

River Star Case Study

Contents

I. Brief Program Description	1
II. How it All Began	2
III. How it Works	4
IV. Partners and Resources	5
V. Volunteers	7
A. Technical Assistance	7
B. Advisory Group	8
VI. River Stars - Who are they?	8
VII. Success Stories	9
A. Model Level River Star Achievements	9
1. Ford Motor Co.	9
2. HRSD	10
3. Kemps Landing Magnet School	11
4. Naval Station Norfolk	11
5. NORSHIPCO	12
6. NOVA Chemicals (US Army Corps of Engineers) Inc.	13
7. US Coast Guard - Integrated Support Command Portsmouth	14
8. W.E. Waters Middle School's SHARK Team	15
B. Overall Program Success	16
VIII. Pitfalls along the Way	16
IX. Checklist for Success	18
A. General Concept	18
B. Recruitment Process	18
C. Technical Assistance	19
D. Getting Results: documentation, measuring results, and review for advancement	19
E. Recognition and Benefits	19
F. Making the Program Self-sustaining	20

River Star Case Study

I. Brief Program Description

The River Star Program motivates industry, government and other facilities in the Elizabeth River watershed to pursue voluntary pollution prevention and wildlife habitat goals. The Elizabeth River watershed encompasses the urban cities of Norfolk, Portsmouth, Chesapeake and the western part of Virginia Beach, Va. **The 200-square-mile watershed is highly industrialized, intensely developed and includes many low-income, minority neighborhoods.** The Elizabeth River has been identified by the Chesapeake Bay Program as one of the three most toxic “Regions of Concern” in the bay watershed, due to high levels of pollution in its waters and sediments.

The Elizabeth River Project’s approach is to motivate all levels of the community to pursue voluntary environmental goals, whether the organization is a civic league, the US Navy or a small office. The slogan “Doin’ right by the river” reflects the River Star’s strengths: building a community with a common cause, where facilities participate because to do so is fun, building employee morale and an improved public profile.

The Elizabeth River Watershed is 90 percent developed and has been at the center of centuries of industrial development.

The River Star program is one of the most successful local pollution prevention and habitat restoration programs in Virginia. In the four years since its inception, River Stars have **documented reduction of hazardous waste by more than 141 million pounds and restoration or conservation of more than 60 acres of urban habitat!** The River Star program has also helped businesses save money, attract new customers, tap grants, land publicity and earn awards. For instance, NOVA Chemicals saved \$405,000 in 1999 in reduced scrap and \$16,000 in mowing costs each year by converting 11 mowed acres into a habitat for migratory songbirds. A newspaper article about Hardy Building Corp.’s wildlife habitat prompted Food Lion to call and ask Hardy to bid on a major construction project. In 1999-2000, River Stars received more than \$20,000 in federal funds for restoration projects. Birdsong Wetland, a restoration project at Larchmont Library, won the Clearwater Award from the Waterfront Centre.

II. How It All Began

The River Star Program began in 1997 as a pilot project to determine its effectiveness for reducing toxic substances in a Chesapeake Bay Program “Region of Concern.” A group of Elizabeth River Project staff and volunteers from the community set up the basic structure of the program and held a pollution prevention workshop in 1997 to introduce the program to the business community. Many organizations joined the River Stars program that day and committed to voluntary efforts to help the River. Two of the first River Stars were NORSHIPCO, one of the *largest* ship repair facilities on the river, and Norfolk Boat Works, one of the *smallest* boat repair facilities on the river.

After the workshop, in order to get momentum in the program facilities were recruited largely at random by using known contacts and word of mouth. Elizabeth River Project staff have tried cold calls, letters, and a combination of these, plus going to conferences, presenting at business meetings (Chamber of Commerce), having current participants go with staff to visit potential participants, sending flyers to potential participants, using mentors, and other outreach methods. They found that person-to-person is the best way to recruit. Rarely do businesses sign up after a cold call or letters.

Marilee Hawkins, former River Stars Program Manager, and Tom Beacham of Norfolk Shipbuilding and Drydock Corp. (NORSHIPCO) pose beneath an early River Star banner at this major shipyard.

During the time the River Star program was beginning, an effort was being made by an action group of the Elizabeth River Project to encourage and certify wildlife habitats in the watershed. This effort stood to benefit from substantial participation by the commercial/industrial stakeholders in the watershed, so it was determined by Elizabeth River Project staff to incorporate habitat issues into the River Stars program. By incorporating this effort and others, the River Stars program was now geared to help address three of the five actions in the Elizabeth River Project's Watershed Action Plan that were identified as "critical areas" deserving the most resources:

- Increasing vegetated buffers, wetland acreage and forested areas;
- establishing pollution prevention and/or sustainable landscaping practices;
- and reducing pollution from storm water runoff.

This incorporation was not entirely smooth, as there were some "turf" issues with volunteers that were helping with other efforts. The Elizabeth River Project lost some volunteers as a result of this incorporation.

Funding has directed the program's focus. For the first three years, the Environmental Protection Agency's, Office of Pollution Prevention was the major funding source for the program, so the focus was more on pollution prevention achievements, and less on habitat restoration initiatives. Specific recruitment efforts were made to shipyards and facilities that report on the Toxics Release Inventory.

The Portsmouth General Hospital Foundation has been another funding source and directed our focus toward organizations that were operating in the Portsmouth area. The National Fish and Wildlife Foundation also supplied funds directed toward wetlands and other habitat restoration initiatives. Generally, funding for the program comes from various sources, and each source tends to have its own priorities.

In 2000-2001, after three successful years, the program has been analyzed and a master plan has been developed to coordinate recruitment efforts in geographic areas where voluntary pollution prevention and wildlife habitat efforts will most benefit the Elizabeth River.

The Master Plan was developed through diverse stakeholder involvement and review of criteria selected for establishing priority areas. Scientists, city officials, city planners, industry representatives, engineers and conservation leaders weighed the criteria for both pollution prevention and habitat enhancement benefit. The weighted criteria were then plotted on a map of the watershed to designate priority areas for restoration, conservation or pollution prevention initiatives.

The majority of opportunities for habitat and wetland restoration and pollution prevention exist along the Southern Branch of the Elizabeth River. The Southern Branch offers the potential of becoming a unified corridor of opportunity several miles long. The Southern Branch is highly traveled, and hence, highly visible. It also contains a predominance of the **specific regulated/permited facilities recommended for targeting as River Star industries:**

- The northern two-thirds of the Southern Branch is highly valued for pollution reduction opportunities due to the high degree of commercial and industrial land uses. Benefits also exist for wetland and habitat activities along much of the waterway. Wetland and habitat efforts along this stretch of the river should be directed toward restoration and enhancement of existing resources.
- Conversely, the strategy for the southern third of the Southern Branch should focus on conservation and preservation. This area has a preponderance of wetlands and other areas within the floodplain, both of which were ranked highly for habitat and wetland restoration and pollution reduction potential by the Working Group. The area also offers opportunities for agricultural land buffers and preservation of undeveloped land.

III. How It Works

The program is administered by the non-profit, grassroots Elizabeth River Project, whose overall goal is to restore the environmental health of the Elizabeth River. The program promotes a non-regulatory, partnership-based approach. The Elizabeth River Project provides assistance and recognition to facilities as they advance through three levels of the program: Commitment, Achievement, and Model levels. This tiered, inter-disciplinary approach allows the River Star facility to start small, with perhaps a “favorite” project, and then branch out, once the program is familiar and the facility has had the benefit of assistance from Elizabeth River Project staff and volunteers.

There are specific criteria for each program level. Once a potential River Star facility documents significant achievements in either wildlife habitat OR pollution prevention, it becomes a Commitment Level River Star. This is a change from when the program began. At first, in order to get the program up and running, a facility only had to make a commitment to set some goals in order to become a Commitment Level River Star; no actual achievements were necessary.

Although this appears to have been a good way to start up the program, there were a group of River Stars that could not seem to do anything, even if goals were set. Some did not even set goals. This began to detract from those facilities on the list that were really working towards goals and achieving results. In addition, some members of the public found this misleading. River Stars that have not yet achieved results now have a grace period of one year to meet the new requirement in order to remain a Commitment Level River Star. New organizations seeking to participate in 2001 and beyond will receive full assistance from the Elizabeth River Project to help them set and achieve goals, but they will not be recognized as River Stars until the achievements are documented and affirmed through peer review.

Two-star, Achievement Level recognition is attained when a River Star documents significant achievements in BOTH pollution prevention AND wildlife habitat. Previously, to reach Achievement Level, a River Star had only to document achievements in either pollution

prevention or wildlife habitat enhancement. This change is intended to encourage well-rounded environmental stewardship.

Three-star, Model Level recognition is awarded when a River Star achieves such exceptional accomplishments in pollution prevention and wildlife habitat that the River Star is recognized as a community leader in environmental stewardship. A new requirement in 2001 for Model Level River Stars is that they successfully mentor other organizations in the program. A grace period of two years has been extended to current Model Level River Stars to meet the new criteria.

Advancement criteria have been changed as described in order to make the River Stars program as meaningful as possible, both to the participant and the public. The new criteria reflect more than a year of research and discussion by staff, River Star peers, outside advisors and technical experts to assess early experience with the River Stars program, and to adjust the program for long term success.

Assistance to River Stars is free and confidential and includes:

- site visits to recommend goals,
- help securing funding for projects (\$20,000 in federal funds were received by River Stars in 1999-2000),
- encouragement,
- technical assistance including project design,
- lining up volunteers to help with planting or site clean-ups (the Elizabeth River Project marshals hundreds of volunteers each spring and fall to help River Stars plant wildlife habitats),
- documentation of results, and
- recognition for achievements.

The Elizabeth River Project has also published several documents useful to the River Stars: a Pollution Prevention Workbook, a Wildlife Habitat Guide, and a Green Directory.

Results, once documented, reviewed by a panel of volunteers from the community with expertise in pollution prevention and wildlife habitat restoration and conservation, the “River Restoration Advisory Committee”. Once this committee has reviewed summaries of a particular facility’s achievements, suggestions for goals made by the

The River Stars P2 Workbook was used as a model for Chesapeake Bay Program’s “Businesses for the Bay” P2 Workbook.

Elizabeth River Project staff, and staff recommendations, they decide whether or not to advance the facility to the next level. All River Stars must be in compliance or working towards compliance with local and state agencies before they are eligible to advance in the program. This process has been an exceptionally good one – the people on this committee are very involved and take their job seriously. Many good recommendations for future projects have also come from their input.

Once a River Star is approved for advancement, the Elizabeth River Project sends the organization a congratulatory letter and invites several of its employees to attend a banquet in honor of advancing River Stars, held in the fall. This banquet is usually held in conjunction with the Elizabeth River Project's yearly Leadership Review Board, so that community leaders will be on hand to witness and applaud the River Star efforts. A slide show is presented to Elizabeth River Project members, community leaders and River Stars that shows off several achievements of the year. Advancing River Stars are highlighted and given banners to take back to their facility to show off to their employees and neighbors.

The Elizabeth River Project also facilitates the organizations' receiving a congratulatory letter from the Mayor of the city in which they operate, and from the Virginia's Secretary of Natural Resources.

River Star successes are summarized in the Elizabeth River Project's newsletter *Mudflats*, and a display advertisement is placed in the local newspaper.

Other recognition includes articles in local newspapers and newsletters (over 30 news articles have featured River Stars and their accomplishments since 1997), and promotion on the Elizabeth River Project's web site.

IV. Partners and Resources

Program partners include about 60 River Star facilities, the community volunteers that participate in technical and advisory roles, the four watershed cities (Norfolk, Portsmouth, Chesapeake and Virginia Beach), Virginia's Businesses for the Bay Program (River Stars are automatically enrolled in that program), and the Virginia Department of Environmental Quality Office of Pollution Prevention.

Funding is provided by grants from state and federal agencies, and private donations.

The Executive Director and Assistant Director of the Elizabeth River Project are currently running the program. Over the course of the program's three-year history, various staff have worked on the program. People with expertise in public relations, pollution prevention, wildlife habitat, wetlands, volunteer management, and marketing, have all been involved in the program. For most of the program's life, one overall coordinator would recruit participants, organize and arrange events, while technical staff in pollution prevention, wildlife habitat, and storm water would perform site visits, make recommendations and track achievements. This arrangement

seems to have worked the best, mostly because technical people are not generally good at recruiting or planning events. There have been staffing shortfalls in the areas of marketing and volunteer management.

At the very minimum, a friendly, outgoing staff person with knowledge of marketing and public relations is necessary to establish contact with potential participants and to keep the program in the public eye. Volunteers can be utilized for technical expertise; however a staff person who can manage those volunteers is highly desirable. If possible, having staff with the technical expertise to make recommendations to participants is helpful, especially if volunteers are hard to find or manage. A staff person with skill in arranging events is necessary; however, that person can be utilized by other organizational programs, if funding doesn't allow full-time assignment to the River Star program.

Volunteers with expertise the areas of pollution prevention, wildlife habitat, wetlands and storm water management have often been utilized in technical and advisory roles.

v. Volunteers

A. Technical Assistance

The Elizabeth River Project created a Strategic Action Team, which is a group of volunteers with expertise in pollution prevention and wildlife habitat to help with River Star site visits, offering suggestions for River Star goals, doing research on pollution prevention technology and creating habitat designs. Generally, volunteers have not been involved with documenting or keeping track of River Star progress. Elizabeth River Project staff has mainly been responsible for this.

The volunteers that have been the most helpful have already been involved with the Elizabeth River Project in another capacity (have buy-in with the Elizabeth River Project's mission), and have jobs that closely correlate with the technical advice needed.

Elizabeth River Project Board members and brothers, Josh (right) and Walter Priest (middle) evaluate a wetland site with an Elizabeth River Project volunteer.

Volunteers need to be aware that they are representing the organization when visiting program participants, and not on a marketing mission for their “real” job. The Elizabeth River Project uses a disclosure form that the visiting staff, volunteers and participant all sign to make sure everyone understands each other’s roles and intentions. We have found this form to be very helpful.

B. Advisory Group

When the River Stars had their earliest achievements, the Elizabeth River Project needed a process for review of these achievements and a way to determine if the effort was worthy of recognition and commendation. A peer group made up of the River Star contacts was set up to peer review the achievements of their fellow River Stars. This process worked well; however, it began to get cumbersome as the program expanded and participation increased. The group was modified to include only those River Star contacts that had some knowledge in the areas under review, and those that were truly motivated to attend meetings and fully participate in the review process. Also included were outside experts in the areas of pollution prevention, wildlife habitat, wetlands and storm water, our areas of focus, which has strengthened the group and allows for good input on the direction of the program from a broader context. Taking the time to find those individuals in the community who believe in the organization’s mission and are motivated to attend meetings is very important when setting up this group.

This advisory group, called the River Restoration Advisory Committee, currently has 17 members and has meetings four times per year. Not only does it review the achievements of River Stars, but members also advise the Elizabeth River Project on any program changes being considered, act as mentors to other River Stars, and help in the recruitment of new River Stars.

VI. River Stars – Who are They?

There are currently about 60 facilities participating in the River Stars program. These range from the largest Naval Base in the world, to the smallest local ship repair facility, and also include 11 schools, many offices, some chemical manufacturers, and even a housing development. Three local government facilities also participate. The current River Star list is attached. There are currently eight organizations participating at the highest level of achievement (Model Level), twenty-seven at the second level of achievement (Achievement Level), and twenty-three at the first level (Commitment Level). Many River Stars sustain previous levels of environmental excellence by adding to previously initiated pollution prevention programs, and enlarging wildlife habitat areas. The River Star program encourages new projects from participating facilities so they can be recognized each year for their latest achievements.

At most River Star facilities, the contact person is not the President or CEO (unless it’s a small company), but someone who has an interest in the environment either due to their job (Environmental Engineer, etc.) or because of outside interests (flower gardener). In the cases where a public information officer or marketing person is the contact, action tends to wane. It is

very important to have a motivated believer as the contact person for the program. Although it is also important to have the buy-in of a high-ranking official in the facility (for resources, funding, or if the contact person leaves), if the facility's participation is then "delegated" to an underling who is not motivated, nothing much happens. In many cases, simply the person who is involved can make the difference between inaction and lack of participation to full participation and excitement about various projects.

Tremendous success has resulted when the facility puts together a team of employees to implement their goals, especially if it involves a habitat restoration. This really helps for the long-term maintenance of the habitat.

Schools have been involved with the River Star program from the beginning. In fact, participating schools installed the first wildlife habitats. However, because schools tend to have a different focus than businesses (generally they have less money, schoolchildren are involved and change each year, and staff structure is very different), a separate track has been implemented for River Star schools. Schools are now reviewed based on a project undertaken over the school year in the areas of habitat enhancement or pollution prevention and are reviewed at the end of the school year. These projects are required to have an educational component. Staff and volunteers of the Elizabeth River Project help the school select a project that will meet the criteria for advancement before the project is implemented. In addition to recognizing the schools for achievements, each student who participates is also recognized with a certificate.

VII. Success Stories

A. Model Level River Star Achievements

Since May of 1997, River Stars have documented the reduction of more than 141 million pounds of hazardous waste and the restoration or conservation of more than 60 acres of wildlife habitat. Eight organizations have reached the highest level – Model level. These eight organizations have been exemplary in their achievements and participation:

1. Ford Motor Company shifted to leaner "product-based programs" in many areas where environmentally sensitive products are used or generated, to reduce potential impacts as well as reduce costs. Ford negotiated purchase agreements with suppliers of paints, solvents, lubricants and other potential pollutants to require the suppliers to reduce the volume of these materials and provide on-site monitoring. Contracts with suppliers are now by cost per unit, instead of purchasing product by volume. Ford reduced its air emissions by 45 percent or 500 tons/year by investing in new technologies in the topcoat paint process. Ford meets high industry standards (ISO 14001) requiring extensive employee awareness and training on pollution prevention. In addition to these significant pollution prevention practices, Ford planted a shoreline buffer using native plants and has incorporated native plants and naturalized areas into other landscaping. The facility also maintains storm water retention devices.

Ford Motor Co. involves their employees in clean up, planting and pollution prevention activities at their site on the Eastern Branch of the Elizabeth River.

2. HRSD (Hampton Roads Sanitation District) was created in 1940 to treat wastewater. HRSD has two treatment plants in the Elizabeth River watershed. HRSD also administers permits and regulates wastewater discharges from businesses and industries, working with permittees to reduce toxins and other pollutants discharged to their system. Pollution prevention strategies directly implemented by HRSD include: recycling biosolids; removing nutrients from the waste stream with a patented removal process at one of its watershed treatment plants; implementing a Hazardous Waste Minimization Program at its laboratory; using low-sulfur diesel fuel to power emergency generators; and installing wet scrubbers to control air emissions from treatment plants. These and other strategies have resulted in a 59% decrease of biological oxygen demand (BOD) in its discharge from 1941 to 1991, a 32% decrease of total suspended solids (TSS) from 1941 to 1991, a 70% reduction in nitrogen from treated effluent during the summer season, an 80% reduction in phosphorus from treated effluent year-round, and a reduction of hazardous waste in its laboratory from 33 to 80%, depending upon the type of waste.

HRSD is probably best known for its community awareness initiatives. Penalties from non-compliant businesses and industries fund many projects including “P2” (pollution prevention) assessments performed by local college students at participating industries, a periodic newsletter, “P2 News,” which is distributed to permittees and government agencies, a scholarship fund for graduate students pursuing an environmental discipline, a matching fund contribution for a water conservation project in low-income neighborhoods, boater education programs, and P2 and pretreatment award programs to honor outstanding efforts of its permittees. This program is very popular. Many River Stars have received awards from HRSD and proudly display them at their offices. HRSD also provides a comprehensive public information program.

Having completed these outstanding achievements in pollution prevention, HRSD undertook a large-scale wildlife habitat project to be considered for advancement to Model Level. HRSD converted one acre of lawn into a wildlife habitat complete with butterfly garden. This habitat included 212 native plants, which provide excellent food and cover for songbirds and other wildlife. The Elizabeth River Project helped manage the project.

3. Students at **Kemps Landing Magnet School** wrote a book titled **The Elizabeth, The River In our Backyard** that represents the results of research, water testing, presentations to elementary school students and interviews with professionals. The book covers the river's history and geography, the Elizabeth River Project and the River Star program, pollution in the river, the economic importance of the river, and what the public can do to help. The book includes pictures, graphs, poems and quotations. The Kemps Landing Magnet School's "Elizabeth River Team" also helped city workers plant 1,000 marsh grass plants, performed water tests, and wrote and performed creative presentations to teach fourth and fifth grade students from three elementary schools about the Elizabeth River. These students even set up a web site that posts the results of water testing.

Naval Station Norfolk personnel add marsh grass to Salt Marsh Park, a 4.2-acre salt marsh. Naval Station Norfolk was Elizabeth River Project's first Model Level River Star.

4. Naval Station Norfolk is the Elizabeth River Project's first Model Level River Star. The largest Naval Base in the world, this facility is a wonderful example for other military organizations. An active pollution prevention team works full time to find ways to prevent pollution and save money. Operational, product development, and purchasing strategies have all been utilized to prevent and reduce waste. The facility has instituted four major materials management programs:

- a Hazardous Materials Minimization Center,
- a Hazardous Substance Management System,
- a Hazardous Inventory Control System,
- and a Hazardous Material Reutilization and Inventory Management Program.

Over 25 different pieces of equipment have been purchased to help in pollution prevention efforts, from aqueous parts washers to a hydraulic fluid particle counter. Initiatives are used on base, ships and submarines. Cost savings have been dramatic – **over \$2,300,000 as of 1998**. Employees and home-ported ships are given training in pollution prevention.

Wildlife habitat initiatives include converting a previous industrial site into a 4.2-acre salt marsh, and constructing and installing five osprey platforms.

The Naval Station is also active in community events including Clean the Bay Day, the Glad Bag-a-thon, and Earth Day. The pollution prevention team volunteers with the Norfolk Environmental Commission, presents at conferences, began a pollution prevention committee with other Navy bases, and participates in the Tidewater Interagency P2 Program.

5. NORSHIPCO spent \$2.5 million to make dramatic site improvements to reduce pollution from storm water runoff, and restore vegetated areas. **Norshipco reduced suspended solids in storm water by 86% in the past two years by improving the capture and treatment of storm water on site.** To capture the storm water, the yard paved 46+ acres and curbed 2.3 miles of roads and parking. Treatment included installing gravel buffers between paving and bulkheads, conducting weekly sweeping of paved areas and periodic vacuuming of storm drains. Employee volunteers restored a wetland along the shipyard's shoreline in 1998. The wetland is thriving. Norshipco has been a leader in solving an international pollution challenge for shipyards involving the deadly antifoulant TBT, used in marine paint. **Norshipco pioneered technology that has reduced TBT in shipyard wastewater by as much as 99 percent.** Research is in cooperation with a consortium including the Center for Advanced Ship Repair and Maintenance (CASRM). Norshipco also re-uses oil removed from its wastewater as boiler fuel (250,000 gallons during the past year). An

NORSHIPCO employees planted a now-thriving wetland next to the shipyard's shoreline, a very early success for the program.

employee awareness program to encourage pollution prevention practices resulted in a 60 percent reduction of paint-related waste, based on results of a recent pilot test.

6. NOVA Chemicals (USA), Inc., a manufacturer of polystyrene beads, is highly active in the pollution prevention area. **Vapor containment equipment has resulted in the 95% reduction of overall emissions and 100 percent reduction of emergency releases of styrene.** NOVA's many pollution prevention projects, including **finding a re-use for its major waste stream, have resulted in a decrease from 2,000,000 pounds of hazardous waste in 1991 to 5,000 pounds in 2001! A high-tech centrifuge recovers prime product from NOVA's waste stream and increases its revenue by \$1.7 million.** NOVA also has been active in spill reduction (98% reduction since 1995), storm water quality (housekeeping, inspections, installation of Best Management Practices - BMPs), water usage reduction, scrap reduction (800,000 pounds in 1999), and purchasing strategies (container returns). NOVA has an environmental orientation for each new employee and contractor, and employees receive annual group training. Eliminating waste at the source is emphasized as part of weekly meetings, monthly inspections and bimonthly "Team Chesapeake" meetings. These pollution prevention efforts won NOVA its Achievement Level star in 1998.

With the help of the Elizabeth River Project, NOVA ventured into wildlife habitat territory in 1999 with an 11-acre "no-mow" area of native trees and shrubs. These native plants were selected to benefit migrating eastern songbirds. The plants will also reduce soil erosion and improve the quality of storm water runoff. **NOVA saves \$16,000 annually by not mowing this 11-acre area.**

NOVA has won much recognition for its efforts both in pollution prevention and habitat enhancement, including television coverage, awards, a radio interview, and numerous newspaper articles; in fact, they were recently mentioned in the *New York Times*. NOVA employees have also been highly active in the community, mentoring other organizations in recycling efforts, attending and speaking at conferences and local city meetings. All this has merited NOVA the highest level of River Star recognition, the Model Level River Star. NOVA has agreed to continue to earn its Model level recognition by monitoring and improving storm water quality, planting more native trees, and mentoring other River Star organizations.

Elizabeth River Project volunteers and employees of NOVA Chemicals plant phase I of an 11-acre habitat for migratory songbirds.

7. U.S. Coast Guard – Integrated Support Command Portsmouth initially advanced to Achievement Level River Star due to pollution prevention initiatives. Pollution prevention initiatives are evaluated and tracked through a P2 Plan. One of the most impressive initiatives employed at the Coast Guard is the Hazardous Material Minimization Center (HMMC) for procurement and distribution of hazardous materials, and the Hazardous Inventory Control System (HICS) software to track material inventory and distribution. This software **tracked a reduction in hazardous waste from 70,000 pounds in 1993 to less than 1,000 pounds in 1998.** The facility also recycles paints, batteries and oils, and re-uses various materials through the HMMC. In 1998, **more than 380,000 pounds of scrap material were recycled yielding more than \$9,500 in proceeds.** Also in 1998, **450 gallons of used oil and 6,110 gallons of oily waste were recycled.** The facility also constructed a self-contained boat and buoy blasting facility, uses solar cells on buoys, uses airless and electrostatic paint guns, installed reduced-flow shower heads, switched from lead-based to polyurethane paint for buoys, switched to non-CFC containing refrigerants, and dispenses materials in small re-usable containers.

The Coast Guard's employee awareness initiatives include meetings, training, volunteer opportunities and a weekly newsletter.

The Coast Guard next re-forested several large fields with 325 native trees and 125 native shrubs and started a nursery by applying for a grant through the National Tree Trust. This re-forestation was designed and coordinated by the River Stars Wildlife Habitat Coordinator. The facility was advanced to Model Level status with the addition of this habitat project and due to its exceptional regional community involvement.

US Coast Guard Portsmouth – Integrated Support Command involves personnel of all ranks in a 4.5-acre reforestation project.

In order to meet the newer, tighter standards for Model level, the Coast Guard will be attempting more local community involvement including participating in Clean the Bay Day and recruiting another local naval facility into the River Star program. In addition, the Coast Guard is considering restoring 50 acres of tidal wetland on its property—a project that was identified and suggested by the Elizabeth River Project.

8. W.E. Waters Middle School's SHARK Team raised oysters to be placed on the broodstock sanctuary in the Western Branch of the Elizabeth River. They also partnered with other organizations to build a half-acre oyster sanctuary in the Southern Branch of the Elizabeth River to be stocked by oysters raised by Portsmouth students. The Elizabeth River Project helped secure funds for this project. These students also design and produce bookmarks with tips on water conservation that are distributed through conferences and a local bookstore. The older students develop mini-lessons on the Chesapeake Bay ecology to teach to younger students. Other activities include a clean up at Portsmouth City Park, marsh planting at the park, and storm drain painting projects. Future plans include raising submerged aquatic vegetation to enhance shallow water habitats, and to raise native trees in partnership with the VPI Extension Service to be planted in riparian buffers.

W.E. Waters Middle School students can farm oysters, describe how oysters clean the Bay, and teach younger students about environmental stewardship.

B. Overall program successes

The numerous newspaper articles, awards and editorials that the program has received evidence the success of the River Stars program. Some of the awards include the Virginia Watershed Award from the Commonwealth of Virginia and the Arbor Oscar Award from the City of Norfolk. The Elizabeth River Project has been asked to speak about the program at various conferences across the region and has been asked to participate in and make presentations at Virginia's Businesses for the Bay workshops. The Elizabeth River Project is also often invited to participate in training and open houses at River Star facilities.

In addition to the large amount of waste reduced and recycled, the acres of wetlands and habitat restored, and the awards given to participating organizations, there are other less measurable things that contribute to the success of the River Stars Program. Probably the most important is a revolution in the attitude of employees at River Star organizations. When employees see that their company cares about the environment, and the community that it is a part of, they are more excited about their jobs and more loyal toward their employers. They contribute more and are more likely to participate in team activities. They also then take this attitude home and begin to look at how they can make changes in their everyday life to help restore the river.

The River Stars Program also gives facilities an avenue for sharing ideas. Pollution prevention strategies can be shared between similar industries. One River Star helps another with recycling programs, also one River Star even found a potential use for its waste in another River Star's process.

Competition is an amazing motivator. Most calls from River Stars are about what they can do to get to the next level soon after a review and recognition event for River Stars that have met their goals: "If they can do it, so can we."

VIII. Pitfalls along the Way

One of the major stumbling blocks the River Stars Program has is getting its participants to document their achievements. Many companies can tell you all the amazing things they have done and plan to do, but cannot or will not write it down and measure results. In many cases, Elizabeth River Project staff have taken on the responsibility of documenting River Star results, with input from the River Star. This is very draining on staff time. There have been experiments with various forms for documenting results. None have been very successful. The more complicated the form, the less success it seems to have. A two-page Application for Wildlife Habitat Certification and a two-page Application for Pollution Prevention Recognition (attached) are now in use. It is important to have plenty of reminders to the River Stars as the review date approaches.

Another big issue in getting things accomplished in this type of volunteer program is making the right contact at the River Star facility. A lack of communication with the River Star contact means a lack of motivation or lack of understanding about the importance of their participation.

Often the contact person at the River Star facility will change. This is also a tricky situation, and is almost like starting all over again when educating the new contact person about what the program is all about and trying to achieve the “buy-in” with the new person.

Dormancy is another big stumbling block to achieving results. If the River Star is not actively pursuing goals, setting goals, or evaluating results, motivation can lag. Keeping the program on the mind of the River Star contact is important. Newsletters, phone calls, events, etc. can all help in this process.

Our River Stars themselves said, “the deadbeats need to go”. Before Commitment Level River Stars were required to actually have achieved results, it was easy for an organization to sign on with a promise and then never do anything. This really detracted from the program and the achievements of the River Stars who had been meeting their goals. Although it is important not to give up on an organization (many have just taken a long time to get going), the goal-setting and motivation can be done in the recruiting process.

Although there are some basic things that all organizations should and could be doing (recycling, employee awareness), each organization is unique and has its own potential and interests, so it is best not to use a boilerplate approach. Using the interest of the organization to get them going and working towards the ultimate potential each one has to contribute is the most productive path. This will require more staff time, but ultimately leads to greater results.

Where do you get the money to run the program? Grants can only sustain you for so long. And they are confining— to meet certain deliverables and to constantly report progress. Becoming self-sustaining is the ideal situation. Fees are one way to achieve this. Elizabeth River Project recently figured the monetary value of the service provided to the average River Star to reach Model Level, from guidance materials, site visits, habitat designs, research, project support, and recognition events, is about \$10,000. However, Elizabeth River Project has struggled with the idea of charging River Stars. One argument is that if you charge for something, it has more worth to the one paying. On the other side, you could lose interest if money becomes a factor. Up until recently, River Stars were asked for a donation - (non-members of Elizabeth River Project \$120, and members \$60). The River Restoration Advisory Committee, professional consultants, Elizabeth River Project Board of Directors, staff and River Star focus groups have been working on the issue of river Star fees and decided on the following recommendations:

- Continue to pursue long-term solutions to stabilize River Star funding.
- Revisit the fee question after intensive marketing of the program is conducted.
- Require organizational membership in the Elizabeth River Project for River Stars to remain in good standing by 2002.
- Publish the real costs of program and encourage optional donations.

- Allow exemptions for government facilities and schools, which are unable to pay, but encourage alternate fundraising efforts such as United Way donations and fundraising events.
- Take advantage of River Star offers to conduct fundraising and provide in-kind services.

Organizational dues would be required commensurate with size of the River Star organization and have been proposed at these levels:

- 25 employees, \$175-\$499 basic level dues;
- 26-50 employees, supporting level dues of \$500 to \$999;
- 51 -250 employees, sustaining level dues of \$1,000-\$1,999.
- More than 250 employees, major donor level of \$2,000 plus.

Directly related to funds, lack of Elizabeth River Project staff has been an ongoing concern. The follow up with current and prospective River Stars suffers when there is not enough manpower. This leads to dormancy, which causes motivation to suffer and results to decline.

IX. Checklist For Success

A. General Concept

- Have a tiered program, so there is always something more for the participants to work toward.
- Decide which efforts are to be included in the program (pollution prevention, habitat enhancement, storm water, etc.).
- Fine-tune criteria for the program so everyone has the same expectations for achievements and success.

B. Recruitment Process

- Have a master plan for recruitment, based on specific problems in the watershed; however, when starting out— go for easy recruits first, to build momentum.
- Get to know your community— make contacts and network in the business community— be out there.
- Use those you already know to get introductions to new recruits— use your contacts.
- Educate those contacts about your organization’s purpose and priorities; you need buy-in.
- Find the incentive for each organization (attention, marketing, being included in events, etc.); these may be different for each one.
- Find a motivated individual to take the lead (find the right contact).
- Care and nurture each organization— visit, invite to events, call, be friendly and helpful, listen and ask them what they need.
- Be non-threatening; soften rhetoric; do not boycott if they won’t join.
- Ask, ask, ask.

- Don't give up.
- Ask motivated participants to help in recruitment and advisory efforts—mentors to other participants.

C. Technical Assistance

- Know something about the facility in advance of site visits to determine the right people with expertise in the right areas (pollution prevention, stormwater, habitat restoration, etc.).
- If you use volunteers for assistance, have a staff person who can manage, motivate and organize them.
- Use a disclosure form on site visits, one that explains the roles and expectations of the staff and volunteers that may be present.
- Try to tailor assistance to the business as much as possible; do not make it boilerplate; all plans (goals) will be different.
- If the organization is hesitant, start small.

D. Getting Results: documentation, measuring results, and review for advancement

- Get backing from the organization's management.
- Help participating organization set goals that are desirable, achievable, measurable and affordable.
- Use forms to facilitate, but don't overdo the paperwork— it will slow things down, better yet, develop forms that are easy to use.
- Encourage and help participants to document achievements— this appears to be a sticking point with many, budget the time to write it all down at the outset.
- Try to get participating facilities to use teams or committees for implementation of goals—the more buy-in from the employees, the more successful the effort.
- Don't give up; try not to let an organization's participation go dormant.
- Create a voluntary advisory group of experts and peers to review achievements (rather than just staff); take the time to get good quality people, motivated and with the right background.

E. Recognition and Benefits

- Make recognition for successes as big as possible. Bring in big names to present awards, etc.
- Get the participants' names out there as much as possible.
- Have a public relations person who can promote, track and document press coverage of the program and participants.
- Hold events to get all participants together; networking and sharing ideas is very productive.

F. Making the Program Self-sustaining

- Get funding for startup; keep in mind program priorities when applying for funding; grant sources will affect program focus
- Some funding should come from program participants—ask for donations; at minimum, participants should be organizational members