____, 20 _____.

_____

NOTARY PUBLIC in and for the state of Washington,
residing at _____.
(Amended by Ord. 11200 § 50 (part), 1996)

APPENDIX C:
MITIGATION PLAN
AND
WATERSHED APPROACH TABLES

Revision 1: July 15, 2024

Sager Family Homes
Attn: Kirk Lisitsyn
PO Box 44428
Tacoma, WA 98448

RE: MITIGATION PLAN – SAGER DEVELOPMENT INC. - MCKINLEY ESTATES

Sager Development INC., hereafter referred to as the applicant, is proposing the construction of a 50-lot short plat. The development site is comprised of approximately 13.02-acres and is located at 7803 and 7909 East McKinley Avenue in unincorporated Pierce County. The properties are developed with two single-family residences, several outbuildings, and a dilapidated barn. The site is in use as a hobby farm and most un-developed areas are regularly maintained. Three depressional wetlands (Wetlands A, B, and C) and one slope wetland (Wetland D) are located on site. Wetland A is in a maintained, partially forested area in the south, Wetland B is in an unmaintained forested area in the east, Wetland C is in a maintained isolated depression in the center of the site, and Wetland D is in a maintained pasture area in the northwest.

The development proposal requires fill of Wetlands C and D, two Category IV wetlands with habitat scores of 3, to consolidate development, provide adequate public road circulation, and avoid impacting higher value critical areas. As a result, the development will be located as far from Wetlands A and B as possible. The applicant will mitigate for the wetland impacts through a combination of wetland creation and wetland enhancement. Overall, this development approach will result in significant wetland enhancement and will minimize overall impacts on the subject property.

EXISTING SITE CONDITIONS

The northern parcel of the two-parcel assemblage (7803 McKinley Ave) is developed with a single-family residence in the southwest, two detached garages, and two detached sheds. The area around the house is vegetated with maintained lawn and solitary Douglas-fir trees (*Pseudotsuga menziesii*). A fence separates the house and lawn area from the eastern and northern portions of the parcel. The area east of the fence is used as a pasture for cows and horses. The northeastern portion of the pasture area is forested with a canopy of Douglas-fir trees, but otherwise vegetation is a mixture of maintained and grazed Himalayan blackberry (*Rubus armeniacus*) and emergent species. The

southern property (7909 McKinley Ave) is developed with two dilapidated structures, a house and barn, both in the western portion of the parcel. The eastern part of the parcel is used part time as additional pasture area for the aforementioned cows and horses. Vegetation within the southern parcel is comprised of maintained lawn and dense Himalayan blackberry in pasture areas and around the existing structures. Three areas of native forest and dense shrub vegetation are present in the northeast, middle, and southern portions of the property. The canopy in these areas include black cottonwood (*Populus balsamifera*), Douglas-fir, western red cedar (*Thuja plicata*), and red alder (*Alnus rubra*).

The applicant has received a jurisdictional determination from the U.S. Army Corps of Engineers (USACE). The jurisdictional determination has determined that none of the on-site wetlands fall within jurisdiction of the USACE. Descriptions of Wetlands C and D are provided below for reference.

Wetland C (3,111 square feet)
HGM Class: *Depressional*
Cowardin Classification: *Palustrine, Emergent, Nonpersistent, Seasonally Flooded/Saturated*
2014 DOE Wetland Rating: *Category IV (15 points), low habitat score (3 points)*

Wetland C is a small depressional wetland located within an isolated depression in the center of the site, approximately 240 feet north of Wetland A and 100 feet west of Wetland B. The wetland features a canopy of red alder and an understory that includes Himalayan blackberry, vine maple, reed canarygrass, and creeping buttercup (*Ranunculus repens*; FAC). Dominant vegetation within Wetland C is rated as facultative (FAC) or wetter and therefore the plant community in the wetland is considered hydrophytic.

The top layer of soil within Wetland C is typically very dark brown (10YR 2/2) sandy loam and extends to a depth of seven inches. The sublayer extends to a depth of at least 18 inches and is also very dark brown (10YR 2/2) sandy loam; however, dark yellowish brown (10YR 3/6) redoximorphic concentrations are present in the matrix. Soils within Wetland C were saturated beginning 10 inches below the soil surface and the water table was observed at a depth of 15 inches during the December site investigation.

Wetland D (1,016 square feet)
HGM Classification: Slope
Cowardin Classification: *Palustrine, Emergent, Nonpersistent, Seasonally Flooded/Saturated*
2014 DOE Wetland Rating: *Category IV (15 points), low habitat score (3 points)*

Wetland D is a small slope wetland located within the pasture area in the northwest corner of the site. Species observed within Wetland D include multiple clover species including white clover (*Trifolium repens*; FAC) and maintained pasture grasses (*Agrostis* spp.; assumed to be FAC). Due to the maintained nature of the pasture, species identification of some species was not possible. Unidentified species were assumed to be rated as facultative. Using this assumption, dominant vegetation within Wetland C is rated as facultative (FAC) or wetter and therefore the plant community in the wetland is considered hydrophytic.

The top 14 inches of soil within Wetland D have are generally black (10YR 2/1) sandy loam with dark yellowish brown (10YR 3/6 and 10YR 4/4) redoximorphic concentrations present in the matrix. Subsoils are typically dark grayish brown (10YR 4/2) sandy loam with dark yellowish brown (10YR 3/6) redoximorphic concentrations present in the matrix. Soils within Wetland D were saturated beginning 10 inches below the soil surface during the March 2024 site investigation and the water table was observed beginning 12 inches below the surface.

Pursuant to Pierce County Code (PCC) 18E.20.035, mitigation is not required for impacts to Category IV wetlands less than 10,000 square feet in size which are not contiguous with a freshwater or estuarine system, located within shoreline jurisdiction, or part of a mosaic wetland complex. Wetland C is located within an isolated depression that has no outlet and therefore is not part of a mosaic wetland complex and has no connection to other freshwater systems. Wetland D is a slope wetland that has no connection to other wetland, freshwater, or estuarine systems. No part of the site is located within shoreline jurisdiction. Due to the size, rating, and physical condition of Wetlands C and D, Pierce County does not require mitigation to compensate for the proposed wetland fill. However, the applicant has provided additional mitigation on-site to compensate for impacts to Wetland C, as required by the Department of Ecology.

PERIMETER BUFFER REQUIREMENTS

The proposed mitigation is in the southern portion of the project site and has been located to meet the perimeter buffer standards described in the Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance Version 2, dated April 2021 (Ecology Publication 21-06-003).

The proposed development is located north of the mitigation site and is comprised of high density residential development. Land use to the west of the parcel is comprised of high-density residential development and the right-of-way for East McKinley Avenue, a busy roadway. These land uses meet the criteria to be considered high impact land uses per Table 6C-1. Land use to the east is comprised of an unused railway and low-density residential development. The proposed site usage east of the wetland mitigation area is an open space with a maintained walking trail. Land use south of the site is comprised of low-density residential development and a maintained utility corridor. Land uses to the east and south of the site meet the criteria to be considered moderate impact land uses. Per Table 6C-2, high and moderate intensity land uses adjacent to Category III wetlands with low habitat scores require 80- and 60-foot perimeter buffers respectively. The proposed wetland creation, wetland enhancement, and perimeter buffer are depicted in Attachment B of this report.

MITIGATION PLAN

The conditions of the subject property provide significant opportunity for wetland creation and enhancement adjacent to and within Wetland A. Wetland A is partially forested and a majority of the wetland unit is maintained. Where routine maintenance of the wetland does not occur, dense Himalayan blackberry dominates understory vegetation. These conditions have limited species richness and structural diversity within the wetland. The topography within and immediately east of Wetland A also lend themselves towards the possibility of wetland creation. Wetland A is located in a depression at the toe of gradually sloping areas to the east and west. Expanding the depression

will not reduce the basin of the wetland or dewater the existing unit and will improve the water quality and hydrologic functions provided by the wetland. The proposed wetland creation will convert buffer areas of low-functioning maintained pasture into wetland areas. As compensatory mitigation for filling Wetland C, the applicant is providing wetland creation and enhancement. Per Table 6B-2 of the Wetland Mitigation in Washington State Part 1: Agency Policy and Guidance Version 2, dated April 2021, impacts to Category IV wetlands may be mitigated for through a combination of wetland creation at slightly greater than a 1:1 ratio and wetland enhancement at a 2:1 ratio.

The majority of on-site buffer areas are regularly maintained and are vegetated with species typically found in pasture areas. Where pasture species are not present, the understory is dominated by Himalayan blackberry and English ivy. These conditions have severely limited the structural diversity and species richness within buffer areas.

Table 1. Mitigation Types and Ratios

Action	Impact Area	Compensatory Mitigation
Wetland Impact	4,127 square feet of Category IV Wetland fill	4,132 square feet of Category III Wetland Creation
		8,254 square feet of Category III Wetland Enhancement

The proposed wetland enhancement and wetland creation within a Category III wetland will increase species richness, structural diversity, and plant density within the wetland. Subsequently, the hydrologic, water quality, and wildlife functions provided by the wetland will be improved. Dense native vegetation will reduce flow rates within the wetland and filter pollutants from the water column. Reduced flow rates will also allow particulates in the water column to fall out of suspension before reaching downstream areas. Improved species richness and structural diversity will provide unique opportunities to wildlife that are not readily available in urban landscapes. Improved access to resting, nesting, and foraging sites will improve the overall habitat provided to wildlife that utilize the site and surrounding area.

PROJECT SPECIFIC GOALS

The main goals of this mitigation plan are to replace the functions and values lost through wetland fill. Specifically, the applicant will replace lost wildlife habitat, stormwater storage, and water quality functions. To achieve this, two specific goals have been established and are listed below. The wetland enhancement, and wetland creation area has been designed to convert pasture wetland areas into a scrub/shrub and eventual forested portion of Wetland A.

Goal 1. Compensate for impacts to water quality and hydrologic functions through creation of additional wetland area contiguous with Wetland A.

- Create 4,132 square feet of wetland area contiguous with the existing boundary of Wetland A, thereby replacing impacted depressional wetland areas with in-kind mitigation.
- Enhance the created wetland area by installing native trees and shrubs.

Goal 2. Improve the overall level of wildlife habitat and wetland functions in the mitigation area, through enhancement of Wetland A.

- Enhance 8,254 square feet of currently maintained wetland area by removing invasive species and installing native trees and shrubs.

Goal 3. Protect the wetland creation and enhancement areas through establishment of a densely vegetated perimeter buffer.

- Enhance an additional 16,462 square feet of wetland area surrounding the proposed 8,254 square-foot wetland enhancement area.
- Enhance 28,773 square feet of buffer area that surround the proposed mitigation site.

Wetland Enhancement

The applicant is proposing a total of 24,518 square feet of wetland enhancement. This area is comprised of 4,132 square feet of wetland creation, 8,254 square feet of direct mitigation for the proposed wetland fill, and 16,462 square feet of enhancement as part of the perimeter buffer establishment. The two areas are contiguous and will thus be planted using a single planting plan. The following plants will be installed within Wetland A:

Wetland Enhancement Planting Plan (24,518 SF)

Common Name	Latin Name	Size	Spacing	Quantity
Black cottonwood	*Populous trichocarpa*	2 gallon	9’	85
Sitka Spruce	*Picea sitchensis*	2 gallon	9’	85
Pacific willow	*Salix lasiandra*	2 gallon	9’	85
Western red cedar	*Thuja plicata*	2 gallon	9’	85
Red-osier dogwood	*Cornus sericea*	1 gallon	6'	62
Sitka willow	*Salix sitchensis*	1 gallon	6'	62
Pacific ninebark	*Physocarpus capitatus*	1 gallon	6’	62
Twinberry honeysuckle	*Lonicera involucrata*	1 gallon	6’	62
Vine maple	*Acer circinatum*	1 gallon	6’	62
Salmonberry	*Rubus spectabilis*	1 gallon	6’	62
Nootka rose	*Rosa nutkana*	1 gallon	6’	62
			Total:	**774**

Buffer Enhancement

As part of the perimeter buffer establishment, buffer enhancement plantings will be installed throughout non-wetland perimeter buffer areas. Non-wetland perimeter buffer areas are currently comprised of two distinct plant communities. Perimeter buffer planting areas 1 and 2 are located in areas that are largely devoid of native trees and shrubs. The enhancement plantings will be densest in these areas and feature species more likely to succeed in open sun. Buffer planting areas 3 and 4 feature native canopy species and sparsely vegetated or invasive-dominated understories. Fewer trees will be planted in these areas, but shrub plantings will remain dense. The following plant lists will be installed in non-wetland portions of the perimeter buffer:

Perimeter Buffer Enhancement Area 1 Planting Plan (17,002 SF)

Common Name	Scientific Name	Size	Spacing	Quantity
Douglas-fir	*Pseudotsuga menziesii*	1 Gallon	9'	70
Western red cedar	*Thuja plicata*	1 Gallon	9'	70
Big leaf maple	*Acer macrophyllum*	1 Gallon	9'	70
Vine maple	*Acer circinatum*	1 Gallon	6'	38
Salmonberry	*Rubus spectabilis*	1 Gallon	6'	38
Thimbleberry	*Rubus parviflorus*	1 Gallon	6'	38
Beaked hazelnut	*Corylus cornuta*	1 Gallon	6'	38
Snowberry	*Symphoricapos albus*	1 Gallon	6'	38
Clustered rose	*Rosa pisocarpa*	1 Gallon	6'	38
Swordfern	*Polystichum munitum*	1 Gallon	6'	38

Perimeter Buffer Enhancement Area 2 Planting Plan (3,498 SF)

Common Name	Scientific Name	Size	Spacing	Quantity
Sitka spruce	*Picea sitchensis*	1 Gallon	9'	17
Western red cedar	*Thuja plicata*	1 Gallon	9'	16
Lodgepole pine	*Pinus contorta*	1 Gallon	9'	16
Vine maple	*Acer circinatum*	1 Gallon	6'	9
Salmonberry	*Rubus spectabilis*	1 Gallon	6'	9
Thimbleberry	*Rubus parviflorus*	1 Gallon	6'	9
Beaked hazelnut	*Corylus cornuta*	1 Gallon	6'	9
Snowberry	*Symphoricapos albus*	1 Gallon	6'	9
Clustered rose	*Rosa pisocarpa*	1 Gallon	6'	9
Ladyfern	*Athyrium filix-femina*	1 Gallon	6'	9

Perimeter Buffer Enhancement Area 3 Planting Plan (5,513 SF)

Common Name	Scientific Name	Size	Spacing	Quantity
Douglas-fir	*Pseudotsuga menziesii*	1 Gallon	15'	9
Western red cedar	*Thuja plicata*	1 Gallon	15'	9
Big leaf maple	*Acer macrophyllum*	1 Gallon	15'	9
Vine maple	*Acer circinatum*	1 Gallon	6'	22
Salmonberry	*Rubus spectabilis*	1 Gallon	6'	22
Osoberry	*Oemleria cerasiformis*	1 Gallon	6'	22
Oceanspray	*Hlodiscus discolor*	1 Gallon	6'	21
Snowberry	*Symphoricapos albus*	1 Gallon	6'	21
Tall Oregon grape	*Mahonia aquifolium*	1 Gallon	6'	21
Swordfern	*Polystichum munitum*	1 Gallon	6'	21

Perimeter Buffer Enhancement Area 4 Planting Plan (2,761 SF)

Common Name	Scientific Name	Size	Spacing	Quantity
Douglas-fir	*Pseudotsuga menziesii*	1 Gallon	15'	5
Western red cedar	*Thuja plicata*	1 Gallon	15'	5
Big leaf maple	*Acer macrophyllum*	1 Gallon	15'	4
Vine maple	*Acer circinatum*	1 Gallon	6'	11
Salmonberry	*Rubus spectabilis*	1 Gallon	6'	11
Osoberry	*Oemleria cerasiformis*	1 Gallon	6'	11
Oceanspray	*Hlodiscus discolor*	1 Gallon	6'	11
Snowberry	*Symphoricapos albus*	1 Gallon	6'	11
Tall Oregon grape	*Mahonia aquifolium*	1 Gallon	6'	10
Swordfern	*Polystichum munitum*	1 Gallon	6'	10

PLANTING NOTES

Mitigation projects of this sort are typically more complex to install than can be described in plans. Careful monitoring by a qualified wetland professional for all portions of this project is strongly recommended. Timing and sequencing is important to the success of this type of project.

Plant in the early spring or late fall. Order plants from a reputable nursery. Care and handling of plant materials is extremely important to the overall success of the project. All plant materials recommended in this plan should be available from local and regional sources, depending on seasonal demand. Some limited species substitution may be allowed, only with the agreement of the consulting wetland professional.

The plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Upon complete installation of the proposed mitigation plan, an inspection by a qualified wetland professional shall be made to determine plan compliance. A compliance report shall be supplied to ECY and Pierce County within 30 days after the completion of planting.

Colored surveyors ribbon, or other approved marking device, shall be attached to each planted tree and shrub to assist in locating the plants while removing the competing non-native vegetation and to assist in monitoring the plantings.

Wood chips or other suitable material shall be used for mulching in the planting areas. Mulch is to be placed in this two-foot diameter area at a depth of three to four inches. A four-inch diameter ring around the base of each plant shall be kept free of mulch. Arborist woodchips are the preferred material for mulch. These can be stockpiled during site clearing or imported.

Irrigation / Watering: Water shall be provided during the dry season (July 1 through October 15) for the first two years after installation to ensure plant survival and establishment. A temporary above ground irrigation system and/or water truck should provide water. Water should be applied at a rate of 1 inch of water twice per week for year 1 and 1 inch per week during year 2.

Soil Amendments: If deemed necessary, organic matter (compost or approved equal) will be incorporated into each of the planting holes, in addition to the designated created wetland area. One unit of loose, well-composted organic material should be incorporated with two units of silt loam topsoil to a depth of eight to ten inches (only three to four inches within three feet of existing drip lines) and mixed thoroughly.

MAINTENANCE, MONITORING, AND CONTINGENCY

MAINTENANCE ACTIVITIES

The purpose of this maintenance program is to ensure the success of the mitigation plantings. The planting areas will be maintained in spring and fall of each year for the first five years and as needed for the remainder of the ten-year monitoring period. The necessity of maintenance in the last five years will be determined by the contracted wetland biologist and a representative from the DOE. Maintenance activities will include the following as necessary:

- Plant inspection and replacement
- Control invasive species
- Remove trash
- Replace signs
- Replace mulch

Following each monitoring, recommendations will be made for the replacement of plant mortality. Any replanting will be done by the contracted landscaper and should be done during the fall maintenance visit. Maintenance should be done by hand to avoid impacts to establishing plants and existing habitat.

INVASIVE SPECIES

Invasive species control will be accomplished through the use of hand removal of foliage and roots, whenever possible. Mowing of Himalayan blackberry and Scot's broom is also effective if conducted as part of a routine maintenance schedule (four times per year). Invasive species, such as Himalayan blackberry, English ivy, Scot's broom, and Japanese knotweed are to be controlled within the mitigation area. All Himalayan blackberry and Scot's broom within the mitigation areas shall be cut to ground level during each maintenance visit. A zero tolerance of noxious weeds, such as Japanese knotweed, is to be implemented and any and all specimens shall be entirely removed from the mitigation area and disposed of in an appropriate off-site location. The goal of this maintenance is to ensure that the planted native species establish as designed. Once established, it is expected that the native plants will prevent further establishment of invasive species.

PERFORMANCE/SUCCESS STANDARDS

Performance/success standards have been established to assess the success of the mitigation project in achieving the stated goals. Performance/success standards are as follows:

PLANT SURVIVAL

Year 1 Monitoring

Success Standard: 100 percent survival of planted species
No greater than 15 percent coverage of invasive species. Zero tolerance of noxious weeds.

Year 2 Monitoring

Success Standard: 90 percent survival of planted species
No greater than 15 percent coverage of invasive species. Zero tolerance of noxious weeds.

Year 3 Monitoring

Success Standard: Minimum 35 percent aerial coverage of native species
No greater than 15 percent coverage of invasive species. Zero tolerance of Noxious weeds.

Year 5 Monitoring

Success Standard: Minimum 50 percent aerial coverage of native species
No greater than 15 percent coverage of invasive species. Zero tolerance of noxious weeds.

Year 7 Monitoring

Success Standard: Minimum 60 percent aerial coverage of native species
No greater than 15 percent coverage of invasive species. Zero tolerance of noxious weeds.

Year 10 Monitoring

Success Standard: Minimum 80 percent aerial coverage of native species
No greater than 15 percent coverage of invasive species. Zero tolerance of noxious weeds.

In any monitored year, naturally occurring native species shall count toward the overall percent coverage of native species.

WETLAND HYDROLOGY

Hydrologic conditions within the wetland creation areas shall mimic conditions in the adjacent wetland. At a minimum, the creation area shall be saturated to within eight inches of the surface for two weeks of the growing season (March through September).

WILDLIFE HABITAT

During each monitoring visit, the presence of any wildlife using the site should be noted.

MONITORING PROTOCOL

This mitigation project will be monitored for ten years following completion and approval of the installed plan. Monitoring will be conducted by the contracted wetland professional or other qualified person.

PERFORMANCE STANDARDS

After the mitigation plantings are installed, the contracted biologist will prepare a compliance report. During this site visit, monitoring transects will be established as appropriate. These will be used throughout the ten-year monitoring period. Plant survival shall be measured during the first two years of monitoring. A complete count of installed species shall be measured against the required plant list. Missing plants will be subtracted from the installed total and used to calculate percent survival.

If one or more of the planted species exhibit a high rate of mortality and are deemed inappropriate for the site, a substitution may be recommended by the consulting biologist.

SAMPLING METHODS – PLANT SURVIVAL

To measure percent cover, two 5m x 5m sample plots will be established within the enhancement area. One sample plot will be in the wetland creation area and one sample plot will be in the pre-creation boundary of Wetland A. These plots shall be fixed, located using stakes, GPS, or other method and used for the duration of the monitoring period. To provide cover values, the Braun-Blanquet Cover Abundance Scale will be used. Cover is defined as "the vertical crown or shoot-area projection per species in the plot" (Mueller-Dombois et al., 1974). The cover values ratings to be used are as follows:

- Any species with cover more than 3/4 of the reference area (75%)
- Any species with 1/2 – 3/4 cover (50% - 75%)
- Any species with 1/4 – 1/2 cover (25% - 50%)
- Any species with 1/20 – 1/4 cover (5% - 25%)
- Any species with less than 1/20 cover (5%)

The collected data will be analyzed by establishing midpoint percent cover based on the Braun-Blanquet scale. The ratings to be used are as follows:

Cover Class	% Cover	Midpoint
• 5	75 to 100%	88%
• 4	50 to 75%	63%
• 3	25 to 50%	38%
• 2	5 to 25%	13%
• 1	<5%	3%

The percent cover value should be established by adding the values of the plants as they occur in the plots and dividing by the total number of plots. In addition to the above plots, a general overview of the vegetation in the monitoring area shall be conducted.

SAMPLING METHODS – HYDROLOGY MONITORING

Hydrology within the wetland creation and enhancement areas shall be noted in the spring (March through May) of years 1, 2, 3, 5, 7, and 10. Soil pits may be dug as necessary to assess hydrology in the wetland area.

SAMPLING METHODS – PHOTO DOCUMENTATION

During the site visit for the compliance letter, photo points shall be established in each of the wetland buffer enhancement areas. Pictures of each transect should be taken, along with pictures showing a general overview of each mitigation area. These photo points shall be documented and used during each monitoring visit.

MONITORING SCHEDULE

It is assumed that the entire mitigation plan will be installed concurrent with site development and will be on a common monitoring schedule. The initial monitoring will begin in early September (prior to leaf drop) following complete installation of the mitigation plan. Subsequently, monitoring will occur in September of years 2, 3, 5, 7, and 10, until all performance standards are met and approved by DOE.

MONITORING REPORTS

After each monitoring visit, a report describing the condition of the mitigation site shall be prepared. These reports shall be submitted to the Pierce County and ECY. These reports will assess both achievement of yearly goals and progress towards achievement of the project goals. Reports will include a description of survival and replacement of the planted stock, plant vigor, percent cover of native vegetation, an assessment of invasive vegetation, an assessment of wildlife using the site, and wetland hydrology. In addition, the monitoring reports shall include the following elements:

- The name of the company person(s) that conducted monitoring and prepared the report
- An executive summary of the approved mitigation plan
- A vicinity map showing the location of the mitigation site
- A mitigation map identifying the location of transects and photo points
- Monitoring photographs
- An analysis of the mitigation site condition and progress toward the stated goals

The applicant should notify the Pierce County and ECY in writing when the monitoring period is complete and the criteria for success have been met. If the project meets all of the criteria for success at the end of the ten-year monitoring period, no further action will be required. If the definition of success is not met, the maintenance and monitoring period will be extended for one year at a time until the site meets the performance standards. If the success criteria are met prior to the end of the ten-year monitoring period, DOE may allow an early termination of the monitoring and maintenance at their discretion. This mitigation plan and the accompanying maintenance and monitoring will not be considered complete until written confirmation is received from DOE.

CONTINGENCY PLAN

If it is determined at any time during the monitoring period that the goals of the mitigation plan are not being met, a contingency plan will be devised to improve or alter those elements that are deficient. If measures beyond standard maintenance are required, a plan containing these measures will be approved by the Pierce County and ECY prior to implementation.

LONG-TERM MANAGEMENT

Upon completion of the ten-year monitoring period, or when a formal Homeowners Association (HOA) has been established, the applicant will pass the long-term management and associated financial responsibilities to the HOA.

USE OF THIS REPORT

This Mitigation Plan is supplied to Sager Family Homes, as a means of addressing Department of Ecology staff comments and recommendations, as they relate to the proposed Mitigation Plan associated with the McKinley Estates development project. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to critical areas are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect. The work for this report has conformed to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report, and any implied representation or warranty is disclaimed.

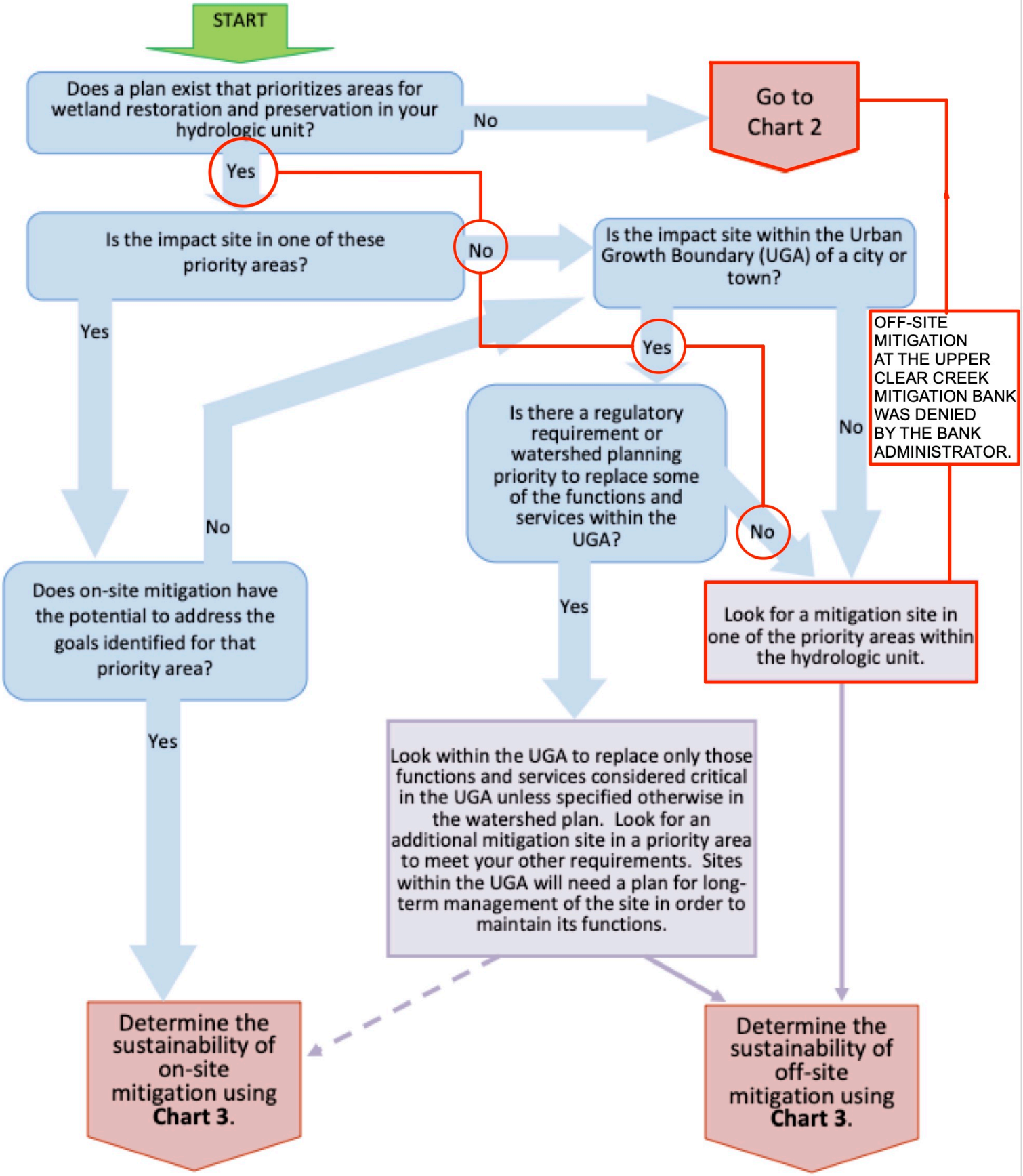
Wetland Resources, Inc.

Eamonn Collins
Associate Ecologist

ATTACHMENT A:
SELECTING MITIGATION SITES
USING A WATERSHED APPROACH

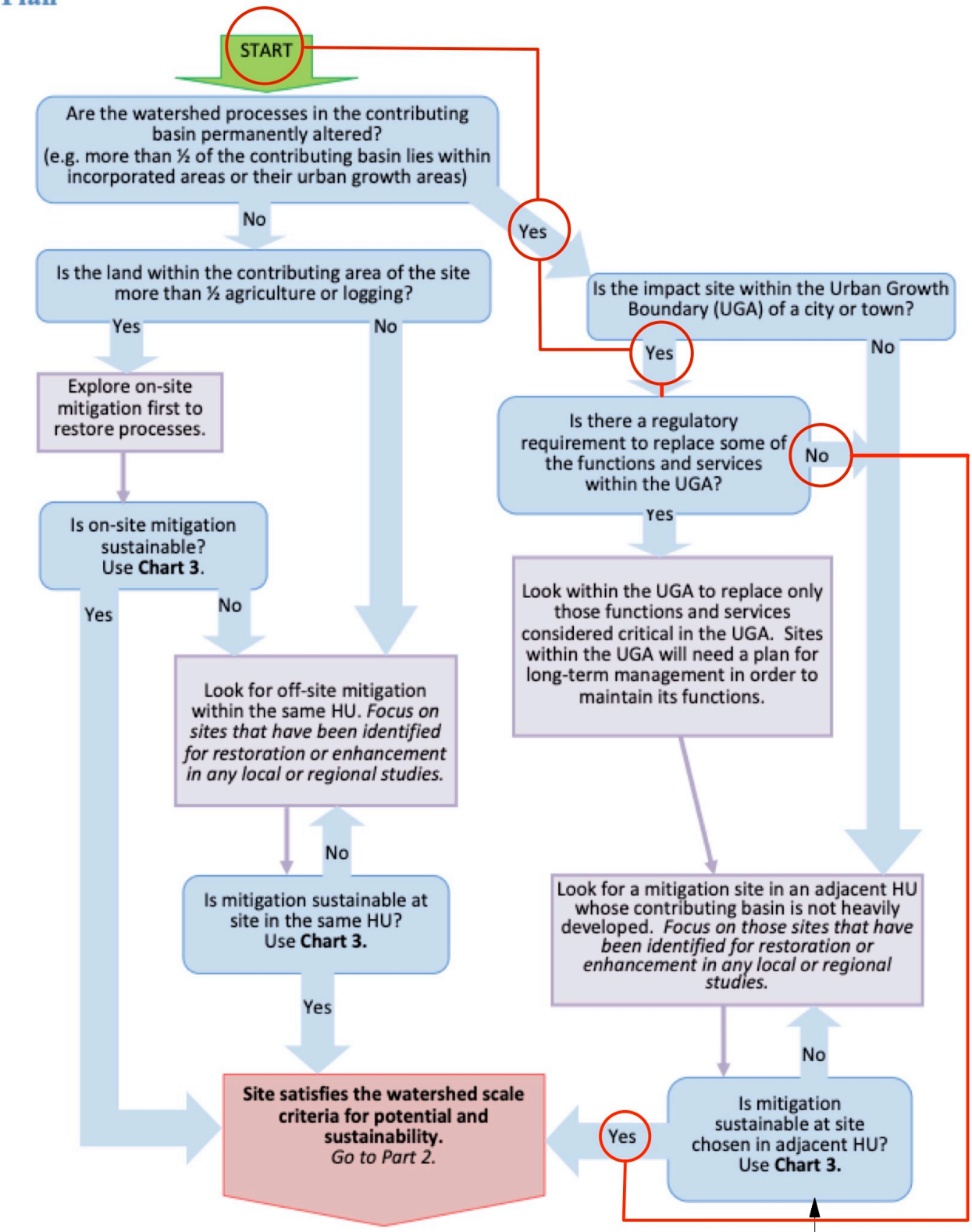
SELECTING MITIGATION SITES USING A WATERSHED APPROACH
ECOLOGY PUBLICATION NO. 09-06-032 (PAGE 11)

Chart 1: Analyzing Potential Wetland Mitigation Sites Using Existing Watershed Plans



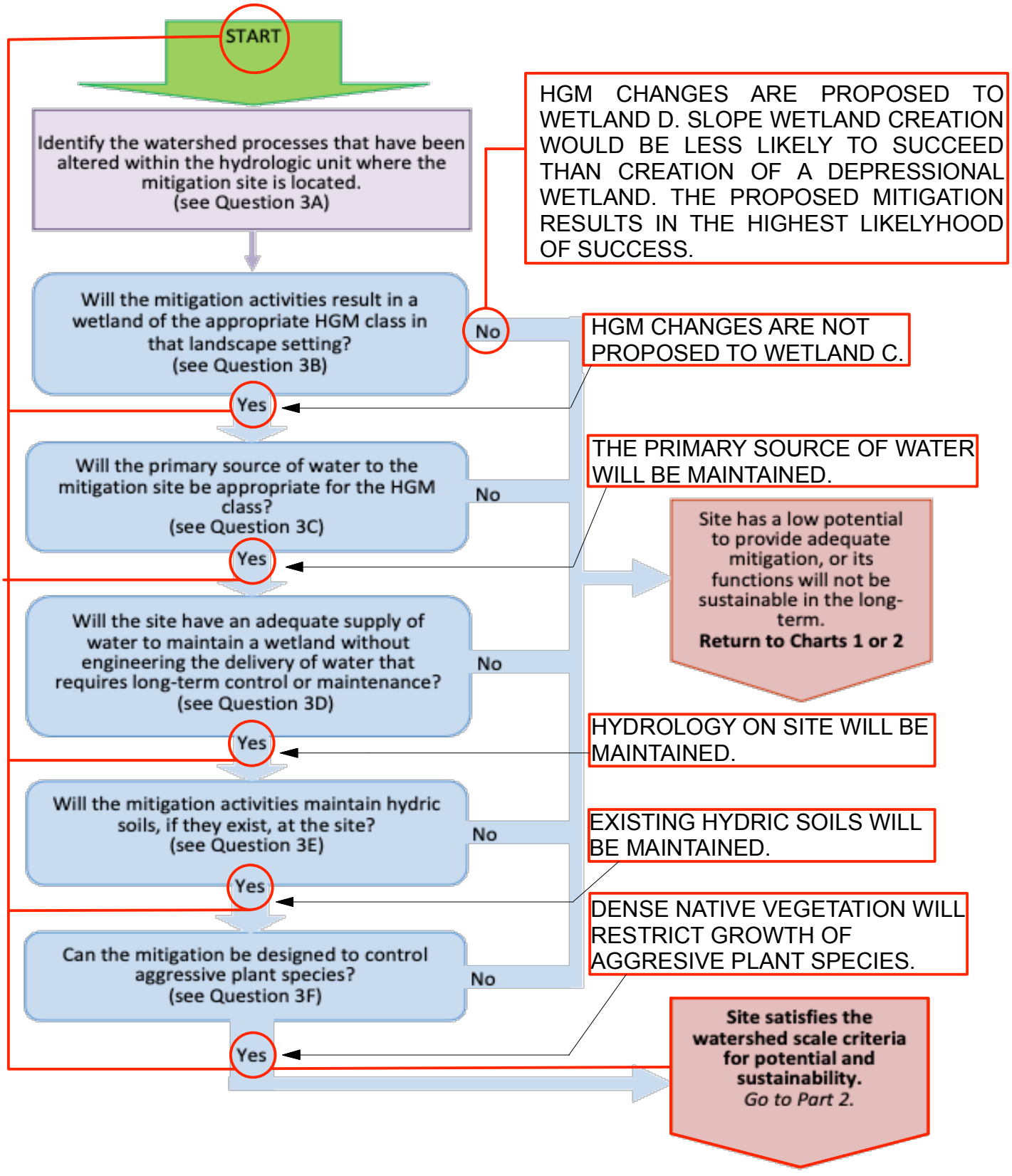
SELECTING MITIGATION SITES USING A WATERSHED APPROACH
ECOLOGY PUBLICATION NO. 09-06-032 (PAGE 12)

Chart 2: Analyzing Potential Wetland Mitigation Sites Without a Watershed Plan



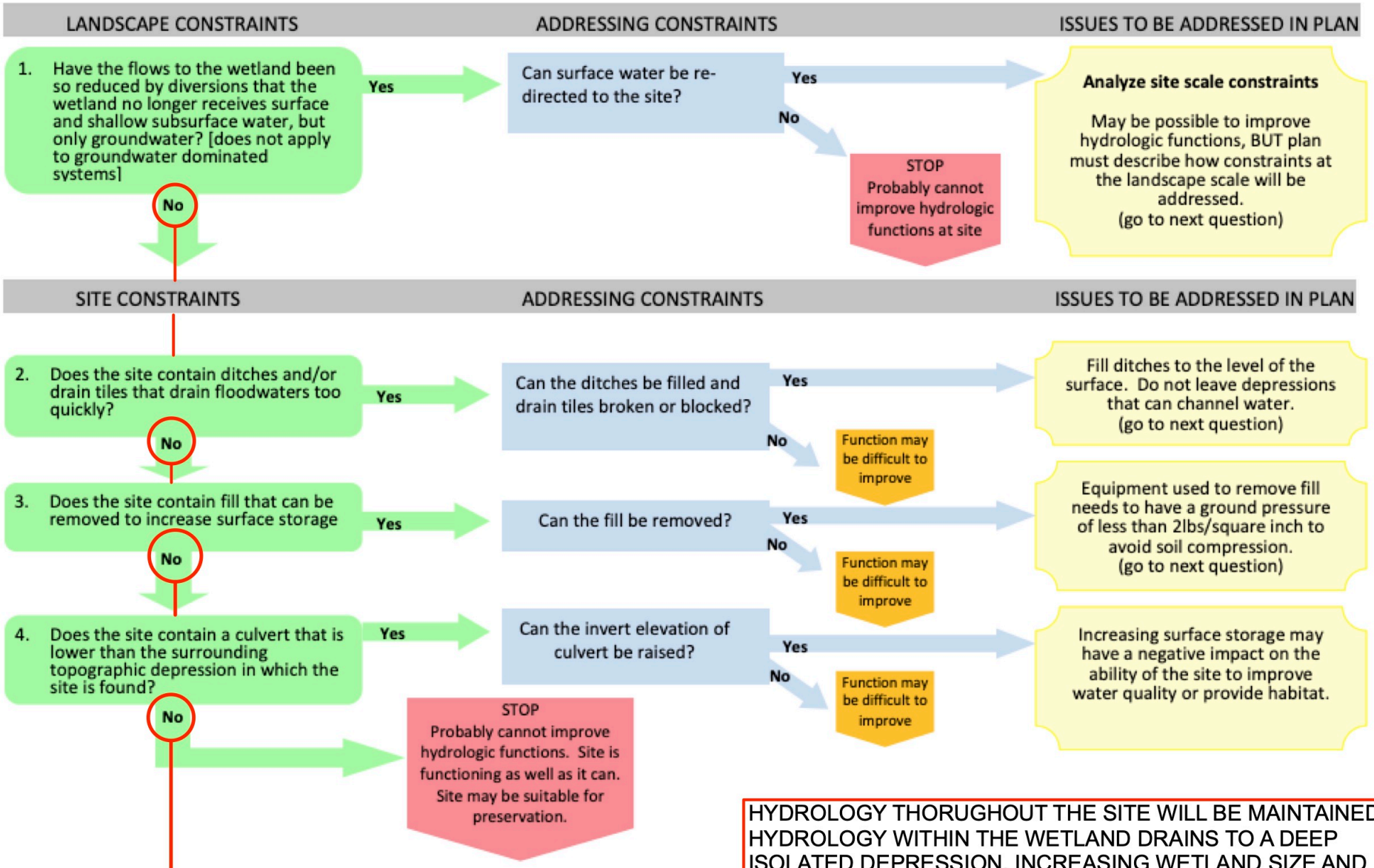
MITIGATION IN ADJACENT HU IS NOT FEASIBLE
ADJACENT AREA IS PRIVATE PROPERTY.
MITIGATION IS PROPOSED TO OCCUR ON SITE
AS THE EXISTING HU IS SUSTAINABLE.

Chart 3: Analyzing the Potential of Sites to Provide Sustainable Mitigation a Watershed Context



SELECTING MITIGATION SITES USING A WATERSHED APPROACH
ECOLOGY PUBLICATION NO. 09-06-032 (PAGE 25)

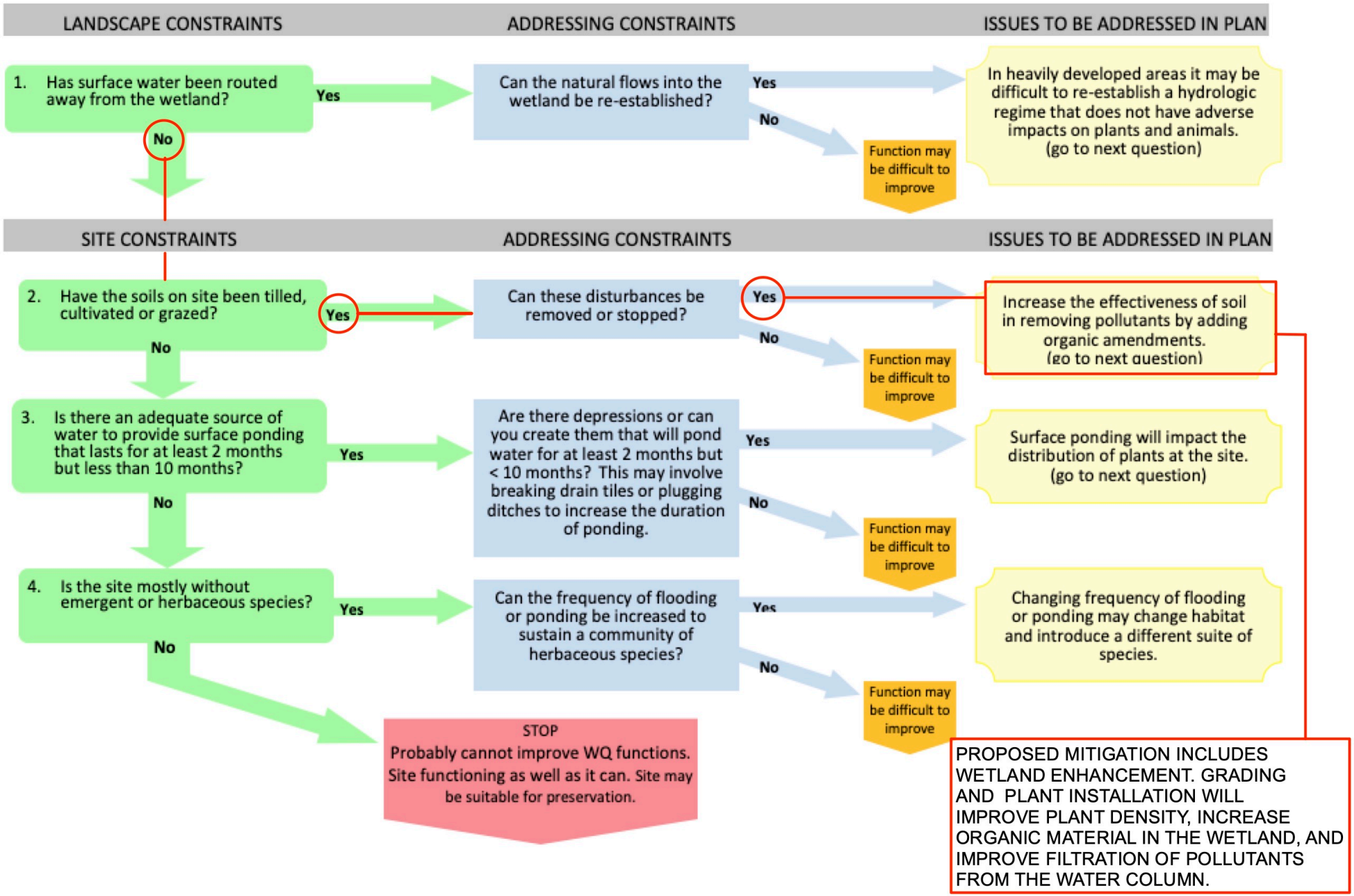
Chart 5: Goal – Improving Hydrology Functions in Depressional Systems Outside of Floodplains



HYDROLOGY THORUGHOUT THE SITE WILL BE MAINTAINED. HYDROLOGY WITHIN THE WETLAND DRAINS TO A DEEP ISOLATED DEPRESSION. INCREASING WETLAND SIZE AND PLANT DENSITY WILL REDUCE FLOW RATES TO THE DEPRESSION, BUT NOT ALTER THE HYDROLOGIC REGIME AS A WHOLE.

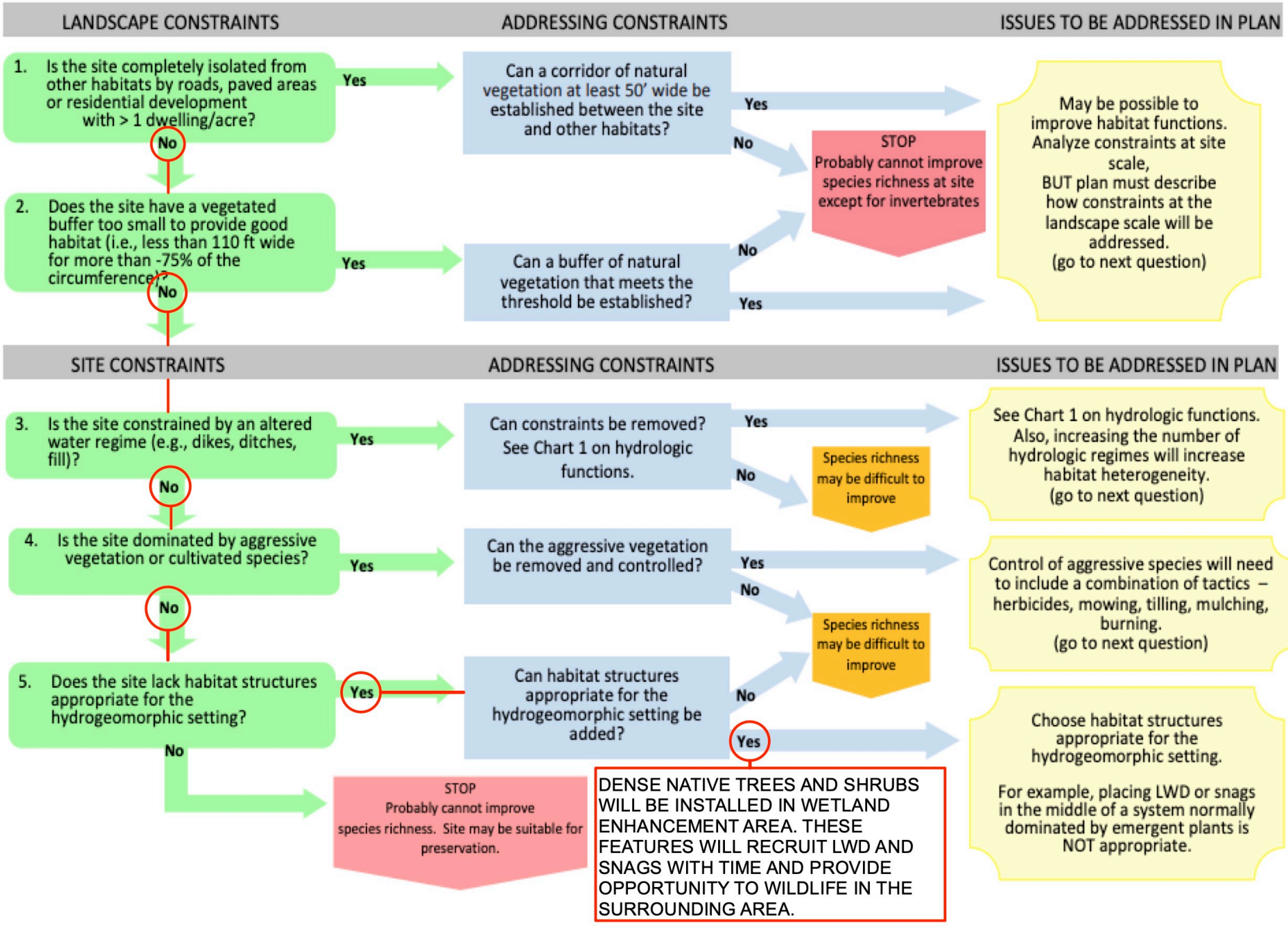
SELECTING MITIGATION SITES USING A WATERSHED APPROACH
ECOLOGY PUBLICATION NO. 09-06-032 (PAGE 27)

Chart 7: Goal - Improving Water Quality (WQ) Functions in Depressional Systems Outside of Floodplains



SELECTING MITIGATION SITES USING A WATERSHED APPROACH
ECOLOGY PUBLICATION NO. 09-06-032 (PAGE 30)

Chart 10: Goal - Improving Species Richness of Wildlife

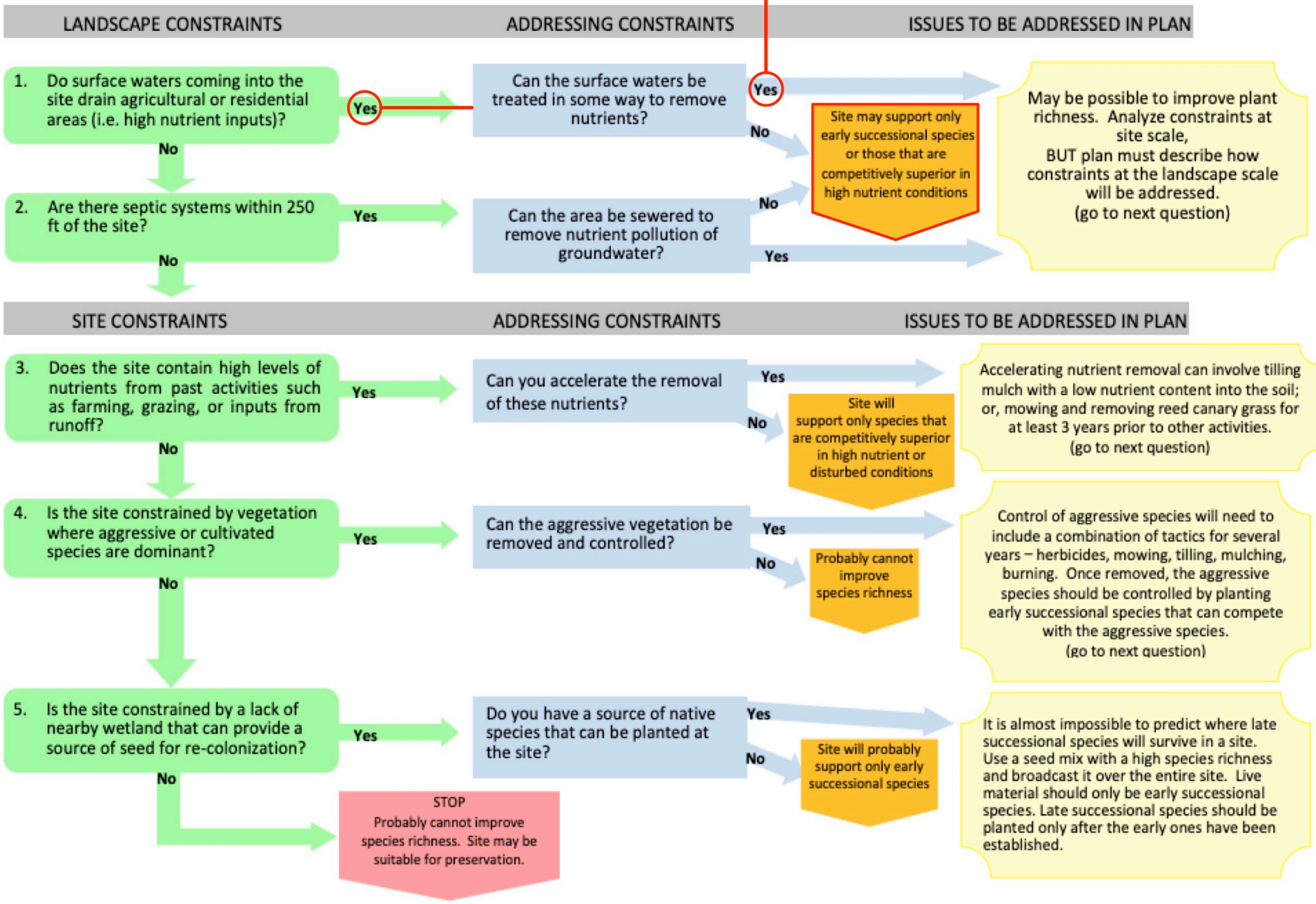


SELECTING MITIGATION SITES USING A WATERSHED APPROACH
ECOLOGY PUBLICATION NO. 09-06-032 (PAGE 31)

ON-SITE AGRICULTURAL ACTIVITIES WILL CEASE. RESIDENTIAL STORMWATER WILL BE TREATED.

WETLAND ENHANCEMENT PLAN WILL INCREASE SPECIES RICHNESS IN WETLAND A.

Chart 11: Goal - Improving Species Richness of Plants



SELECTING WETLAND MITIGATION SITES USING A WATERSHED APPROACH
CHART 3 Q & A

Question 3A: Identify the watershed processes that have been altered within the hydrologic unit where the mitigation site is located.

Problems caused by altered watershed processes in the hydrologic unit	Yes	No	In watershed plan?
Increased flooding	X		
Eutrophication in streams, rivers, and lakes	X		
Impaired water quality	X		
Erosion of streams and river banks that threaten human and natural resources		X	
Fragmentation and loss of habitat	X		
Other (especially if noted in plan)			

The applicant is proposing 4,132 square feet of wetland creation contiguous with Wetland A and 8,254 square feet of wetland enhancment within Wetland A as mitigation for filling Wetlands C and D. Proposed wetland impacts total 4,127 square feet of wetland fill. This meets the requirements for on-site mitigation required by ECY.

The proposed wetland creation and enhancement of Wetland A, a Category III wetland, as compensatory mitigation for the elimination of two isolated low quality Category IV wetlands, will increase the density of native vegetation as well as structural diversity and species richness within Wetland A. This will increase attenuation of floodflow, improve biofiltration functions, and increase the quality of habitat and opportunities provided to wildlife. The credited mitigation will be bolstered by the enhancement of all perimeter buffer areas surrounding the mitigation site. Dense native plant communties will be installed throughout most of Wetland A and its associated buffer. As a result, the overall functions and values provided by the site will be improved.

Question 3B: Will the mitigation result in a wetland of the appropriate hydrogeomophic (HGM) class for the landscape setting?

Wetland A and Wetland C are both depressional wetlands. Wetland D is a slope wetland that does not discharge to any adjacent water bodies. Mitigation for the impacts to Wetland D will result in a change of HGM classification. Creation of a slope wetland to provide in-kind mitigation would be less likely to succeed than creation of a depressional wetland. Depressional wetlands also provide a higher level of hydrologic and water quality functions and values than slope wetlands. Modification of the HGM classification will benefit the on-site condition.

Question 3C: Will the primary source of water to the mitigation site be appropriate for the HGM class?

The existing hydrologic source for the on-site depressional wetland is surface flows from precipitation. The hydrologic source of water to Wetland A will not be impacted.

Question 3D: Will the site have an adequate supply of water to maintain a wetland without engineering the delivery of water that would require long term control or maintenance.

The on-site wetland areas will continue to receive hydrology from surface flows from precipitation.

Question 3E: Will the mitigation activities maintain hydric soils, if they exist, at the site?

Yes, all hydric soils within the mitigation areas will remain intact.

Question 3F: Can the mitigation be designed to control aggressive plant species?

Yes. Any invasive plant species within the wetland enhancement areas will be removed prior to installation of native plantings. Regular maintenance and weed suppression will allow installed plants to become established. Once established, the presence of dense native vegetation will prevent the spread of invasive species.

ATTACHMENT B:
MITIGATION PLAN MAP

WETLAND IMPACTS AND MITIGATION PLAN MAP
SAGER FAMILY HOMES - E MCKINLEY AVE

PORTION OF SECTION 7, TOWNSHIP 20N, RANGE 3E, W.M.

LEGEND

- WETLAND
- WETLAND IMPACTS
- WETLAND CREATION
- WETLAND ENHANCEMENT
- PERIMETER BUFFER

Scale 1" = 100'

0 50 100 150 200

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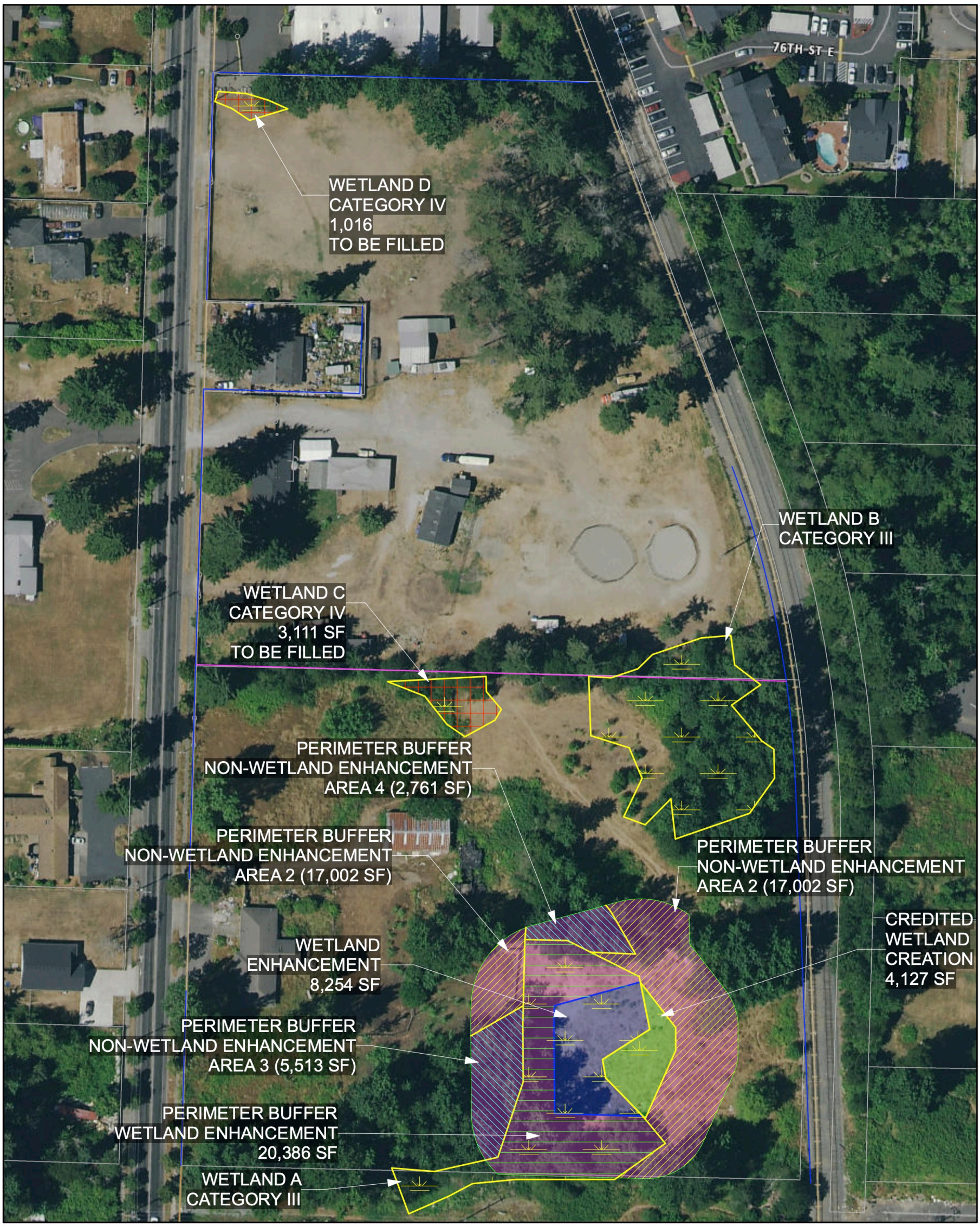
Impacts & Mitigation Plan Map
Sager Family Homes - E McKinley Ave
Unincorporated Pierce County

Sager Family Homes
Attn: Kirk Lisitsyn
PO Box 44428
Tacoma, WA 98448

Sheet 2/2
WRI Job#: 22294
Drawn by: EC
Rev. 1 Date: July 15, 2024

WETLAND IMPACTS AND MITIGATION PLAN MAP
SAGER FAMILY HOMES - E MCKINLEY AVE

PORTION OF SECTION 7, TOWNSHIP 20N, RANGE 3E, W.M.



LEGEND

- WETLAND
- WETLAND IMPACTS
- WETLAND CREATION
- WETLAND ENHANCEMENT
- PERIMETER BUFFER
- PERIMETER BUFFER WETLAND ENHANCEMENT
- PERIMETER BUFFER NON-WETLAND TOTAL ENHANCEMENT
- PERIMETER BUFFER NON-WETLAND UNDERSTORY ENHANCEMENT

Scale 1" = 100'

0 50 100 150 200

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Impacts & Mitigation Plan Map
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Sager Family Homes
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