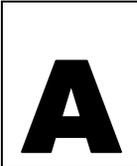


**WMF Form A: Workplan Template**  
**Watershed Management Fund Workplan: 2017/18**



**Definitions**

**Goal:** What you are working towards, your ultimate destination, where you are going.

**Objective:** Tangible, measurable steps on the road towards your goal.

**Activities:** The specific actions you plan to do this year.

Submit completed form by **March 31, 2017** via email to [kemacquarrie@gov.pe.ca](mailto:kemacquarrie@gov.pe.ca) or in person to Kate MacQuarrie, Ross Bernard or Mary Finch

**Watershed Group: South Shore Watershed Association**

**Goal #1: River Assessment: Recheck previously rehabilitated river sections to confirm fish passage abilities and requirements for additional rehabilitation structures.**

<b>Objectives</b>	<b>Activities</b>
<p>River assessments:</p> <ol style="list-style-type: none"> <li>1. Reassess 2 km of stream above Stordy's Pond on the East Branch of the Westmoreland River.</li> <li>2. Reassess 1.3 km of stream above the Sewage lagoon on the West Branch of the Westmoreland River.</li> <li>3. Reassess .25 km of stream above and below the new culvert crossing of Route 13 and the DeSable River.</li> <li>4. Reassess 1.3 km of stream above Lord's Pond on the Tryon River</li> <li>5. Reassess .5 km of stream above Webster's Pond on the Augustine Cove River</li> </ol>	<ol style="list-style-type: none"> <li>1. Reassess designated section for downed trees and winter damage.               <ol style="list-style-type: none"> <li>a. Re-establish fish passage</li> <li>b. GPS &amp; Photograph if chainsaw service is required</li> <li>c. Refer to stream cleaning crew</li> </ol> </li> <li>2. Locate, GPS &amp; photograph, areas of point source siltation/run off [recheck after major rain event] - Refer to manager for reassessment</li> <li>3. Locate, GPS &amp; photograph, areas of garbage dump               <ol style="list-style-type: none"> <li>a. New or environmental issues need to be reported to both SSWA manager and landowners</li> </ol> </li> <li>4. Locate, GPS &amp; photograph, areas which require planting in buffer zones</li> <li>5. Locate, GPS &amp; photograph, areas that need attention or restoration</li> <li>6. Locate areas of Invasive species according to list provided by PEIISC.               <ol style="list-style-type: none"> <li>a. Document and refer to Invasive species protocol</li> </ol> </li> <li>7. Report Beaver activity on main branches and assigned tributaries following SSWA beaver management policy</li> <li>8. Identify great gravel spawning grounds.</li> <li>9. Identify &amp; GPS brook trout spawning springs</li> </ol>

**Beaver Dam Assessment:**

Reassess identified beaver activity areas below to determine action required to re-establish fish passage

1. West Branch Westmoreland River
  - a) 46.2713 -63.4721
  - b) 46.2688 -63.4717
  - c) 46.2498 -63.4798
2. Above lord's pond
  - a) 46.2583 -63.5601
3. TCH section of West Branch Tryon
  - a) 46.2726 -63.5938

1. Assess areas for beaver activity
2. If no activity or evidence of beaver life is found
  - a. GPS and Photograph
  - b. remove old debris
3. If beavers / dam building activities / or beaver evidence (chewed branches) are located.
  - a. Attempt to identify dam or lodge area
  - b. GPS & photograph area
  - c. Report to manager

**Culvert Assessments:**

To confirm fish passage abilities to restored stream sections above

1. Confirm fish passage
2. If fish passage is obstructed:
  - a. GPS, Photograph and identify as:
    - i. Private crossing
      1. If it is a simple blockage - Remove debris
      2. If it is a functional issue (hung / sloped/ or crushed) refer to manager
    - ii. Department of Transportation crossing
      1. If it is a simple blockage - Remove debris
      2. If it is a functional issue (hung / sloped/ or crushed) refer to manager

**Goal #2: Stream Restoration: Restore / assist fish passage for all life stages and species of anadromous fish populations to new areas or areas which have not been addressed in over 5 years.**

**Objectives**

General stream cleaning to remove fish blockages caused by refuse debris, downed trees, overgrowth of pioneer species trees, invasive species and overgrowth of water plants:  
 Locations:  
 Tryon Watershed:  
 1. 2.5km of the Trans Canada section of west branch will be cleaned to restore fish habitat  
 2. 1km section along Stuchberry's Lane will be cleaned to restore fish habitat  
 Westmoreland Watershed:  
 1. .7 km major blockage between Crapaud bridge and Old Town Rd.

**Activities**

1. obtain general stream cleaning permit and landowner permission
2. access river section to determine which trees will be removed and which will stay as fish cover and mammal crossings
  - a. unstable trees in the water column, or trees over hanging the river too low to allow for spring freshets will be removed.
  - b. Stable rooted trees with acceptable clearance will be left for shade and crossings.
3. remove designated or downed trees
  - a. ensure debris is placed high on the bank, out of the flood plain to prevent re-entry into the river.
4. identify any areas of invasive species which must be removed from the area to prevent reintroduction downstream
  - a. See invasive species protocol
5. identify & remove any overgrowth of water plants
6. identify any springs in need of rehabilitation work
  - a. See spring rehabilitation protocol
7. document work locations and before and after photos
8. plant riparian and upland trees and shrubs where warranted to:
  - a. Provide bank stabilization,
  - b. reduced erosion and siltation,
  - c. shade and shelter,
  - d. biodiversity,
  - e. wildlife protection.

**Goal #3: Spring rehabilitation Protocol: Clean sediment and plant overgrowth from springs to re-establish water flow and fish access to improve spawning rates of SSWA Brook Trout.**

**Objectives**

To recheck and re-access springs cleaned in 2016 for signs of fish use:

1. Top of Lord’s Pond – two springs
2. Spring in Lupine trail park

Identify and address new springs where cleaning has been requested

1. Spring near new Augustine Cove Bridge (#1129)
2. Tryon estuary – Acadian well below walking trail
3. Barb’s spring

**Activities**

1. Identify springs in need of cleaning
2. inspect springs for any sign of fish
3. remove excess heavy debris and plant overgrowth
4. pressure wash springs with outlet or small pump
5. remove dirty water with larger pump
6. ensure dirt water isn’t entering water channel
7. recheck springs after cleaning

**Goal #4: control of invasive species protocol: To prevent the spread of existing invasive plant species, monitor for the arrival of new invasive species and develop an action plan for their eradication from the SSWA environment.**

**Objectives**

Increase public awareness of invasive species issues:

1. SSWA will hold a public awareness information session on the issues of invasive species, focusing on control of purple loosestrife, Japanese knotweed, and wild cucumber.
2. SSWA will also be offering information on the dangers of invasive species and including deadly nightshade and attempting to remove it from public places

**Activities**

Survey watershed for areas of:

1. Japanese knotweed – remove and smother areas from SSWA parks
2. Purple loosestrife – cut and bag all flowers located
3. Wild cucumber – pull down and uproot all plants located
4. (Bella Donna) Deadly night shade – remove from park / trail areas
5. Areas of canary grass which has been smoothing shrub growth will be cut to enhance natural plant growth
6. Invasive species assigned "spotter" to report to invasive species council any invasive species found

**Goal #5: To plant native trees, shrubs and other vegetation to increase total forest cover of the SSWA watersheds, provide plant diversification and wildlife habitat.**

<b>Objectives</b>	<b>Activities</b>
<p>1. Increase total forest coverage area by 4000m<sup>2</sup>- designated areas will be reclaimed as forest areas and diversely planted with native trees and shrubs</p>	<ol style="list-style-type: none"> <li>1. ~800 native trees and shrubs will be planted and protected by tree wraps in the reclaimed area left by realignment of the TransCanada highway through Tryon</li> <li>2. ~50 native trees and shrubs will be planted and protected by tree wraps in the area above Frenchy's pond in Westmoreland</li> </ol>
<p>2. Enhance estuary shoreline with salt tolerant native shrubs to increase diversity, wildlife food sources and nesting sites and mitigate river contamination from upland runoff</p> <p>~150 m along west side of Westmoreland estuary ~120 m along east side of upper Tryon estuary</p>	<ol style="list-style-type: none"> <li>1. Westmoreland               <ol style="list-style-type: none"> <li>a. plant ~300 salt tolerant shrubs in Victoria estuary</li> </ol> </li> <li>2. Tryon               <ol style="list-style-type: none"> <li>a. plant ~200 shrubs in upper estuary</li> </ol> </li> </ol>
<p>3. Improve Forest – areas damaged by bark beetle will be restored with native trees and shrubs</p> <p>~ 4 acres of designated damaged forested areas at Camp Abegweit in Augustine Cove ~1000m<sup>2</sup> designated damaged forested area on the upper Tryon Estuary</p>	<p>designated damaged forested areas will be restored by; cutting down dead and dying white spruce trees, using the stumps as nursery logs and replanting with native trees and shrubs to add diversity, trees will be protected by tree wraps.</p> <ol style="list-style-type: none"> <li>1. Richard Point -Plant 200 salt tolerant shrubs and mixed hardwoods in upper forest area.</li> <li>2. Tryon Watershed - plant ~200 shrubs and mixed hardwoods in upper estuary forest site.</li> </ol>
<p>4. Maintain pollinator garden at Westmoreland River Nature park and establish new pollinator areas, to provide milkweed for the Monarch butterfly caterpillars and flowering shrubs for adult pollinators.</p>	<ol style="list-style-type: none"> <li>1. Organize Pollinator garden development day.</li> <li>2. Weed, prune or replace shrubs as needed</li> <li>3. Provide additional mulch</li> <li>4. Install wild Beehive</li> <li>5. Plant milkweed in alternative wetlands - Suitable locations for milkweed will be located and planted to assist pollinator populations.               <ol style="list-style-type: none"> <li>a. Stuchberry's Lane</li> <li>b. Frenchy's pond</li> <li>c. Seven Mile Bay</li> </ol> </li> </ol>

**Goal #6: Pond Restoration Projects – To establish and maintain one pond / park area on the rivers in each of the SSWA watersheds, to enhance fish and wildlife habitat and provide leisure and educational areas for residents.**

Objectives	Activities
<p>Replace spillway at Lord’s Pond to prevent nutrient laden sediment from contaminating the Tryon River and estuary. Anoxic events have plagued the Island over the last few years and are becoming steadily more common. Excess nitrates, mainly from the run off from agricultural fields, cause overgrowth of sea lettuce in the estuaries. After an initial bloom, the sea lettuce dies off using up the dissolved oxygen during its decay process resulting in anoxic events which kill or stresses all inhabitants of the estuary. The spillway has already breached, the addition of this structure will prevent the Tryon river from flash contamination, destroying downstream and estuary habitat. This new structure will enhance fish habitat in the pond and provide fish access to upstream spawning sites which are now blocked due to an 18-inch overhang from the culvert going under the Trans-Canada highway. This will also allow for maintenance work to the pond.</p>	<ol style="list-style-type: none"> <li>1. obtain land for project</li> <li>2. survey land for subdivision</li> <li>3. survey land for placement of spillway and natural bottomed fish-way</li> <li>4. obtain blueprints for spillway replacement</li> <li>5. install coffer dams to isolate work area and reroute water through old spillway</li> <li>6. install environmental control structures and grub work area</li> <li>7. remove sediment in pond from work area inside coffer dam</li> <li>8. maintain water control in work site</li> <li>9. install gravel for base of spillway</li> <li>10. install forms and concrete for spillway and wing walls, backfill to create new berm</li> <li>11. install guides for stop logs</li> <li>12. install stop logs</li> <li>13. install armor rock</li> <li>14. install safety top for spillway</li> <li>15. remove coffer dam from pond</li> <li>16. seed and mulch exposed soils</li> </ol>
<p>Install a natural bottomed fish passage at Lord's Pond:</p> <p>The old wooden celled fish ladder is fallen under disrepair and is unsuitable for passing smaller species of fish like American Rainbow Smelt. During the first phase of this project, the spillway will be replaced. During the second phase, the water height in the pond will be lowered using the new spillway to allow for a natural bottomed fish passage to be installed in the dry.</p>	<ol style="list-style-type: none"> <li>1. obtain land for natural bottomed fish ladder</li> <li>2. survey land</li> <li>3. survey for placement of fish ladder</li> <li>4. obtain blueprints for fish passage</li> <li>5. install environment control structures</li> <li>6. grubbing of land</li> <li>7. excavate 300 loads of fill for 3 % slope of fish ladder according to surveyor</li> <li>8. excavate sediment from the dried pond area to prevent downstream contamination once water level is increased</li> <li>9. install berm between pond and natural bottomed fish ladder to control water</li> <li>10. install culvert for driveway crossing</li> <li>11. install pool and baffles to access culvert</li> <li>12. install culvert for water control into fish passage</li> <li>13. install pool and baffles to access culvert</li> <li>14. survey for slope of fish ladder</li> </ol>

	<ul style="list-style-type: none"> <li>15. install erosion control fabric under fish ladder</li> <li>16. install rip rap for fish passage</li> <li>17. install large rock for fish cover</li> <li>18. plant shrubs for fish shade while traversing fish passage</li> <li>19. install collar to control water access into fish passage</li> <li>20. mulch and seed</li> </ul>
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<p>Develop Stordy’s pond area into Westmoreland River Nature Park: an area for leisure for our community members. Bring back to life a great spot for anglers and wildlife spotters as well as provide an ideal habitat for a variety of wildlife species that can be of service for educational purposes [Englewood &amp; Amherst Cove schools] as well as a perfect place for future events in the community.</p>	<ul style="list-style-type: none"> <li>1. Landscaping around the pond and the parking lot to make pond area more accessible <ul style="list-style-type: none"> <li>a. Install crushed rock</li> <li>b. Establish walking paths</li> <li>c. Boarder parking lot to prevent 4-wheeler damage</li> </ul> </li> <li>2. Monarch way station area – to be designated</li> <li>3. signage – to be installed</li> <li>4. interpretive shelter to be built</li> </ul>
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Linden Hill Bypass Pond/Catchment and Webster’s pond	<ul style="list-style-type: none"> <li>1. Assessment of Dam</li> <li>2. Grass maintenance</li> <li>3. improve bird boxes</li> </ul>
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**Goal #7: Wildlife habitat: To assist wildlife by installing nesting structures where appropriate natural infrastructure is lacking.**

<b>Objectives</b>	<b>Activities</b>
<p>Monitor, repair and installation of Birdhouses</p> <ul style="list-style-type: none"> <li>1. Maintain 120 bird boxes currently installed</li> <li>2. Construct 50 swallow boxes for public distribution</li> <li>3. Construct and install 20 swallow boxes</li> <li>4. Construct and install 10 Kestrel / Saw Whet boxes</li> </ul>	<ul style="list-style-type: none"> <li>1. Existing nest boxes will be surveyed and plotted with GPS <ul style="list-style-type: none"> <li>a. Inspect integrity of box – remove or repair if damaged</li> <li>b. Remove old bedding and debris</li> <li>c. Install bedding <ul style="list-style-type: none"> <li>i. Swallow – no bedding</li> <li>ii. Kestrel &amp; owl– 1/3 full with wood chips</li> <li>iii. Flicker – fill with wood chips</li> </ul> </li> </ul> </li> <li>2. Installation of new boxes appropriately</li> </ul>

**Goal #8: Stabilize shoreline: The designated areas will be restored with bioengineered shoreline protection and/or planted with appropriate native trees, shrubs or marram grass to mitigate shoreline erosion and study protection methods.**

Objectives	Activities
<p>Tryon Point Rd- a 100-foot pilot project was started in 2011, testing various methods of bioengineered protection, this was expanded in 2016 to a 200-foot section and new materials and shrubs were added, the objective this season is to secure structure with previously added materials on site, promote decomposition of materials, add additional plants and monitor area to collect data on results.</p>	<ol style="list-style-type: none"> <li>1. Access site for winter damage</li> <li>2. Secure any loose materials</li> <li>3. Prune or replace shrubs</li> <li>4. Monitor site for results</li> </ol>
<p>Camp Abegweit shoreline project – a 450-foot bioengineered shoreline protect structure was constructed in 2015, 2<sup>nd</sup> Phase maintenance work, with new materials and salt tolerant plants were added in 2016, the objective this season is to secure structure with previously added materials on site, promote decomposition of materials, add additional plants and monitor area to collect data on results.</p>	<ol style="list-style-type: none"> <li>1. felling of dead and de-branching of downed trees to be used as construction materials for nurse logs or mulch for paths</li> <li>2. reinforcement and securing of the bioengineered bank with materials collected from previously loosened materials</li> <li>3. plant uplands and marram grasses where needed</li> <li>4. continue development of walking trail area</li> <li>5. obtain and install compostable materials around plantings</li> <li>6. off season monitoring of shoreline project to determine winter effects</li> <li>7. documentation of changes in coastline in collaboration with the UPEI climatology lab.</li> </ol>
<p>Victoria Provincial park – a 800-foot section of shoreline was planted with salt tolerant shrubs and fenced to deter mowing in 2016, the objective this season is to prune or replace damaged shrubs and monitor to collect data on results.</p>	<ol style="list-style-type: none"> <li>1. Inspect and weed around shrubs</li> <li>2. Remove and replace dead shrubs</li> <li>3. Photograph and collect data</li> </ol>
<p>Hampton shore – a 650-foot section of shoreline was planted with salt tolerant shrubs (wild roses and bayberry) , marram grasses and an upland drainage pool was constructed by the cottage association, the objective this season is to prune or replace damaged shrubs and monitor to collect data on results.</p>	<ol style="list-style-type: none"> <li>1. Inspect and weed around shrubs</li> <li>2. Remove and replace dead shrubs</li> <li>3. Photograph and collect data</li> </ol>
<p>Seven Mile bay watershed- in 2016, ~30 m along banks at Seven Mile Bay was evaluated for mitigation possibilities. The landowner hired a construction company to install arbor stone. The objective this season is to plant salt tolerant shrubs above the stone to assist in stabilization of the area.</p>	<ol style="list-style-type: none"> <li>1. ~25-mixed salt tolerant shrubs will be planted along shore Seven Mile bay watershed</li> <li>2. Landowners will be re-educated on the importance of leaving an un-cut grass strip along the shore.</li> </ol>

**Goal #9: SSWA Watershed Monitoring: To collect watershed data to evaluate rehabilitation strategies, progress and concerns. This will enable SSWA to determine which rehabilitation efforts have initiated environmental improvements and guide future projects.**

Objectives	Activities
<p>Estuary and Wetland Enhancement Assessment: Continue accessing the “Estuary project” site 1 to determine if project has had a long-time effect on estuary habitat and should be repeated at another estuary location.</p>	<ol style="list-style-type: none"> <li>1. Monitor site               <ol style="list-style-type: none"> <li>a. Percentage converted into natural bank structure with grasses</li> <li>b. Depth of channel in front of structure</li> </ol> </li> </ol>
<p>Crapaud Lagoon Monitoring: Objective is to obtain the monitoring results of the Crapaud Lagoon water testing done by the municipality to determine if the effluent has had a detrimental effect on the adjacent environment.</p>	<ol style="list-style-type: none"> <li>1. Continue contact with Crapaud and Victoria municipal councils</li> <li>2. Request access to environmental data for our watershed</li> <li>3. Support the municipality if they need input from our organization.</li> </ol>
<p>Spring Monitoring: Collection of data to locate/categorize water flow of SSWA springs was done in the Spring of 2014. Objective is to re-access designated spring water flows at the beginning and end of 2017 season.</p>	<ol style="list-style-type: none"> <li>1. Designate spring areas to volunteers, for assessment.</li> <li>2. Determine if springs in SSWA area dry up after the summer</li> <li>3. Collect data available after monitoring in the fall on flow</li> </ol>
<p>Water Monitoring: SSWA will continue its partnership with BBEAMA to collect water quality parameters at designated sites</p>	<ol style="list-style-type: none"> <li>1. Continue CURA H2O water monitoring project through St Mary’s university</li> <li>2. Track changes in our water conditions</li> <li>3. Determine which of our stream restoration techniques will have a lasting effect on the watershed habitat.</li> </ol>

**Goal #10: Community Events and Outreach: Have watershed residents actively engage in watershed restoration and management.**

Objectives	Activities
<p>Provide opportunities for SSWA residents to participate in SSWA educational and workshop events. Increase community knowledge and appreciation of the watershed. Provide transparency in the working methods of the watershed group to attract new members and increase the involvement of residents</p>	<ol style="list-style-type: none"> <li>1. Organize Pollinator garden development day.</li> <li>2. Public awareness information session on the issues of invasive species</li> <li>3. Spring monitoring</li> <li>4. Public nest box building workshops will be held at the Crapaud exhibition children’s center</li> <li>5. Nesting boxes and benches built by the SSWA volunteers</li> <li>6. Workshop for the construction of the Westmoreland River Nature Park interpretive shelter.</li> <li>7. Adopt a nest or bat boxes.</li> <li>8. Improve contact between students and watershed board members by texting the work location to a board member as to provide the ability to join the work force.</li> </ol>

<p>Provide community places for SSWA residents to participate in SSWA educational personal leisure activities</p>	<p>Lord's Pond:</p> <ol style="list-style-type: none"> <li>1. Reposition and secure floating bridge</li> <li>2. Inspect wooden walkways and fishing platform for maintenance</li> <li>3. Weed and maintain woman institute flower garden</li> <li>4. Check pond area for garbage, assist with grass cutting and whipper -snipping.</li> <li>5. Maintain tables and signage</li> <li>6. Install benches</li> </ol> <p>Tryon River Trail:</p> <ol style="list-style-type: none"> <li>1. Install crushed rock on paths</li> <li>2. Maintain tables</li> <li>3. Prune and replace trees damaged by last year's heavy snowfall</li> </ol> <p>Westmoreland River nature park</p> <ol style="list-style-type: none"> <li>1. Organize opening of pond area to the public.</li> <li>2. Organize hatchling release.</li> </ol> <p>Webster's Pond:</p> <ol style="list-style-type: none"> <li>1. Check pond area for garbage, assist with grass cutting</li> <li>2. Maintain tables and signage</li> </ol> <p>Trail was begun at Camp Abegweit last season.</p> <ol style="list-style-type: none"> <li>1. This will be rechecked and extended.</li> </ol>
<p>Community Outreach and Educational Activities</p>	<ol style="list-style-type: none"> <li>1. Crapaud Exhibition – SSWA booth and bird houses for children's center</li> <li>2. Canada Day celebration</li> <li>3. Walking tours</li> <li>4. Canoe trips</li> <li>5. Birding/walking tours</li> <li>6. "Kiss a Fish"</li> </ol>
<p>Maintain regular communication with Watershed residents</p>	<ol style="list-style-type: none"> <li>1. Quarterly SSWA newsletter</li> <li>2. Sswa.ca website       <ol style="list-style-type: none"> <li>a. Ask partners to link to our website. [Englewood, Crapaud Community, Chamber of commerce]</li> </ol> </li> <li>3. Summer student blog</li> <li>4. SSWA annual photo contest</li> <li>5. Water for Health pamphlet</li> </ol>

a. how to maintain healthy water resources

**Goal #11: Corporate Memberships and Partnerships with Local Businesses and Government: Establish a working relationship with local businesses and government to promote watershed awareness and increase productivity.**

Objectives	Activities
Communication with Government(s)	<ol style="list-style-type: none"> <li>1. Survey dirt road to determine the requirement of check dams and report to DTIR if action is required</li> <li>2. Inquire about policies concerning cutting shrubs and trees providing shore protection on crown land.</li> <li>3. Request areas of limited ditch mowing.</li> <li>4. Landowners working in conjunction with the ALUS program will be offered enhancement techniques for water diversion structures and riparian zone areas. SSWA will be working with Shawn Hill (ALUS coordinator) to expand habitat restoration into new areas</li> </ol>
Increased support for SSWA, bring in extra funding/materials for the realization of watershed projects.	<ol style="list-style-type: none"> <li>1. Invite corporate members to establish or renew their memberships.</li> <li>2. Contact potential sponsors for WRNP area as to help establish the resting area around the fish ladder and pond.</li> <li>3. Develop a membership marketing strategy to get community engagement and sponsoring.</li> </ol>

**Goal #12 Annual Watershed Planning: Achieve efficient and effective watershed programming throughout the fiscal years.**

Objectives	Activities
Continue working on the “living document” of SSWA Watershed Management Plan	<ol style="list-style-type: none"> <li>1. Annual work plan developed each year starting in the fall</li> <li>2. Planning sessions to provide the work plan schedule in January-February so that permits and funding can be applied for on timely basis</li> <li>3. Insight in the long-term planning/goals of SSWA</li> </ol>