The 2001 SOE report introduces a new topic that broadly addresses programs and initiatives that provide information and encourage active participation in activities that have a direct influence on the state of the environment. The City places a high value on environmental stewardship and education and recognizes the contributions made by all citizens in achieving its environmental goals for a healthy sustainable environment.

The two indicators discussed under this topic are:

11: **Community Environmental Stewardship**; and

12: **Environmental Education**.

Community environmental stewardship can take many forms including active participation in programs with an environmental focus, volunteering for projects or activities aimed at cleaning up or restoring the environment, raising awareness for environmental issues, or sponsoring programs that achieve any or all of these goals.

Environmental education can also take many forms including school curricula; City- or community-sponsored events; hands-on activities, clubs and contests; and written materials for distribution to people of all ages.
INTRODUCTION

Why Should We Measure This Indicator?
Individually, we all need to do our part to protect the city’s environmental assets by making choices that lead us towards a more livable and sustainable community. In a way, the SOE report monitors the collective results of our individual efforts. At another level, community stewardship initiatives bring together citizens interested in more active participation. Stewardship is the act of taking responsibility for the well-being of the environment and doing something to restore or protect that well-being.

Organizing and participating in events, volunteering, or simply making a donation, are all ways of demonstrating to your community that you care about the state of the environment. By working together, we can enhance and maintain those things we value, leaving a legacy for future generations and building community pride. This new indicator was introduced to demonstrate the level of participation of community members in environmental stewardship programs.

What is Being Measured?
It would be difficult to accurately estimate the level of participation in the wide range of stewardship programs that can be found in Richmond. This indicator focuses on the City’s Partners for Beautification program, for which good quantitative data exist. Specifically, this indicator measures:

- Participation in Partners for Beautification projects; and
- Participation in other environmental stewardship projects.

RESULTS

Participation in Partners for Beautification Projects

In 2000, 2800 volunteers contributed a total of 21,321 volunteer hours to ‘adoption’ programs. The value of this work is estimated at $162,000 (Table 9a). In addition to volunteer efforts, donations to ‘Adoption’ programs were $19,000 in 1998, $72,870 in 1999, and $67,350 in 2000.
In 2000, twelve parks were adopted, equalling about 70 ha, along with twelve streets, three gardens, three trees, and four dog bag dispensers (Figure 9a). Trail adoptions equaled 24 km in 2000 compared with 21 km of adopted trails in 1998.

Of these adoptions, twelve were by individuals or families; 18 by community groups; eight by schools and eight by businesses.

Additionally, a total of 49 trees were planted by community stewards in 2000, not including tree planting events sponsored by the City; 42 trees were planted by community stewards in 1999.

**Participation in Other Environmental Stewardship Projects**

It is not possible to report on all the environmental stewardship programs in Richmond. However, a few examples are worth noting.

The Cambie Community Centre has been the home of the City’s Environmental Youth Corps since 1993. The Youth Corps works to revitalize ecologically sensitive areas in Richmond, while educating the public, particularly youth, about environmental issues. Projects include clean-up degraded areas, minimizing the effects of pollution and habitat destruction, replanting areas with native vegetation, and enhancing Richmond's urban greenspaces.

**Table 9a. Participation in Partners for Beautification Projects**

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Volunteers</td>
<td>350</td>
<td>2,313</td>
<td>2,800</td>
</tr>
<tr>
<td>No. of Volunteer Hours</td>
<td>2,423</td>
<td>7,223</td>
<td>21,321</td>
</tr>
<tr>
<td>No. of Trash Bags Collected</td>
<td>80</td>
<td>325</td>
<td>350</td>
</tr>
<tr>
<td>Estimated Value of Work</td>
<td></td>
<td>$72,000</td>
<td>$162,040</td>
</tr>
</tbody>
</table>

**Figure 9a. End-of-Year Totals for Adopted Areas in Richmond (1998-2000)**
Richmond State of the Environment 2001

River Works is a two-year community stewardship project spearheaded by the Vancouver Aquarium Marine Science Centre. This project targets the restoration of estuary habitats along the Fraser River. Community volunteers and school groups restore, enhance and monitor habitats to maintain and increase the biodiversity of River Works sites. Two sites are located in Richmond: London’s Landing and Iona Beach. Activities at London’s Landing include water quality testing, removal of debris, bird surveys, and installation and monitoring of bird boxes. Activities at Iona Beach include removal of debris, site mapping, vegetation planting and sampling of fish in artificial spawning channels.

Richmond sponsors an annual Landscape and Garden Contest as part of its Partners for Beautification program. Hundreds of residents and businesses have participated in this contest, which encourages citizens to beautify their properties, thereby contributing to the overall attractiveness of the city.

DISCUSSION

What is Happening?
Since 1998, both the number of volunteers and the number of projects undertaken as part of the Partners for Beautification Program have increased. What these results do not show is the degree of turn-over in the various projects. For example, the identity of the areas adopted in 2000 may differ from those adopted in 1998, that is, adoptions may not last that long in some cases. Also, the adopting individual or organization may also change over time. However, the results do show that the program has attracted a growing number of community stewards since its inception. This is likely the result of an increased level of awareness of the program as well as awareness of the benefits of and need for such partnerships.

Existing City Programs
One objective of the OCP is to strengthen the sense of community among Richmond residents and to be a leader in efforts to build broad support for economic, environmental and social well-being. In addition to the Partners for Beautification Program, the City offers other opportunities for community involvement in environmental matters.

One of the City’s key environmental initiatives was the community-based Advisory Committee on the Environment (ACE). The Committee, presently made up of volunteer citizens, has a mandate to advise City Council and generate independent information on environmental issues of concern to the community. It also reviews and monitors the state of the environment in Richmond (i.e., through SOE reporting), encourages and coordinates public participation in environmental initiatives, and enhances public awareness of environmental issues. Members of ACE also sit on the Vancouver International Airport Authority’s Environmental Advisory Committee and Noise Management Committee.

The City has also sponsored the Mayor’s Environmental Achievement Awards. These awards were established in 1991 to recognize individuals, groups or organizations for their efforts towards improving environmental quality in Richmond. In 2000, ten achievement awards were presented in five categories: general achievement; water conservation; waste reduction; preserving and enhancing wildlife habitat; and sustainable transportation. The City also sponsors the Richmond Landscape and Garden Contest. In 2000, a record 126 entrants competed in 21 categories including Best Residential Garden, Best Children's Garden, Best Allotment Plot, and Business Landscaping.
Richmond and the Region

With shrinking municipal budgets and expanding environmental responsibilities, local governments are finding it increasingly important to establish partnerships within their communities to accomplish environmental objectives and raise awareness of important environmental concerns. All municipalities in the GVRD are working hard to encourage community participation in environmental stewardship initiatives.

For example, since 1996, the City of Surrey has worked with youth to restore parks and riparian areas as part of its Salmon Habitat Restoration Program (SHaRP). The Township of Langley supported the creation of the Langley Environmental Partners Society (LEPS) and the Salmon River Watershed Management Partnership to carry out stream mapping and other conservation activities.

The Stoney Creek Environmental Committee (SCEC) has been active in the City of Burnaby since 1996. This group conducts regular biophysical assessments, monitors the creek, and coordinates numerous creek clean-ups and riparian plantings. Burnaby also sponsors annual Environment Awards to recognize significant contributions by individuals, agencies and businesses in achieving the City’s environmental goals, and, since 1998, has worked with a citizen Environmental and Waste Management Committee. The City of Vancouver provides opportunities for citizens and local resident groups to adopt, garden and maintain traffic circles, diverters and bulges on roadways as part of their Street Partnership Program.

Streamkeepers and watershed protection groups are also active in Burnaby, Coquitlam, Surrey and along the North Shore.

THE FUTURE

Targets and Influences

There are no targets for community environmental stewardship.

What Can Citizens Do?

To learn more about Partners for Beautification:

- Call the City of Richmond Parks and Recreation Department at 604-244-1208.
- Pick up a copy of the Partners for Beautification brochure at City Hall.
- Visit the Partners for Beautification web site at www.city.richmond.bc.ca/services/beautification/beautification_index.htm
- Recommend someone deserving for the Mayor’s Environmental Achievement Awards held annually in November.

To learn about other environmental stewardship initiatives consult the 2001 Richmond Environmental Project Guidebook, which contains a complete list of funding organizations, resources and contact information, or contact your local community centre. For volunteer opportunities in your community, contact Richmond Connections Information and Volunteer Society, an organization which brings people and services together. Call 604-279-7020 or visit www.vcn.bc.ca/rcs.
SUMMARY

In 2000, 2800 volunteers contributed a total of 21,321 volunteer hours to the Partners for Beautification Program. The value of this work is estimated at $162,000. The number of volunteers has increased by over 2400 people since 1998, which has been partly due to the expanded program range. Twelve parks and 24 km of trails have been adopted along with twelve streets, three gardens, three trees and four dog bag dispensers. Additionally, 49 trees have been planted by community stewards. This indicator has been rated as Good News.
INTRODUCTION

Why Should We Measure This Indicator?

Environmental education is one way to increase our understanding of the relationships between humans and the environment. All indicators in the SOE report are influenced by what we know and understand about the environment and the effects of our own choices on the environment.

What is Being Measured?

There are no specific indicators for this category. Although environmental education is an important topic, there are few sources of quantitative information (e.g., enrolment numbers in environmental programs or clubs). Additionally, the effectiveness of environmental education initiatives is even more difficult to measure. As a result, environmental education can only be discussed in qualitative terms.

It would be impossible to report on all types of environmental education. This edition of the SOE report focuses on Richmond school programs. Future editions of the SOE report should investigate environmental education programs aimed at other segments of the population.

RESULTS

Richmond schools have a number of environmental education programs. Provincially-defined school curricula contain environmental subject matter ensuring that all elementary and high school students are introduced to various environmental themes.

Additionally, virtually all schools in Richmond have student-run environmental clubs and many are actively involved in stewardship programs such as the salmon hatchery operated by students from Steveston Secondary School.

The Richmond School District has entered into a very ambitious multi-year program called Destination Conservation. The program is based on an international model and is co-sponsored by the School District, BC Hydro and the Province. Under this program, students, teachers, school district staff and utility companies are involved in auditing school energy and water consumption and in retrofitting school buildings for greater efficiency. The program encourages conservation-minded habits in students such as turning off lights and computers at the end of the day.
By monitoring the changes in energy and resource consumption in their school, students gain a unique appreciation for conservation. The program was introduced during the 2001 school year. Approximately 35 Richmond schools are expected to participate over the next two years.

Two programs, sponsored by national organizations, educate students and adults alike about the benefits of ‘green schools’. The Evergreen Foundation sponsors the Learning Grounds and Common Grounds Program, which works with school communities, including teachers, parents, principals and community members, to create outdoor classrooms and habitat areas on school grounds. Organizers provide training and education workshops, how-to manuals and resource guides, and grants for native plants. To date, eleven schools from Richmond have either received funding, participated in workshops, or become Model Schools that maintain environmentally and educationally rich outdoor spaces.

The Society for Environment and Energy Development Studies (SEEDS) sponsors the Learners in Action Green School Program. Under this program, students take action to enhance the environment or communicate about the environment. The project is then recorded. To date three Richmond schools have been awarded the Green School Banner for completion of 100 environmental projects.

In addition to these programs, numerous schools also take part in the ICBC ‘Way-to-Go!’ trip reduction program and Partners for Beautification.

**DISCUSSION**

**What is Happening?**

The lack of quantitative data for this indicator makes it difficult to observe trends. However, we may get a sense of how effective these education initiatives have been in raising awareness and action by looking at trends evident in other indicators.

**Existing City Programs**

Most of the programs discussed in the results section do not fall under the responsibility of the City. The City does however organize, fund and sponsor several environmental education initiatives such as State of the Environment reporting, Environment Week, and dissemination of information through brochures, displays and the City’s website.
City-run community centers offer programs with an environmental focus. For example, the Steveston Community Centre offers educational harbour tours, sponsors youth camping trips to natural areas, and holds free workshops called Eagles in our Backyard, which are co-sponsored by the Richmond Public Library. The Richmond Nature Park Society is a non-profit organization that works in partnership with the City of Richmond to provide educational and recreational programs that encourage residents and visitors to learn about the environment and natural history of the community. They offer educational programs for all ages on a range of science and nature topics.

Richmond and the Region

There are numerous examples of environmental education programs sponsored by municipal governments in the GVRD. The following are only a few examples.

The City of Surrey has a ‘Salmon in the City’ education program that has several displays and a video for the general public that are set-up at City-sponsored and community events, malls and libraries. Over 4000 people had access to this information in 1998. Surrey also runs a ‘Watershed Education Campaign’ that targets businesses in watersheds with chronic pollution problems. Municipal staff work with volunteers and students to visit each business to discuss pollution prevention measures.

The District of North Vancouver has funded and operated the Lynn Canyon Ecology Centre since 1971. The centre has educational displays, hands-on children’s activities and wildlife films, and hosts outdoor nature programs for individuals, schools and community groups.

The City of Burnaby co-funds with the Burnaby School District, the Environmental Research and Education Centre. This ‘environmental classroom’ – which is an example of environmental friendly building design – is located in Stoney Creek Community School and is open to any environmentally-focused community group for meetings, events and educational activities. Burnaby also provides annual funding to BCIT in support of their Burnaby Lakes System Project. As part of this project, students undertake biophysical research and enhancement activities, and work to raise awareness among industries, residents and other landowners in the local area.
The Township of Langley works closely with property owners along watercourses and provides brochures and educational information on the importance of stream processes and riparian habitats. As part of their Storm Drain Marking Program, Langley has marked an estimated 3000 storm drains with a fish symbol to remind residents that anything deposited in a storm drain negatively affects fish.

THE FUTURE

Targets and Influences

There are no targets for environmental education. However, future editions of the SOE report should continue to look at this indicator, report on the results of some of the programs discussed here, and expand the range of programs reviewed in this edition. For example, in addition to elementary and secondary school programs, which were the focus of this edition, other types of environmental education in Richmond include:

- Post-secondary, e.g., Kwantlen College Environmental Technology Program;
- Out-of-school organizations for kids, e.g., Scouts and Guides; and
- Non-governmental organizations and community groups.

What Can Citizens Do?

Citizens can show their support for environmental education programs by actively participating or making a donation in support of a particular program. Here are some other ideas:

- Ask your children what they have learned about the environment in school and try some of the activities at home, e.g., energy conservation or landscaping your yard for wildlife habitat.
- Call the Richmond Nature Park at 604-273-7015 and register for one of their upcoming programs.
- Pick up a copy of the Richmond Recreation and Cultural Guide to see what kinds of environmental programs are being offered in your area.
- Obtain a copy of the 2001 Richmond Environmental Guidebook and try out some of the proposed projects.

SUMMARY

Environmental Education has been introduced as a new indicator. Limited quantitative data are available and trends have not yet been discerned. This indicator was not assessed.