

An Introduction to Stream Wise

4/11/2022 VTCAC Meeting

Bringing neighbors together to protect and restore healthy waterways across the Lake Champlain Basin



Presented By:

Lake Champlain Basin Program (LCBP) – Lauren Jenness

FluidState Consulting – Dana Allen

The Image Farm – Matt & Pam Heywood

Greenleaf Design – Holly Greenleaf



Partner Recognition

Phase 1 – Program Development

Federal, state/provincial, and local NGOs input

Phase 2 – Pilot Program

Regional program testing

Project Advisory Committee (7)

- US & VT Fish & Wildlife
- NY & VT Depts. of Environmental Conservation
- OBVBM (Organisme de bassin versant de la baie Missisquoi)
- Adirondack Park Agency
- Lake Placid Land Conservancy

Community Partners (10)

- Lake Champlain Sea Grant
- Watersheds United VT
- VT River Conservancy
- Poultney-Mettowee NRCD
- Friends of the Winooski River
- CWICNY (Champlain Watershed Improvement Coalition)
- LCLGRP (Lake Champlain Lake George Regional Planning Board)
- Lake George Association
- Ausable River Association
- MRC Brome-Missisquoi

Partner organizations (6)

- Friends of the Winooski
- Ausable River Association
- OBVBM
- WUV
- VT Fish and Wildlife
- Lake Champlain Sea Grant

Stream Wise Phase 1 – Program Development

1 – Establish Foundation/Resource Library

Project Team conducted initial information gathering tasks related directly to stream restoration regulatory standards, non-regulatory programs, and funding opportunities for the Lake Champlain Basin, leading to a synthesized programmatic foundation from which to build the Stream Wise Award Program.

Output:

- *Unified resource library of regulatory standards and non-regulatory programs by region*

51-page Resource Library Summary

and

Excel-based database that contains 154 resources used to develop this regionally responsive Stream Wise Program

- 40 VT resources
- 58 NY resources
- 29 QC resources
- 27 stream buffer literature resources



Stream Wise Phase 1 – Program Development

1 – Establish Foundation/Resource Library

2 – Solicit Feedback/Program Outline

Project Team held meetings with LCBP, PAC, and CPs to gather additional information on stream restoration programs, Best Management Practices, and other information to ultimately inform Stream Wise Award Program development for the entire Basin.

Outputs:

- *Outline of regionally responsive assessment criteria and award levels*
- *Methods and standard procedures to carry out award program and provide BMP recommendations*



**Assessment Protocol
& Evaluation Criteria**

v1.0
October 2021

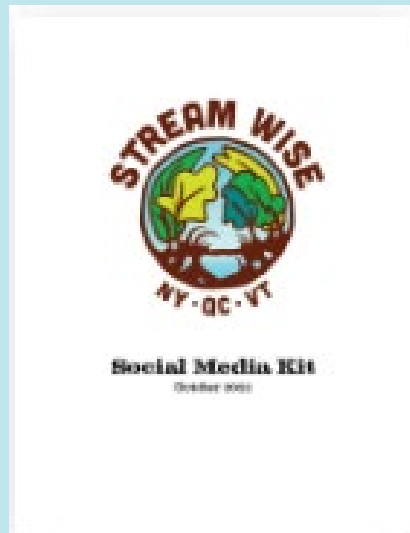
Stream Wise Phase 1 – Program Development

- 1 – Establish Foundation/Resource Library
- 2 – Solicit Feedback/Program Outline
- 3 – Program Development/Branding and Communications Plan

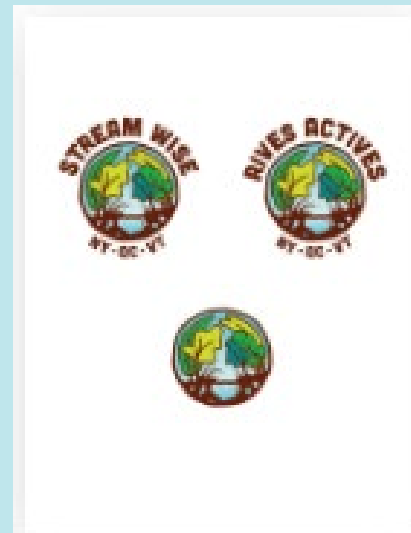
Project Teams used information from the first two steps to guide the development of Stream Wise Award Program criteria, standards, and award levels, as well as inform the development of the branding and communications plan.

Outputs:

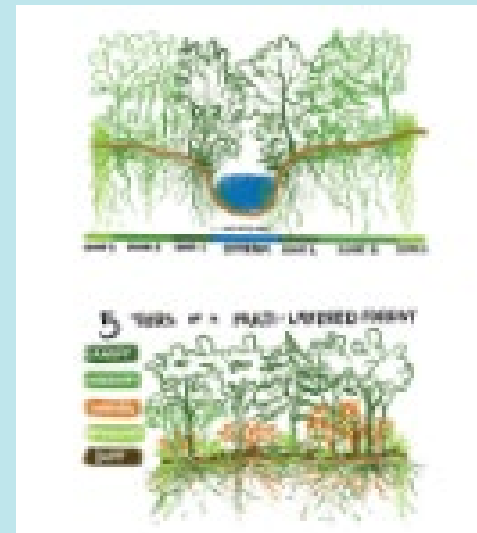
- Branding Materials
- Communications Plan



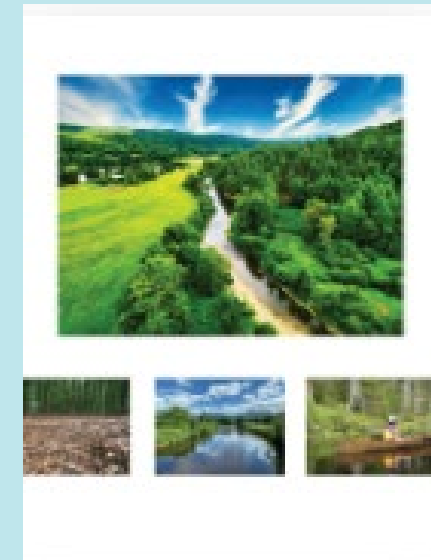
Social Media Kit



Logos



Graphics



Photos

Stream Wise Phase 1 – Program Development

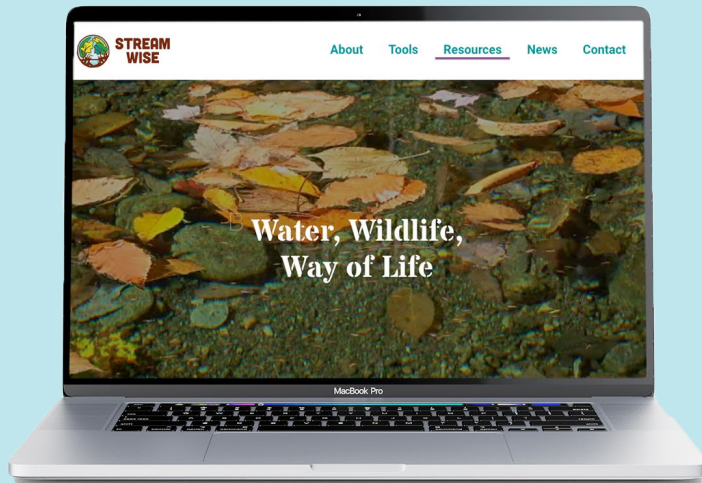
1 – Establish Foundation/Resource Library

2 – Solicit Feedback/Program Outline

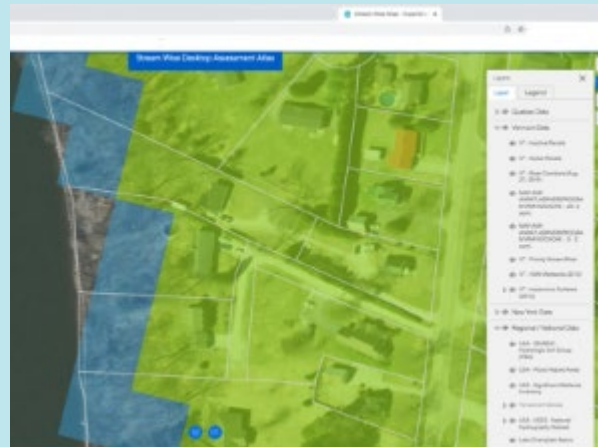
3 – Program Development/Branding and Communications Plan

Additions – Stream Wise website & Stream Wise Data Collection App and online assessment resource

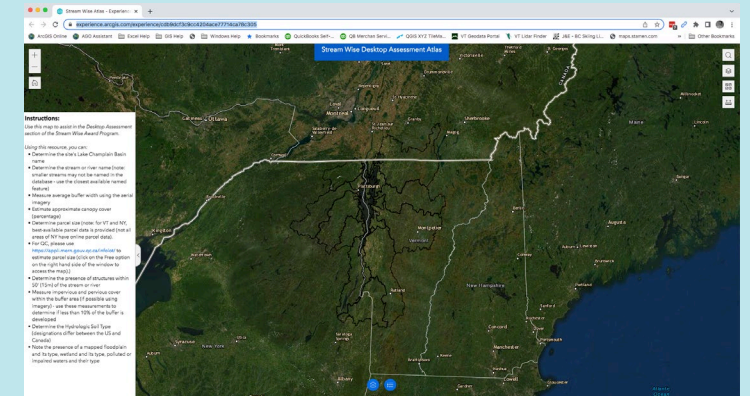
AND translation of all material into French



Website



Fulcrum Application



Desktop Assessment Atlas

What is Stream Wise?

A **valuable, voluntary, inclusive, basin-wide** tool

that can be used by our partners to

Inform and **incentivize** communities within the Lake Champlain Basin to **engage** in activities that **enhance** and **protect** water quality, aquatic/riparian habitat, and increase flood resiliency.”

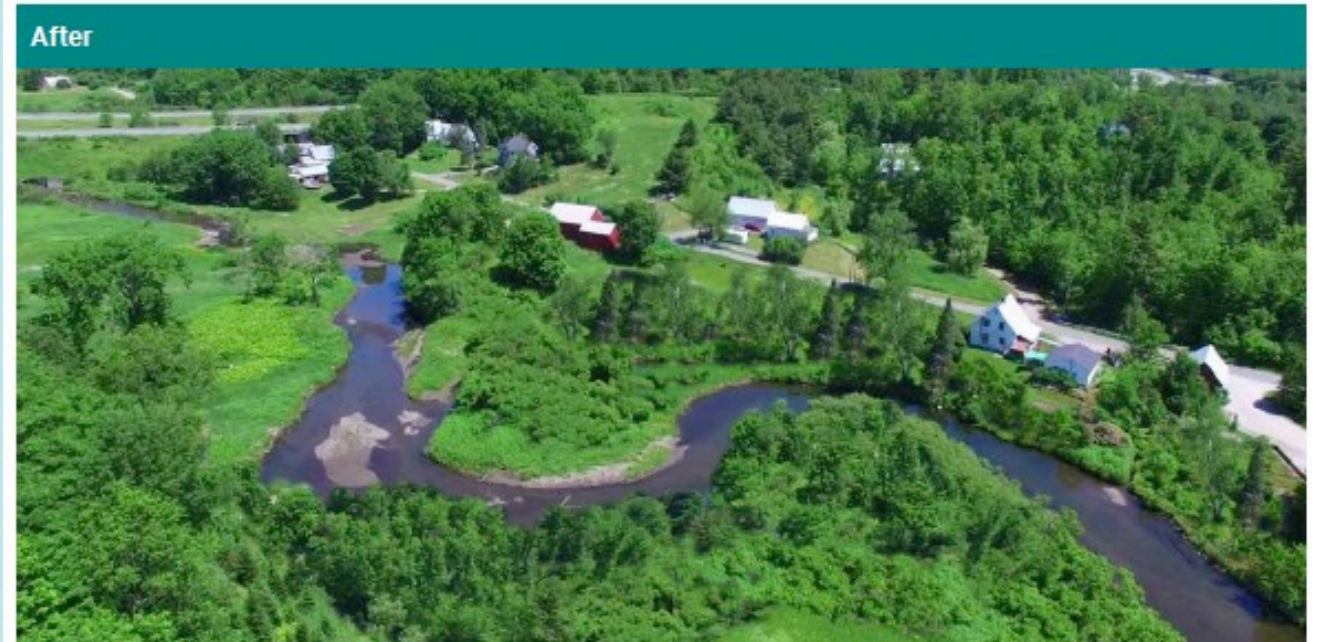
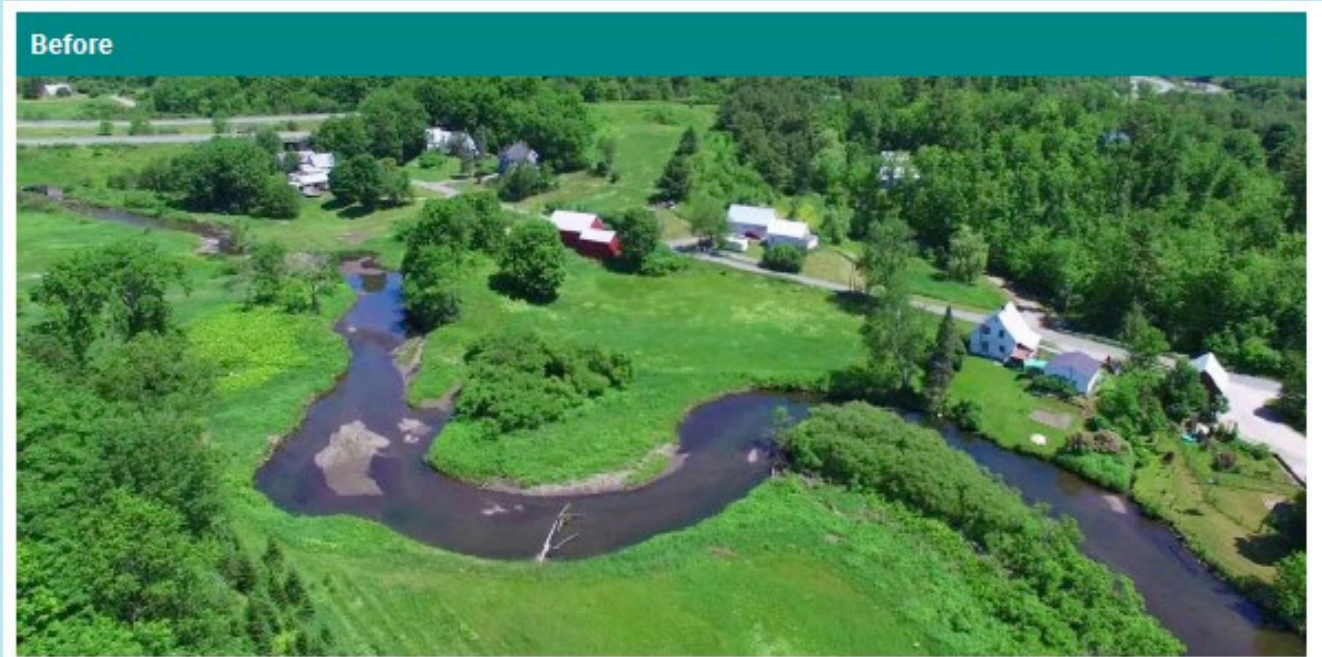


- Voluntary Award Program
- Targets residential properties
- Leverages social marketing using social media
- **Awareness Campaign & Assistance Resource**



What are we trying to create?

- 50' (or 30') wide buffer
- Native & Naturalized Vegetation
- Multi-tiered canopy
- No (or minimal) impervious and pervious cover (disconnected wherever possible)
- It's inclusive – Stream Wise helps properties achieve good buffer conditions – to maintain good stream integrity.
- Educational – teaches owners simple practices that go a long way.



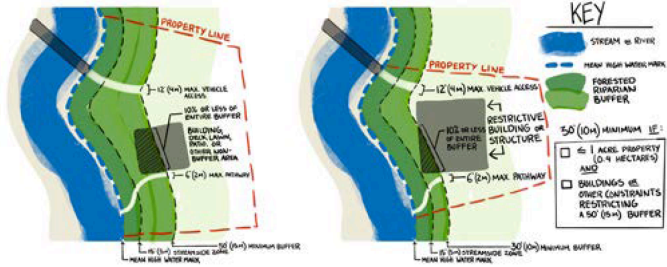
Buffers - Three Primary Criteria



Field Visit Form: Property Assessment Tool Continued

1. Buffer Width

Meets ☐ Does Not Meet ☐



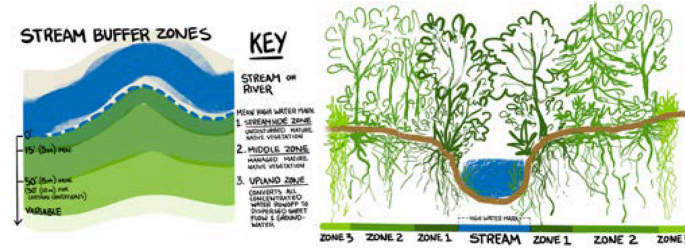
Criteria	Meets	Does Not Meet	NA
1a. There is a 50' (15m) minimum vegetated buffer OR 30' (10m) minimum if property is 1 acre (0.4 hectares) or less and has existing infrastructure that prevents a 50' (15m) buffer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1b. There is a maximum of 10% of the minimum buffer area that is in existing impervious or pervious development, including lawn, structures, decks, patios, or other non-naturally vegetated areas. This development is AT LEAST 15' (5m) FROM MEAN HIGH WATER MARK (not in the Streamside Zone). This 10% does not include access paths.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1c. All surface water runoff from developed areas within the buffer is captured and infiltrated or converted to dispersed sheet flow (not concentrated runoff points).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1d. Foot paths or stairs are 6' (2m) wide or less and are minimized (e.g., remove unnecessary paths).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1e. Vehicle access is 12' (4m) wide or less.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1f. Access points are pervious and infiltrating water or are hydrologically disconnected (all water runoff is diverted into vegetated areas, spread out, and infiltrated using switchbacks, water bars, crowned roads, turnouts, rock aprons, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Field Visit Form: Property Assessment Tool Continued

2. Buffer Zones

Meets ☐ Does Not Meet ☐



Criteria	Meets	Does Not Meet	NA
2a. Streamside Zone (min. 15' or 5m from mean high water mark) is undisturbed mature native cover and/or densely planted vegetation that is stabilizing the streambank with a secure root system and providing aquatic habitat (e.g., shading over shallow water, woody debris). There is no disturbance, clearing, or development except access points.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2b. Middle Zone (from Streamside Zone to buffer edge) is established multi-layered vegetative cover to capture, filter, and store nutrients, sediments, and pollutants (coming from upland runoff and flooding). There is limited clearing (minimum 70% canopy cover) and development (maximum 10% of entire buffer).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2c. Upland Zone (beyond minimum buffer edge) converts all channelized or concentrated water flows (pipes, rills, etc.) to dispersed sheet flow so that all stormwater runoff entering the buffer is sheet flow or groundwater using herbaceous filter strips or other stormwater management practices to slow runoff and infiltrate or spread out flows (rain gardens, infiltration trenches, vegetated swales, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2d. Streambank is stable. There is no erosion, channelization, or bare soil from upland erosion above mean high water mark (okay if there is naturally occurring erosion within the stream channel - below mean high water mark - that is outside of landowner's control; No hard armoring (rip rap, retaining walls) that is not also densely vegetated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Field Visit Form: Property Assessment Tool Continued

3. Buffer Vegetation

Meets ☐ Does Not Meet ☐

Five Tiers of a Multi-Layered Forest



Criteria	Meets	Does Not Meet	NA
3a. 5 Tiers are present unless lack of tiers is outside of the landowners control, e.g., deer grazing or natural occurring plant community does not have all 5 tiers, such as evergreen forest with little understory, wetland marsh/meadow, woody shrub swamp, rocky ledge with no duff, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1. Canopy Layer: Tall, mature deciduous and evergreen trees that create structure and canopy cover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Understory Layer: Saplings/replacement trees, small understory trees and tall shrubs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Shrubs Layer: Low-growing deciduous and evergreen woody shrubs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Groundcover/Herbaceous Layer: Herbaceous vegetation (perennials, annuals, biennials), including native grasses, sedges, flowers, ferns, and mosses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Duff Layer: Organic material on forest floor - leaves, twigs, dead plant material, woody biomass, mushrooms, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3b. Native plant species should comprise 75% or greater of the buffer area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3c. Invasive species do not dominate the understory or threaten to dominate (Remove invasive species physically where possible, seek technical assistance for other solutions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3d. Limited cutting for views and firewood/coppice is allowed in Middle Zone, not Streamside Zone, e.g., limb branches up on lower 1/3 of tree for views instead of cutting entire tree; There is a minimum 70% canopy cover; There is no removal of vegetation (or duff) below 3' (1m) (removal of hazardous trees is allowed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3e. There is no pesticide or herbicide use on the property unless recommended by a professional to remove invasive species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Landowner Follow-Up



Certificate of Participation

Thank you for joining Stream Wise.

Name: _____

Address: _____

You are a valued member of your stream community in the _____ watershed. Based on your property evaluation, here is a quick summary of current stream wisdom and opportunities for more stream wisdom.

STREAM WISE CRITERIA

This property: **Meets** ☐ **Does Not Meet** ☐

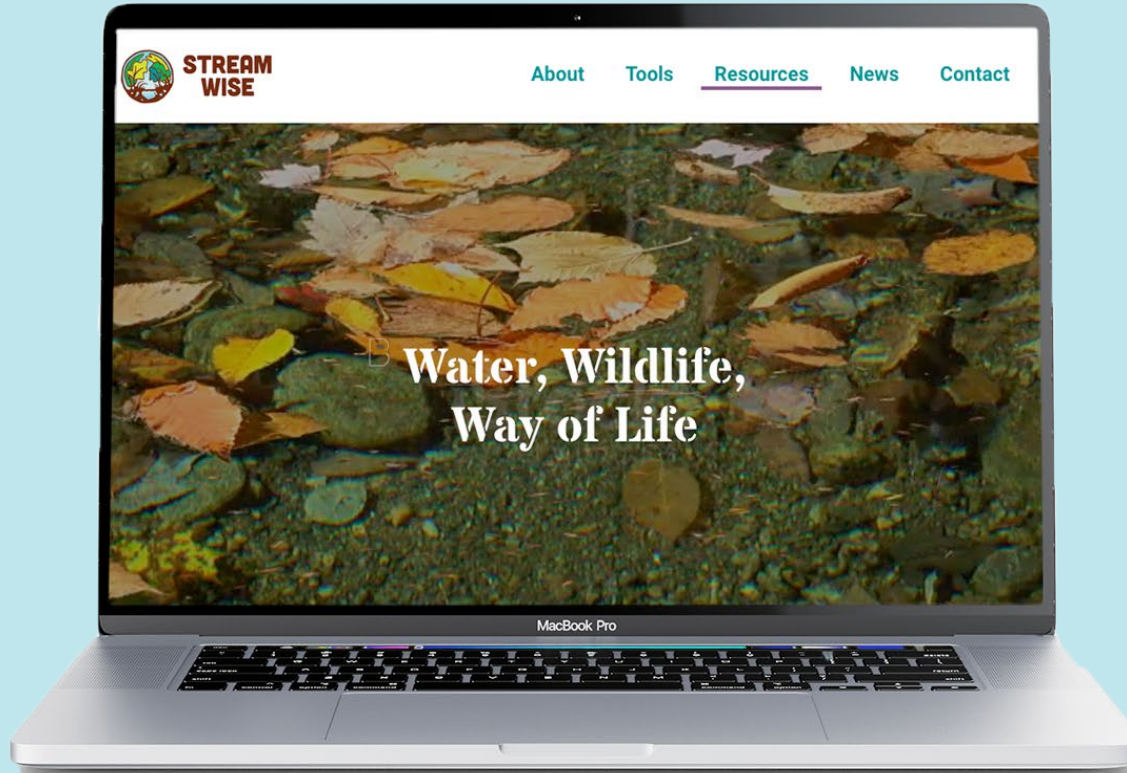
_____ coming a Stream Wise Property.
Contact: Name _____ Email _____ Phone _____
Host Organization _____

streamwisechamplain.org

Branding and Communications



Spread the Word – Social Marketing



Social Media:

- Facebook
- YouTube
- Instagram

But Also:

- Peer-to-Peer



Assessment Protocol & Evaluation Criteria

v1.0
October 2021



Certificate of Participation

Thank you for joining Stream Wise.

Name: _____

Address: _____

You are a valued member of your stream community in the _____ watershed. Based on your property evaluation, here is a quick summary of current stream wisdom and opportunities for more stream wisdom.

STREAM WISE CRITERIA

This property: Meets ☐ Does Not Meet ☐

GOOD PRACTICES	IMPROVEMENT AREAS	POSSIBLE SOLUTIONS
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

We will follow up with you on next steps, including resources for technical assistance. Please don't hesitate to reach out for support in becoming a Stream Wise Property.

Contact: Name _____ Email _____ Phone _____

Host Organization _____

streamwisechamplain.org



Field Visit Form

Property Assessment Tool

The following property assessment and recommendations are based on commonly accepted best management practices (BMPs) for riparian areas that protect the health of streams and adjacent land. The goal of the Stream Wise Program is to protect and enhance natural vegetated stream buffers and encourage other practices that benefit water quality, aquatic and riparian habitat, and increase flood resiliency. This program is not linked to any enforcement action. If you have any questions about the qualifying score, please contact the host organization. Sites that are awarded the Stream Wise sign represent model, stream-friendly properties. **Thank you for your participation!**

Stream Wise uses Fulcrum to record data - get the app on [iTunes App Store](#) and [Google Play](#). [Contact LCB](#) for login information.

Date _____

Evaluator _____

Host Org _____

Stream / River _____ Basin _____

Property owner(s) _____

Mailing address (year-round) Street _____ Apt/Suite _____

Town/City _____ State/Province _____ ZIP/Postal Code _____

Site Assessment Address Street _____ Apt/Suite _____

Town/City _____ State/Province _____ ZIP/Postal Code _____

Phone number _____ Email address _____

Property ownership (check one): Own ☐ Rent ☐ How long (years)? _____ Year-round ☐ Seasonal ☐

Permission to use name(s)? Yes ☐ No ☐ Photo release? Yes ☐ No ☐ Owner initials/approval _____

What does the property owner value in riparian area? (Fishing, swimming, wildlife, boating, aesthetics, etc.) / Notes: _____

Award Status: A property must meet Stream Wise standards in all three categories to become Stream Wise and be given a Stream Wise Award.

Category	Meets	Does Not Meet	Summary Report complete <input type="radio"/>	Certificate of Participation provided <input type="radio"/>
1. Buffer Width	<input type="radio"/>	<input type="radio"/>	Technical Assistance Follow Up required? Yes <input type="radio"/> No <input type="radio"/>	
2. Buffer Zones	<input type="radio"/>	<input type="radio"/>	Next Steps communicated (if applicable) <input type="radio"/>	
3. Buffer Vegetation	<input type="radio"/>	<input type="radio"/>	Stream Wise Award Yes <input type="radio"/> No <input type="radio"/> Sign provided <input type="radio"/>	

Stream Wise Field Visit Form (v1.0) | October 2021 1



Materials

Style Guide

- Brand standards and tips
- Links to logos, colors and fonts

Social media kit

- Links to approved photos and graphics
- Hashtag recommendations and inspiration
- Sample posts

Outreach Materials

- Sign
- Certificate
- Social media accounts (in progress)
- Website (in progress)

Methods

DIGITAL

Website

- All about Stream Wise
- Practitioner tools and resources
- Site development in progress

Social Media

- Facebook, Instagram and YouTube
- Social Media Kit serves as startup guide
- Accounts owned by LCBP (in progress)

Email Newsletter

- Highlight people and happenings
- Annual reports, etc.
- Volunteer opportunities

Analytics

- Track visitors, views and engagement

IN REAL LIFE

Site assessments

- Free evaluations!
- Recommendations & technical resources
- Award Sign
- Pilot program

Social gatherings

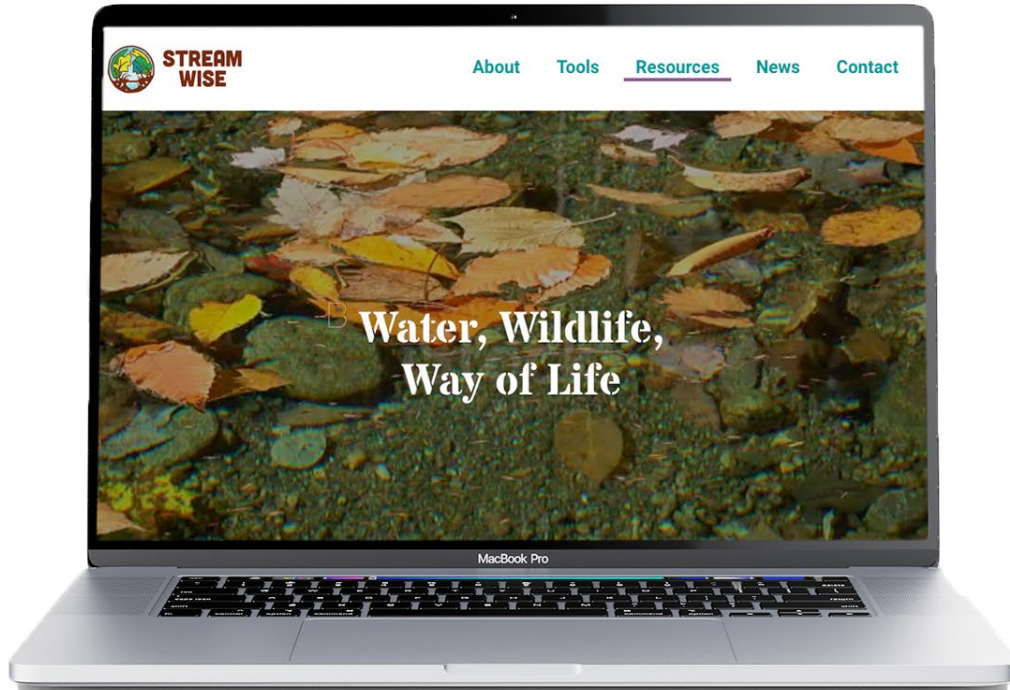
- Local presentations / workshops
- Neighborhood events to spread the word, e.g., Stream Wise Walk & Talk, Beers & Buffers

Swag

- Koozies, hats, stickers, etc.

Print

- Posters, postcards, follow-up surveys
- As needed/funded



Best Practices

Website

- Update content regularly (e.g. news posts)
- Link to blog from social media

Social Media

- Post weekly, engage daily
- Integrate with website posts

Email

- Send newsletter seasonally
- Engage with specific audiences

Analytics

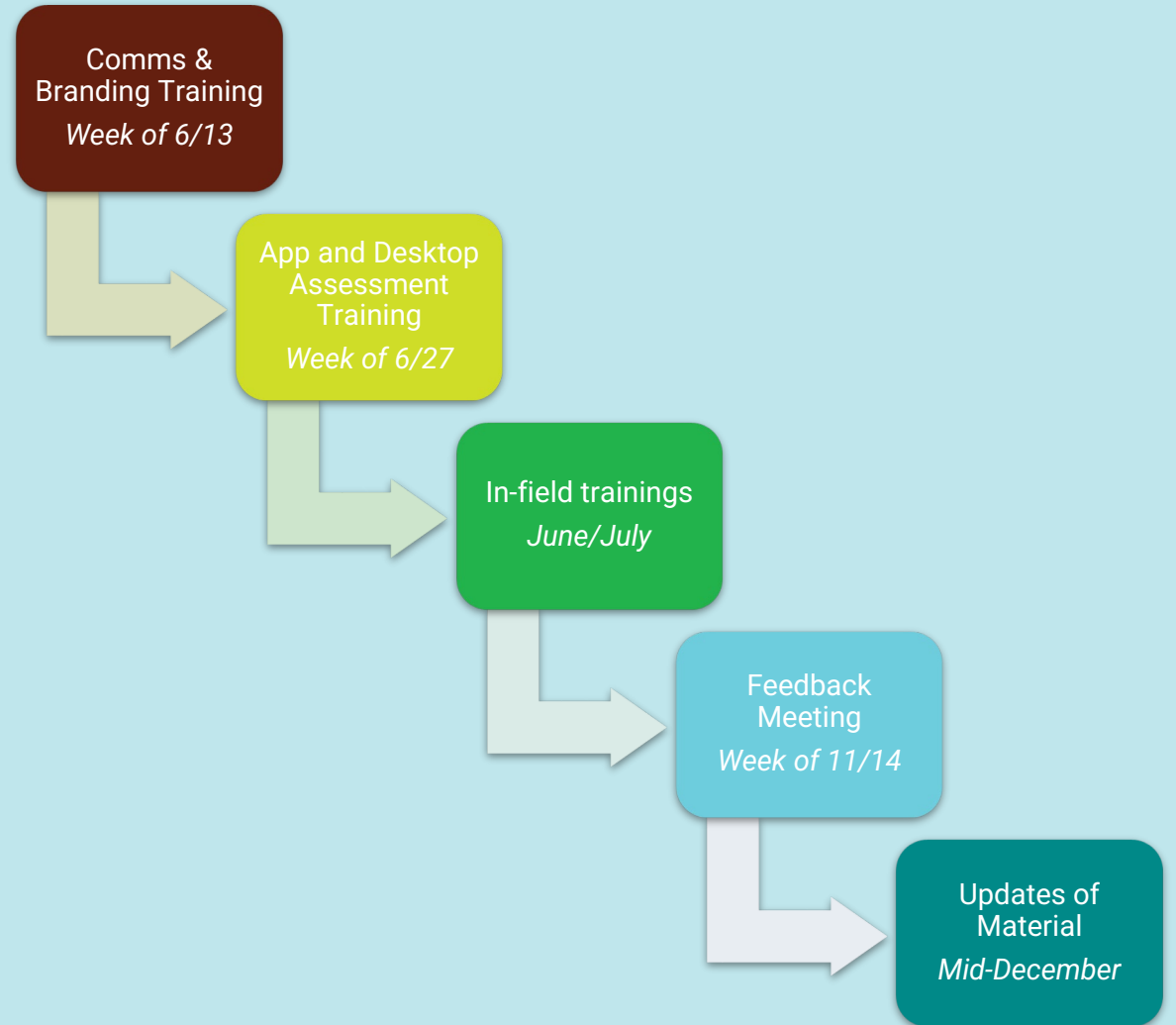
- Monitor outcomes regularly and after each campaign



streamwisechamplain.org

Next Steps – Summer 2022

Stream Wise Pilot Year Season





THANK YOU!

QUESTIONS?

