

























#### Acknowledgements

This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation and the Westchester Community Foundation.

This plan was developed by Groundwork Hudson Valley and the Sarah Lawrence College Center for the Urban River at Beczak with the support of:

Westchester County Board of Legislators - Saw Mill Watershed Advisory Board

Board Chair - County Legislator MaryJane Shimsky

City of Yonkers Village of Hastings-On-Hudson

Village of Dobbs Ferry
Town of Greenburgh
Village of Irvington
Village of Elmsford
Village of Tarrytown
Village of Pleasantville
Town of Mount Pleasant

Town of New Castle

#### Introduction

The Saw Mill River Coalition, a program of Groundwork Hudson Valley, was established in 2001 with a vision of revitalizing and protecting the Saw Mill River. Throughout the last two decades, the coalition has worked to promote the health of the river through community-based initiatives, such as organizing vine cutting and river cleanup events and supporting government led projects like the Saw Mill River Daylighting in Downtown Yonkers. However, there are still great challenges the river faces, as it runs entirely through highly developed suburban and urban areas. To face these challenges, it is important to develop a process which can ensure continuity of coalition work. In the past few years, the coalition chose to follow the path of other successful watershed alliances in the United States. A State of the Watershed Report was published in 2019, which along with municipal and community input, led to the development of this 5-Year Action Plan. Looking forward, the coalition aims to focus its efforts on developing, together with Westchester County, a comprehensive watershed management plan.

Just like every watershed has its unique characteristics, so does every watershed alliance. Therefore, this action plan not only outlines what we wish to see in the future, but also identifies existing assets and past achievements of our coalition. Such assets include active stewardship program, led by Groundwork Hudson Valley, a successful water sampling program, led by the Sarah Lawrence College Center for the Urban River at Beczak, a county supported advisory board as well as past plans and reports, municipal surveys, community input sessions and a renowned river daylighting project. This plan draws upon those assets and sets clear goals and objectives for further strengthening them.













#### Plan Scope

In this plan, the coalition proposes to continue the ongoing work of our stewardship program, our water quality sampling program, community engagement efforts and the routine meetings of the Saw Mill Watershed Advisory Board, while also pursuing funding to complete a comprehensive watershed management plan. We see the development of a watershed management plan as a crucial step for moving towards implementation of large restoration projects, so this 5-Year Action Plan is designed based on the assumption that a proposal for funding for the development of a watershed management plan will be submitted in year 1, the work on developing the plan will start during year 2 and the plan will be completed by year 4. This aspirational timeline is dependent on our ability to secure significant funding.

The plan consists of six sections, focusing on the fields of stormwater management, water quality, habitat restoration, community engagement and stewardship, access and recreation and stakeholder coordination. It is important to note that the success of achieving the objectives of this plan is highly dependent on the ability to ensure continuous funding for the work of the coalition towards the planning and implementation of projects. The strategies, tasks and measurable outcomes detailed in the plan should be viewed as guidelines for efforts to be made by members of the coalition, local municipalities, and the county government to support the restoration of the Saw Mill River.

Covid19 – This plan was developed throughout the spring and summer of 2020, in the midst of the Covid19 crisis. This crisis impacted the routine work of the Coalition, especially when it comes to hosting community engagement and stewardship events, which were substituted with virtual meetings or limited to fewer people to allow for social distancing. But more than all, the Covid19 crisis brought a lot of uncertainties when it comes to future availability of funding resources. In the coming year, as we begin stepping out of this crisis and having better clarity regarding funding resources, we will revise the Action Plan accordingly.

#### **Table of Contents**

Stakeholder Coordination	4
Community Engagement and Stewardship	9
Stormwater Management	13
Water Quality	17
Habitat Restoration	21
Access and Recreation.	25













#### Acronyms

SMR - Saw Mill River

SMRC – Saw Mill River Coalition

SWAB - Saw Mill Watershed Advisory Board

GWHV – Groundwork Hudson Valley

CURB – Center for the Urban River at Beczak

WMP – Watershed Management Plan

GI – Green Infrastructure

#### Link for Existing Plans, Agreements and Reports

Saw Mill River Coalition Action Plan: 2004

Memorandum of Agreement with respect to the Saw Mill River Watershed (2005-2006)

Stormwater Reconnaissance Plan for the Saw Mill River – Pocantico River Watershed (2012)

Saw Mill River Recreation Area Plan (2014)

State of the Saw Mill River Watershed Report (2019)













#### **Stakeholder Coordination**



Saw Mill River Coalition Community Engagement Meeting

Like most environmental features, a river knows no human-made boundaries. When a wetland is paved in a particular town, increasing the flow rates of the rivers, the impact will be felt in communities further downstream. The power of a successful watershed alliance lies in its ability to bring different stakeholders from the private, public and nonprofit sectors to sit together and address issues of the river from a watershed-wide point of view. These connections are the foundation for collaboration between different stakeholders such as different municipalities, local developers who own property along the river and community-based organizations who work to restore its health. A strong stakeholder forum is also an important tool for securing funding for river restoration projects. The Saw Mill River runs through 12 municipalities, several commercial districts and residential neighborhoods. With the support of the Westchester County Board of Legislators, the Saw Mill River Coalition is helping to coordinate the work of the SWAB – the Saw Mill Watershed Advisory Board. Throughout the years the SWAB has been successfully promoting river restoration projects at the watershed-wide scale as well as coordinating restoration projects at the local level.

Strategy	Tasks	Who's responsible	Examples/ measurable outcomes
Continue supporting municipal and	Designate and train SWAB Coordinator	SWAB	Designated SWAB coordinator leads quarterly meetings
community partners through the County's Saw Mill Watershed	Add new members to the SWAB from local community organizations	GWHV + CURB	6-8 new members added
Advisory Board (SWAB)	Routinely update SWAB members on coalition activities	GWHV + CURB	At least one SWAB update email between each quarterly meeting
	Coordinate local outreach activities with SWAB members	GWHV	Municipal partners promote and support SMRC outreach in local events
	Create a system for documenting data on SMR flood events to be updated based on municipal partners input	SWAB, GWHV	SMR Flooding map embedded on SMRC website
	Maintain quarterly SWAB Meetings	SWAB Coordinator	4 meetings per year with at least 8 out of 11 municipal partners present at each meeting
	Create a platform for SWAB and BRAB idea exchange	SWAB Coordinator	1 quarterly meeting per year to be combined with BRAB meeting
Renewed commitment from municipal partners	Designate official representatives from each municipality	SWAB Coordinator	List of official SWAB members posted on Westchester County Board of Legislators Website
	Revise 2004 Memorandum of Understanding with municipal partners committing to pursue up to 3 local SMR restoration actions	SWAB, GWHV	At least 10 out of 12 municipalities sign renewed commitment letter
	Work with Westchester County and municipal partners on securing funding for the development of a Watershed Management Plan	SWAB, Westchester County Planning, GWHV	Revised LWRP or equivalent grant application submitted in 2020

Strategy	Tasks	Who's responsible	Examples/ Measurables outcomes
Develop a Watershed Management Plan	Hire Watershed Management Plan Consultant	SWAB, Westchester County	Consultant hired
	Educate SWAB on Watershed Management Plan best practices	GWHV + SWAB coordinator	Bronx River Alliance staff present to SWAB their WMP process and lessons learned
Promote new collaborations with private sector	Work with municipal partners to identify private landowners in the floodplain	SWAB	Contact list of commercial, residential and industrial owners
stakeholders	Work with municipal partners to identify potential incentives for private commercial landowners	SWAB	Tax breaks for green infrastructures on commercial properties.
	Conduct outreach and invite private stakeholders to participate in SWAB and SMRC meetings	SWAB Coordinator + GWHV	SWAB meeting with commercial property owners  Personal outreach to residential property owners regarding SMRC meetings
Promote local municipal restoration actions	Meet with each municipal partner to coordinate support for local restoration actions	GWHV	Meeting with at least 8 out of 12 municipal partners
	Municipal partners present local restoration actions taken at SWAB meeting	SWAB	At least 5 projects presented  Site visit to 1-2 municipalities
	Map dumping "hot spots" along the river	SWAB, GWHV, CURB	Each municipality creates a list of dumping hot spots with details regarding source of dumping and potential actions to be taken
Continued municipal support in SMRC activities	SWAB members reach out to local elected officials for participation in	SWAB	Each active stewardship group hosts local elected officials
	stewardship/ community engagement events		Elected Officials participate in SMRC community meetings

# **Year 2-3 (continued)**

Strategy	Tasks	Who's responsible	Examples/ Measurable outcomes
Coordinate municipal partners and stakeholders' input for Watershed	WMP consultant to meet with SWAB	GWHV, SWAB Coordinator	All 12 municipal partners present at meeting
Management Plan	Organize a river tour for SWAB members and WMP consultant	GWHV, SWAB Coordinator	Visit potential restoration site in at least 4 municipalities
Prioritize projects for implementation	Develop stakeholder survey for project prioritization	Prioritize projects for implementation	Develop stakeholder survey for project prioritization
	Municipal partners prepare 1 pager documents for potential projects within their jurisdiction	Westchester County, SWAB municipal partners	Municipal partners prepare 1 pager documents for potential projects within their jurisdiction
Monitor local municipal restoration actions	Work with municipal partners on evaluating success of municipal actions	SWAB	Municipal members share progress and lesson learned with SWAB
	Measure success in treating dumping "hot spots"	County	Action (camera, signs, enforcement, letters to owners etc.) taken at least at half of all sites.

Strategy	Tasks	Who's responsible	Examples/ Measurable outcomes
Support the development of Watershed Management Plan	Selecting high priority sites for initial implementation	SWAB Coordinator, GWHV	5 priority sites agreed on by SWAB members
Secure implementation funding	Round one of fundraising for implementation of high priority projects based on WMP recommendations	Westchester County, Municipalities	Funding proposal for at least 2 sites submitted
Assess progress of 5-Year Action Plan objectives	Survey SWAB members on 5-Year Action Plan progress	SWAB, GWHV	Survey answered by all watershed municipalities
Promote completed WMP	Share and promote WMP with communities	SWAB	WMP published on all local websites and newsletters
	Present WMP to Elected officials of municipalities with highest priority sites	GWHV	Presentations to elected officials (City Council/ Board of Trustees) in at least 10 watershed communities
Evaluate restoration projects cost/benefit	Work with municipal and state partners to evaluate expenses of flood damage	SWAB, GWHV	Publish summary report of past and present expenses for emergency management and infrastructure repair
	Partner with an academic entity focusing on ecosystem services	GWHV, SMRC	Develop ecosystem services appendix to WMP













#### **Community Engagement and Stewardship**



Members of the Green Team during the Annual Great Saw Mill River Cleanup event at the Saw Mill River Daylighting site in Yonkers

Having clear priorities and a well-educated grassroots constituency is the lifeblood of successful watershed alliances. The Saw Mill River Coalition seeks to expand and work more effectively in terms of its goals and objectives, more volunteers need to be involved in site-specific stewardship activities, and a greater understanding is needed across the watershed of the importance of the stream to local biodiversity and water quality protection.

Strategy	Tasks	Who's responsible	Examples/ measurable outcomes
Increase and diversify community participation in coalition work	Develop an interactive, traveling Saw Mill River education roadshow, in both English and Spanish.	GWHV	Reach 100+ residents
	Conduct semiannual coalition public engagement meetings - one for lower watershed and one for upper watershed	GWHV+CURB	40+ participants
Increase online presence of	Develop new website for coalition	GWHV	Reach 500+ residents
coalition	Semiannual coalition newsletter	GWHV	Reach 500+ residents
SMR Heroes - Collect stories from residents who lived or worked in the Saw Mill River Watershed	Conduct outreach to identify potential testimonials	GWHV	At least 4 stories published on SMRC website and newsletters
Expand Stewardship Program	Open an upper watershed stewardship group	GWHV	2+ annual events reaching 50+ residents
J	Open a lower watershed stewardship group	GWHV	2+ annual events in new restoration sites
	Develop Model Stewardship Guide	GWHV	Reach 100+ residents from at least 8 municipalities
	Expand the Great Saw Mill River Cleanup	GWHV	open at least 1 new cleanup site
Increase and diversify SWAB participation	Conduct outreach to community-based stakeholders to join SWAB meetings	GWHV + SWAB staff	6+ new SWAB members

Strategy	Tasks	Who's responsible	Examples/ Measurables outcomes
Promote Model Stewardship Guide	Conduct outreach to local sustainability advisory boards	GWHV, SWAB	Meetings with all Sustainability/ Conservation Advisory Boards
	Present Model Stewardship Guide to SWAB members	GWHV	Lead SWAB Meeting promoting municipal support in local stewardship groups.
	Present Model Stewardship Guide to residents	GWHV	Dedicate a full coalition community engagement meeting to presenting the Stewardship Program.
Continue expansion of stewardship program	Support new river stewardship groups based on Model Stewardship Guide	GWHV	At least 4 stewardship groups working according to a work schedule set in the beginning of the season including 2 annual group leadership meetings for planning.
	Expand Great Saw Mill River cleanup to Upper Watershed	GWHV, SMRC	Add 3 new sites north of Woodlands Lake
Educate students on SMR restoration	Promote SMR Daylighting Curriculum to teachers throughout the watershed	GWHV, SMRC	At least 100 teachers exposed to curriculum
Gather public input for	Conduct Public Surveys	WMP Consultant + GWHV	100+ answered surveys
Watershed Management Plan	Host public participation workshops	WMP Consultant	2 annual workshops

Strategy	Tasks	Who's responsible	Examples/ Measurable outcomes
Modify stewardship program around newly	Promote educational programs around restoration sites	GWHV	Community participation in development of interpretive signage
implemented restoration sites	Develop community/ participatory monitoring program for restoration sites	GWHV + CURB	Citizen Science monitoring program for water quality, flood events and invasive species
Educate students about SMR restoration	Develop watershed wide SMR Restoration educational curriculum	GWHV	Curriculum addresses issues such as climate change, stormwater management and water quality
WMP Outreach	Organize tours to the different project sites	GWHV + SWAB	2 annual tours. At least 40 participants per tour.
	Promote stories about WMP in local media outlets	GWHV, SMRC	Stories to be published at least 5 media outlets.
	Conduct public meetings to present WMP	GWHV + CURB	2 annual coalition meetings presenting the plan.
	Develop interpretive signage for restoration sites	GWHV + SWAB members	at least one sign per site explaining the work that has been done and the projected benefit.













#### **Stormwater Management**



Flooding along the Saw Mill River in Greenburgh, NY

Stormwater management is a core issue in the effort to restore the health of the Saw Mill River. Not only is the issue of stormwater the direct cause for one of the most urgent problems impacting communities throughout the watershed, recurrent flooding events, but it also has a direct impact on issues such as water quality, habitat, and access. Improving stormwater management in the Saw Mill Watershed is even more crucial given the impact of climate change. More and more, extraordinary weather events are becoming the norm in Westchester County. Nor'easters, tropical storms and severe thunderstorms have deluged Westchester with greater frequency and intensity. With intense development throughout the Saw Mill Watershed, and specifically along the Saw Mill River floodplain, permeable surface is becoming rare, resulting in increasing flow levels in the river leading to more flooding, bank erosion, low filtration and deterioration of sewer utilities.

Strategy	Tasks	Who's responsible	Examples/ measurable outcomes
River Bank Restoration	Remove invasive vines at selected stewardship sites:  - Yonkers – Executive Blvd - Dobbs Ferry – Chauncey Park - Pleasantville – McDonalds - Pleasantville – Grant St	GWHV, SMRC	2 upstream invasive removal events 2 downstream invasive removal events Total 6 acres cleared of invasives
	Plant and maintain native vegetation in:  - Yonkers – Executive Blvd - Pleasantville – Grant St	GWHV, SMRC Stewardship Groups	0.4 acres planted
Promote GI throughout watershed	Present GI best practices to SWAB	GWHV, CURB	Sample policy and design guidelines and their relation to the SMR are presented at SWAB meeting
	Work with municipal partners to include GI in local plans and infrastructure projects	GWHV, SWAB	Gather list of planned infrastructure projects within the watershed that may include GI elements
			Municipal partners to sign letters of commitment for promoting GI projects
	Educate local communities on homeowner stormwater management tools	GWHV	Table at 5 community events  Teach stormwater
			management practices in public schools
Debris removal	Expand Great Saw Mill River Cleanup	GWHV	Add 9th cleanup site with at least 15 volunteers to currently existing 8 sites.
	Work with the City of Yonkers on developing solution for ongoing debris removal from Daylighting	GWHV	Quarterly review with the City of debris in Daylighting
	Organize additional cleanup events at stewardship program sites	SMRC	2 local cleanup events
	Work with SWAB to identify solutions around downed trees	GWHV	Present to SWAB best practices for wooded habitat management in urban areas

Strategy	Tasks	Who's	Examples/ Measurables
		responsible	outcomes
Promote GI	Promote municipal efforts to get	GWHV,	Develop model grant
throughout	funding to create GI plans	SWAB,	proposal for local GI
watershed		municipalities	project
			Submit at least 1 GI grant
			proposal per year
	Develop a presentation of best	GWHV,	Municipal SWAB
	practices for GI incentive tools for	SWAB	members present to City
	private sector		Councils/Boards of
			Trustees potential tools
			for GI Incentives for
			private developers
	Establish a consistent wetland buffer	SWAB	Adoption of policy by
	management policy		majority of municipalities
Perform Baseline	Begin stream-flow gauge project on	Westchester	Gauges installed in at least
Watershed	Saw Mill River	County	3 locations
Assessment (as		Planning	
part of a	Prepare an existing conditions	WMP	Model entire watershed
watershed	hydrologic model	Consultant	based on permeability and
management			land use
plan)	Perform a comparative analysis of the	WMP	List of priority sub-basins
	sub-basins and select priority sub-	Consultant	created
	basins		
			3 priority sub basins
	Manitan and and asstatoms flavoustes	WMP	identified
	Monitor pre and post storm flow rates	Consultant	Establish average baseline flow rates of river before
		Consultant	and after storm events
	Identify erosion hot spots	WMP	Top 10 erosion hot spots
	identity erosion not spots	Consultant	identified
	Identify flooding hot spots	WMP	10 most flood prone
	Identity flooding not spots	Consultant	locations identified
Identify stream	Map potential floodplain restoration	WMP	At least 10 potential
restoration sites	sites	Consultant	floodplain restoration sites
for	sites	Consultant	identified
implementation	Prepare preliminary design	WMP	20% design documents
implementation	documents for selected high priority	Consultant	prepared for 2-3 potential
	restoration sites	Jonesmant	restoration sites
	Raise necessary funds for floodplain	Westchester	Funding secured for at
	restoration projects identified in	County +	least 3 major projects
	WMP	Municipalities	J F J
		1	

Strategy	Tasks	Who's responsible	Examples/ Measurable outcomes
Promote GI throughout watershed	Develop Homeowner Stormwater Management toolkit	GWHV, SWAB, SMRC	Toolkit sent to residents by all watershed municipalities
			Toolkit hashtag created for sharing examples
	Implement local GI projects	GWHV, SWAB municipal partners	Amount of stormwater captured in watershed increased by at least 5%
Implement restoration activities at priority sites identified in year 3	Install bank stabilization plantings and monitor	Westchester County, SWAB municipal partners	30% average erosion reduction at 3 top priority erosion hot spot sites
based on watershed management plan	Plant buffer strips	Westchester County, SWAB municipal partners	At least 0.5 acre of riparian buffer planted
	Implement stream-flow gauge project 2 <sup>nd</sup> round	Westchester County	2-3 additional gauges installed at priority subbasins
Restoration site maintenance	Develop floodplain restoration maintenance plan for municipalities	Westchester County, SWAB municipal partners, SMRC stewardship groups	Maintenance plan completed for each site, involving county agencies, municipal DPWs and local stewardship groups
Monitor and document effects of restoration projects	Develop participatory science stewardship program for floodplain restoration monitoring	GWHV + CURB	A comprehensive dataset of river conditions collected at project sites after completion of restoration













#### **Water Quality**



Saw Mill River Coalition Volunteers sampling water in Hastings-on-Hudson

The issue of water quality in the Saw Mill River has been an ongoing challenge. In the last decade, the County and the Saw Mill River Coalition have continued to monitor water quality in the watershed which has public health, aquatic habitat and recreational impacts that can limit the viability of the river as a local resource. With EPA funding, a 4-year water quality study was carried out with Manhattan College to assess 15 sites from the headwaters to the mouth of the river focusing on fecal coliform (bacteria), conductivity (road salt), total phosphorus (fertilizer), pH (acid), and turbidity (suspended sediments). In 2015, Coalition members Riverkeeper and the Center for the Urban River at Beczak (CURB) launched a new round of sampling at the same 15 sites. It focused primarily on Enterococcus ("Entero"), which is an indicator of fecal coliform. Prior studies were conducted by the USGS and the Army Corps as well. Using this existing data, and as part of the development of a comprehensive Watershed Management Plan, the County and the Coalition will narrow down the source of key pollutants and propose specific projects, policies, and programs to address them at "hot spot" sites.

Strategy	Tasks	Who's responsible	Examples/ measurable outcomes
Continue baseline pollution monitoring	Train local high school students in water quality analysis and sampling	CURB	Continued hosting of both the Winter Water Academy and Blue Team at CURB
	Perform water sampling in selected sites	CURB	Seasonal sampling data collected at sites along the SMR
Consolidate existing water quality data and information	Transfer consolidated water sampling data to WMP consultant	CURB	Data transferred to WMP consultant
River bank Restoration	Expand Willow Planting Project to additional bank restoration sites	GWHV, stewardship groups	Additional Willows planted along banks of SMR

Strategy	Tasks	Who's responsible	Examples/ Measurables outcomes
Consolidate existing water quality data and information	Identify all past water quality data collected by USGS and Army Corps	WMP Consultant	A compilation of all historic water quality data is collected and document for future reference
Identify pollution prevention opportunities	Map pollution "hot spots"	WMP Consultant	Locations identified along the river that are prone to different pollutants using information collected
	Determine high priority pollution hot spots  Perform preliminary analysis of pollution source for high priority sites	WMP Consultant WMP Consultant	Locations are prioritized based on the highest levels of needs  Pollution sources are identified at high priority hot spots
Analyze non-fecal pollution levels - conductivity (road	Perform water testing for non-fecal pollution	CURB	Additional water quality data points collected along the river during the sampling season
salt), total phosphorus (fertilizer), pH (acid), and turbidity (suspended sediments)	Explore state and federal funding opportunities for non-fecal pollution cleanup, prevention and mitigation	CURB	Funding opportunities identified for the continued support and betterment of the water quality of the SMR
Water sampling reviewing and monitoring	Additional water quality sampling carried to confirm initial hot spot assessments	CURB	Sample at least 2 potential hotspot pre and post extreme rain event
	Consultant, Coalition, County staff review water quality hot spots together	GWHV	A trip to identified hot spots by group scheduled and completed
Work towards implementation of pollution	Coalition and County staff finalize public access and water quality strategies	SMRC	List of projects and strategies created.
prevention projects identified in year 1 and 2	Raise necessary funds for pollution prevention projects	Westchest er County	Funds sought and obtained by county
	Work with municipalities on developing sewer leaks prevention program	Municipal partners	Sewer leaks prevention program created and implemented

Strategy	Tasks	Who's responsible	Examples/ Measurable outcomes
Implement restoration activities at priority sites identified in year 2	Fix high priority leaking sewer pipes	Municipalities + Westchester County	Water quality improvements.
Implement regulation for reducing non-fecal pollution	Work with municipalities, county and state to reduce the use of salt on roadways and impacts on the stream in the winter	SMRC, CURB	An alternative salt plan is developed and adopted by users along the SMR
	Re-evaluate monitoring for heavy metals, toxics, PCBs in sediments	CURB	Determined whether it is feasible to monitor for these additional parameters physically and financially
Monitor and document effects of restoration projects	Develop citizen science stewardship program for floodplain restoration monitoring	GWHV + CURB	Water quality improvements tracked













#### **Habitat Restoration**



Members of the Green Team planting Willow trees along the Saw Mill River in Yonkers

The natural habitat of the Saw Mill River has been in decline throughout centuries of ongoing development throughout the watershed. This is a multifaceted problem. The Saw Mill River Parkway, which stretches along more than two thirds of the river, exposes much of its floodplain to direct sunlight, accelerating the spread of invasive species which have taken over much of the flood plain and pushed out native riparian vegetation, insect communities and aquatic animals. Sewer leaks throughout the watershed have led to poor water quality and with it a decline of native aquatic habitat. In the lower watershed, a rapid process of urbanization turned entire sections of the river into a concrete channel, which in much of Downtown Yonkers runs under the city streets. These channelized sections, a man-made dam in Great Hunger Memorial Park and rapid flow rates at some sections of the river due to mismanagement of stormwater create an obstacle for species that have been migrating up and down the Saw Mill River throughout history. The approach for mitigating this multifaceted problem must be multilayered itself. Many of the strategies offered in other sections of this plan will help to restore the natural habitat of the SMR. This section offers strategies and actions specifically focused on the issues of habitat restoration and biodiversity.

Strategy	Tasks	Who's responsible	Examples/ measurable
			outcomes
Riparian habitat	Conduct frequent	SMRC stewardship	Significant reduction of
restoration	removal of invasive	groups	invasive vine spread along
	vines at stewardship		a total of 0.6 miles of
	sites and monitor		floodplain at 4+ sites
	Expand vine cutting	GWHV, SMRC	Additional 0.5-mile strip
	program	stewardship groups	of flood plain added to
			program for a total of
	Maintain and monitor	GWHV, SMRC	75% survivability of
	Yonkers willows site	Yonkers stewardship	willows and shrubs
		group	
			50% reduction of Japanese
			Hops spread rate
	Expand native habitat	GWHV, SMRC	At least100 native trees
	planting program	stewardship groups	planted
			0.4 acre planted [or
			restored to seedling forest]
Develop best	Test and monitor	GWHV, SMRC	Clear determination of
practices for	invasive vines	Yonkers stewardship	best practices most suited
community-based	reduction strategies at	group	to Saw Mill River
riparian habitat	various sites		community-based bank
restoration			restoration projects, with
			references to the testing
			sites, will be included in a
			SMR Model Stewardship
	D 11' 1 CMD ' '	CMIN	Guide
	Publish SMR invasive	GWHV	Each SMRC stewardship
	vines control		group presents their long-
	guidelines as part of		term vine control plan
	Model Stewardship		
	Guide		

Strategy	Tasks	Who's	Examples/ Measurables outcomes
		responsible	
Native riparian forest restoration	Coordinate sponsorship of stewardship groups by local tree nurseries	GWHV, SMRC	<ul><li>1 planting event per year for each group</li><li>1 tree maintenance training event per year for each group</li></ul>
	Support local stewardship groups in applying for Trees for Tribs	GWHV, SMRC	2 proposals submitted
Naturalization of critical fish migration	Develop plan for Woodlands Lake Dam Removal	Westchester County Planning	Woodlands Lake Dam Removal feasibility study completed
obstacles	Promote naturalization project for Carpet Mills channelized	GWHV, Curb, City of Yonkers	Conduct site visit with Army Corps of Engineers
	section		Present stream naturalization best practices to City Council
SMR Daylighting – restore natural habitat of	Prioritize habitat restoration in design process of Daylighting 4 (Chicken Island)	City of Yonkers	3 annual meetings with design consultant to discuss habitat restoration practices
covered section in Downtown Yonkers	Include in SMR Daylighting Phase 4 design measures for reduction of water velocity at Daylighting 3 site	City of Yonkers	Design consultant for Daylighting 4 to study Daylighting 3 and publish report of potential interventions through Daylighting 4 design
Identify priority species	Partner with an academic institution to conduct insect population assessment at selected sites	GWHV, CURB	Saw Mill River insect population assessment report published
	Work with DEC HREP on conducting American Eel population assessment	GWHV, CURB	Saw Mill River American Eel population assessment report published
	Organize biennial bioblitz for tracking stewardship impact	GWHV, SMRC stewardship groups	Bio-blitz results from at least 5 sites published

Strategy	Tasks	Who's responsible	Examples/ Measurable
			outcomes
Include natural habitat restoration elements in WMP	Collaborate with an academic partner for selecting restoration species	WMP Consultant, Westchester County, GWHV	Publish a guide for selecting native species based on site goals and characteristics including info from Bio Blitz results
Monitor and document success of	Organize biennial bioblitz for tracking stewardship impact	GWHV, CURB	Bio-blitz results from at least 5 sites published
restoration site	Conduct second insect population assessment	GWHV, CURB	Publish 2-year population change in SMRC Newsletter
	Organize SMRC tour of riparian forest restoration sites at different stages	GWHV, SMRC	At least 40 participants in the tour  Local stewardship groups
	amorom suages		share lessons learned
SMR Daylighting –	Implement Daylighting 4 at Chicken Island	City of Yonkers, GWHV	0.7 acres daylighted and planted with native vegetation
restore natural habitat of covered section in Downtown Yonkers	Secure funding for fish passage improvements to Daylighting 3	City of Yonkers, GWHV	Funding secured for sediment removal and a fish ladder
Naturalization of critical fish	Remove Woodlands Lake Dam	Westchester County	3.5 acres restored and planted with native vegetation
migration obstacles	Carpet Mills naturalization feasibility study	City of Yonkers, Army Corps of Engineers	Feasibility study published
Riparian forest restoration	Continue maintenance of restoration sites	SMRC stewardship groups	At least 4 events per year for each group At least 75% planted trees survivability rate
	Open 2 new planting sites at priority subbasins	SMRC, GWHV	100 native trees planted 0.4 acres planted
	Plant riparian trees at post-dam-removal Great Hunger Memorial Park	Westchester County Parks	At least 100 trees planted
	Monitor reduction of invasive vines at mature stewardship sites	SMRC stewardship groups, GWHV	Required routine vine cutting reduced to 1 event per year per site













#### **Access and Recreation**



Winter recreation trails and signs opening access to the Saw Mill River from the South County Trail in Hastings-on-Hudson

"Not just a parkway" has been a long-time tag line for the Saw Mill River. Even though thousands of drivers pass along the river every day, many of them are not aware of the river with all its magnificent ecosystems. Proper access to the Saw Mill River for recreational purposes is mostly limited to the South County trail, which itself tends to ignore the river running alongside it, lacking signage, seating or well-maintained trails. Furthermore, many of the riverside communities do not have proper access routes for pedestrians or cyclists. Many times, the river runs through vacant "no-man-lands" which hold great potential to be developed as new river parks. The variety of access issues contributes to the Saw Mill River's reputation as a forgotten river. The Saw Mill River Coalition believes that the river can serve as a great attraction for recreational activity such as hiking, walking, cycling, snowshoeing and kayaking. In addition, we believe that the river should also serve as an educational tool to teach residents of the efforts taken to restore the wellbeing of- an urbanized stream. Developing new access and recreation opportunities is a critical element in raising awareness, engagement and political will for supporting restoration efforts throughout the watershed.

Strategy	Tasks	Who's responsible	Examples/ measurable outcomes
Increase river access and local recreation opportunities through community-based projects	Coordinate stewardship projects to increase river access, visibility and recreational opportunities from the South County Trail in the lower watershed	GWHV, stewardship groups	Add 3 new "signature locations" along the trail  Install 2 additional benches
	Create new river access opportunities at upper watershed	Upper watershed stewardship group	Trail work, bench and signage at McDonalds site in Pleasantville
	Promote designation of the new14.8 acres Chauncey SMR Park as Dobbs Ferry village park	Dobbs Ferry stewardship group	Tour of site with elected county official conducted  Map potential access routes and signature locations
River restoration sites as an educational tool	Publish SMR Curriculum for school teachers to lead tours of SMR Daylighting	GWHV, Yonkers Public Schools, City of Yonkers	Curriculum sent to all schools in 12 watershed municipalities
	Organize public tour of lower watershed restoration sites	GWHV	At least 30 participants exposed to 4-5 sites
Promote connectivity and river access opportunities	Promote implementation of 2014 SMR Recreation Plan recommendations	Westchester County Parks, SWAB municipal partners	Plan presented to SWAB  2-3 priority recommendations developed into proposals
from existing and planned recreational infrastructures along the SMR	Improve river access opportunities at V.E. Macy Park	Westchester County (Parks, Planning)	Organize site visit with Parks personal and Ardsley Conservation Committee
Promote online information on SMR access and	Publish SMR Recreation Plan on new SMRC Website	GWHV	Outreach of plan via all municipal newsletters
recreation opportunities	Develop an access and recreation map on SMRC website	GWHV	Map to include all trails and signature locations

Strategy	Tasks	Who's responsible	Examples/ Measurables outcomes
Increase river access and local recreation opportunities through	Create new river access opportunities from local river adjacent businesses in the Village of Ardsley	SMRC, Village of Ardsley	Install benches and signs at Bridge Street site
community-based projects	Conduct trail work and open new access points at Dobbs Ferry Chauncey Park	Dobbs Ferry stewardship group	Trails connecting all surrounding neighborhoods opened  3 new benches installed
Promote wayfinding along river access sites	Install interpretive signage at signature locations	Stewardship groups, Westchester County Parks	4 new signs installed along South County Trail signature locations
	Work with Rivertowns Square management on installing signs from Lawrence St to Chauncey Park	Village of Dobbs Ferry, Dobbs Ferry stewardship group, GWHV	3 signs and park map installed
River restoration sites as an educational tool	Lead public educational tours of SMR Daylighting	GWHV, City of Yonkers	50-100 people participate in new proposed tours
Promote connectivity of and river access opportunities from existing and	Promote implementation of 2014 SMR Recreation Plan recommendations	Westchester County Parks, SWAB	Implement year 1 proposals if granted  Develop 2 additional connectivity proposals
planned recreational infrastructures along the SMR	Promote development of plans for connecting highway- separated parks	SWAB municipal partners	Proposal for connecting Rum Brook to South County Trail  Proposal for connecting the 2 sections of V.E. Macy Park
	Develop proposal for recreational connection between the Yonkers Greenway, South County Trail and Old Croton Aqueduct	City of Yonkers	Plan presented to Westchester County Parks and to NYS Parks and Historic Preservation  Proposal submitted to NYSDOT
Develop recreational activity at SMR	Implement Yonkers Greenway bike lanes at Daylighting 1 and 2	City of Yonkers	3,500ft of new river adjacent bike lanes
	Organize annual SMR hike	GWHV	At least 25 participants per hike

Strategy	Tasks	Who's responsible	Examples/ Measurable outcomes
Create new river parks	Implement SMR Daylighting 4 at Chicken Island in Yonkers	City of Yonkers	0.7 acres of new urban river park open to the public
	Complete designation process of Dobbs Ferry Chauncey Park as village	Village of Dobbs Ferry Dobbs Ferry stewardship	14.8 acres of new park open to the public Friends of Chauncey Park group established  Maintenance plan completed
River restoration sites as an educational tool	park Develop plans for an urban river restoration educational facility at Great Hunger Memorial Park	group Westchester County Parks, WMP Consultant	Maintenance plan completed Proposal for center prepared and submitted Preliminary design documents prepared
	Expand SMR curriculum to include Daylighting 3,4	City of Yonkers, GWHV	Expanded curriculum published to all watershed schools  At least 100 people per year participate in site tours
Increase river access and local recreation	Promote kayaking activity on the river	Stewardship groups, GWHV	3 new platforms installed along newly designated parks
opportunities through community-based projects	Expand winter recreation on the SMR	Stewardship groups, GWHV	Organize annual SMR flotilla  1.5 miles of snowshoeing/cross country ski routes developed
projects	Organize annual SMR bike tour	GWHV	At least 20 participants
Promote connectivity of and river access opportunities from existing and planned recreational	Expand Yonkers bike lanes network to Daylighting 3 and 4 and continue via Palisade Ave to Old Croton Aqueduct trail	City of Yonkers	800ft of river adjacent bike lanes added 150% ridership increase at daylighting sites coming from newly connected trails
infrastructures along the SMR	Promote implementation of 2014 SMR Recreation Plan recommendations	Westchester County Parks, SWAB municipal partners	Implement year 2-3 proposals if granted  Develop 2 additional connectivity proposals
	Develop new recreation plan for upper watershed	SMRC, GWHV	5-8 new sites surveyed  Plan published and distributed to municipalities

