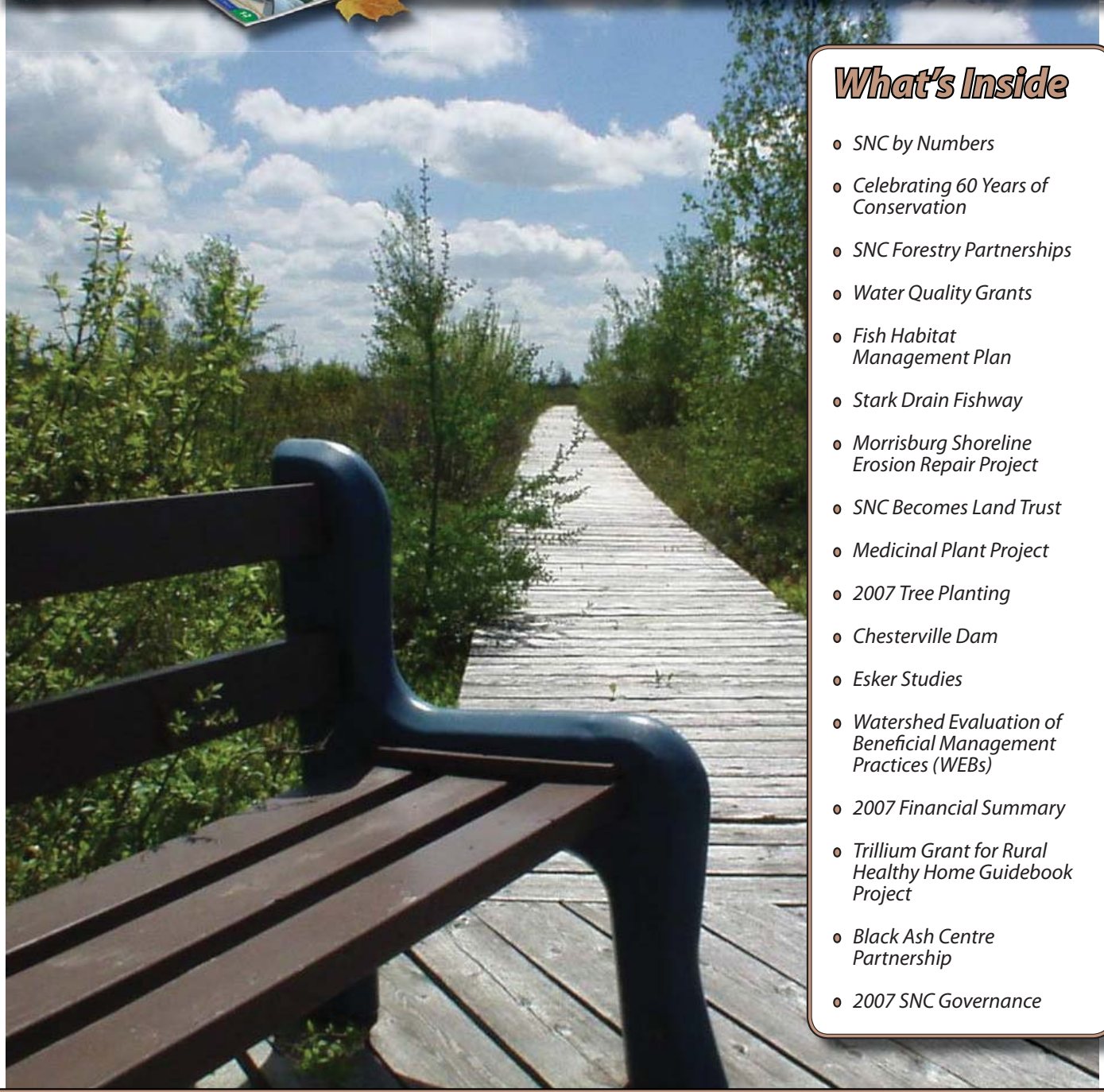


South Nation Conservation Annual Report 2007



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SNC by Numbers

1

Out of 36 Conservation Authorities in Ontario.

4146

Number of km² that make up the SNC jurisdiction.

100,000

Number of trees planted in 2007.

15

Number of municipalities in the South Nation River watershed.

175

Length in kilometers of the South Nation River.

54

Number of fish species in the South Nation watershed.

5

Number of canoe routes along the South Nation River.

9

Number of SNC-operated conservation areas & trails.

5

Number of turtle species at risk in the South Nation watershed.

87

Number of Clean Water Program projects completed in 2007.

20

Number of subwatersheds in the SNC jurisdiction.

13

Number of members on SNC's Board of Directors.

Celebrating 60 Years of Conservation in the South Nation Watershed

South Nation Conservation's 60th Anniversary in 2007 was a real cause for celebration. We feel proud to be an organization that has maintained its relevance to the communities it serves for sixty years. The anniversary allowed us an opportunity to gather with our friends, colleagues, volunteers and patrons to reflect on our rich history and celebrate our achievements. Thanks to everyone who celebrated with us.

This report highlights one of our busiest and most productive years ever. Several important projects were completed, including major repairs to the Chesterville Dam, the Shoreline Erosion Repair Project in Morrisburg, the creation of the Stark Drain Fishway, and the two year Medicinal Plant Project. A Fish Habitat Management Plan for the South Nation Watershed was completed, with a published report expected in June 2008.

2007 also marked some great beginnings. South Nation Conservation became a Land Trust, streamlining the land donation process and making it easier for residents to protect their land from future development if they wish. A Trillium Foundation grant was received in partnership with the Dundas Environmental Awareness Group to create a new Rural Healthy Home Project, building on the successful Healthy Home Guidebook already developed through the partnership.

A great deal of work was done laying a solid foundation for the Source Water Protection program created under the Ontario Clean Water Act, and culminating in the creation of a local Source Protection Committee.

South Nation Conservation takes pride in striving to work cooperatively with all members of the Watershed community – from farmers, to homeowners, to urban businesses. Thank you to all those who have worked with us to make this such a successful year, including our Board of Directors, municipal partners, volunteers, patrons and staff.

Gaston Patenaude, Chair



SNC's 60th Anniversary Photo Contest Winner. Photo by Susanna Herczeg.

SNC Forestry Partnerships Continue to Grow in 2007

South Nation Conservation is a partner in the management of 18,000 hectares of public forest land in Eastern Ontario. This includes SNC lands, the lands owned by the United Counties of Stormont, Dundas and Glengarry (SD&G), and the United Counties of Prescott and Russell (UCPR).

- Through the forest certification program of the Eastern Ontario Model Forest (EOMF), all forest lands managed by SNC are certified as “well-managed” by the Forest Stewardship Council (FSC). An examination of forest management activities in 2007 by a third party auditor resulted in a 5 year extension of EOMF’s FSC certificate.
- SNC has begun the development of a 20 year forest management plan for the forested properties owned by UCPR. Two open houses were held in 2007 to solicit input from the public.
- SNC completed and began the implementation of a 20 year management plan and 5 year operations plan for SD&G.



Shelterwood harvest in UCPR.

Water Quality Grants



A dug well prior to being decommissioned.

Eighty-seven projects were completed in 2007 through the Clean Water Program for a total grant amount of \$147,195. Well decommissioning, manure storages, livestock access restrictions, buffer strips, stream bank erosion control and septic system upgrades are some of the projects that were funded.

The Clean Water Committee wishes to thank the following funding contributors who made these grants possible: Eastern Ontario Water Resources Committee, Lafleche Environmental Inc, Parmalat, St-Albert Cheese, and South Nation Conservation.

Fish Habitat Management Plan

2007 marked the completion of the Fish Habitat Management Plan. The plan is a comprehensive evaluation of each of twenty subwatersheds in the SNC jurisdiction. It outlines SNC’s role in future fish management, grades current ecological conditions, and encourages local efforts to enhance fish habitats with a list of suggestions for projects, referred to as “Eco-Actions”.

These Eco-Actions could serve as guides to local residents and community groups who are interested in adopting a subwatershed to improve its environmental conditions. It is hoped that such Eco-Actions will improve fish and wildlife habitat grades in future reports.



*SNC continues to find seldom-before seen fish in its watershed. This Longnose Gar (*Lepisosteus osseus*), caught hoop netting in the South Nation River during 2007, was last documented 30 years ago.*

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The Stark Municipal Drain contains top predator fish, such as Northern Pike (Esox lucius). Warm water fish, such as Pike and baitfish, were unable to swim upstream prior to the drain's remediation. The project was completed in October 2007.

Stark Drain Fishway

The Stark Drain, located in North Stormont, connects to the Payne River and is a spawning area for pike. SNC staff observed that the culvert at County Road #9 was perched due to erosion, thus preventing the pike from swimming upstream to spawn.

In July 2007, SNC staff took measurements of the culvert and drain geometry, as well as stream velocities. Using the FishXing model, the data was compared to the specific abilities of a certain species of fish, in this case the pike, and information provided was used to design a crossing that would allow the fish to pass.

In October 2007, SNC staff and volunteers placed rock to improve crossing from a perched culvert to a more gradual incline. SNC plans to monitor this crossing to ensure that the fish are now passing through the culvert and to determine if any further work is required in spring 2008.



Stark Drain prior to remediation.



SNC staff and volunteers work hard to move rocks around the Stark Drain.

Morrisburg Shoreline Erosion Repair Project

In 2005, South Nation Conservation, in partnership with the Township of South Dundas, began an evaluation of the erosion along the St. Lawrence River shoreline in Morrisburg, specifically between the Village dock at the foot of Ottawa Street and the Village beach to the East. Staff from both institutions, as well as a consultant with expertise in erosion, undertook a full inspection and identified areas of concern between the Morrisburg Park and the Water Treatment Plant.

It was concluded that the existing shoreline was subject to wave action from the wind and from boat swells, resulting in significant erosion.

To prevent further erosion, the shoreline was stabilized with boulders and small interlocking cobbles to fill the gaps, starting at the water's edge and continuing up the bank to slightly above the wave action line. The repaired section was approximately 500m long and used 1,900 tonnes of rocks. Construction was completed in January 2007 under the supervision of SNC.

The total project cost was approximately \$63,000. Fifty percent of the funding to undertake this project was granted to SNC by the Ministry of Natural Resources under the provincial Water and Erosion Control Infrastructure Program. The remaining fifty percent of the funding was provided by South Dundas Township.

The success of this project was a result of the well-established partnership between South Dundas Township and South Nation Conservation.



Morrisburg shoreline prior to erosion repair.



Morrisburg shoreline after shoreline stabilization.

SNC Becomes Land Trust

In Autumn 2007, the South Nation Conservation Land Trust was born. As owners of 10,000 acres of land, most of which was bought over 40 years ago, SNC recognized this land as an important legacy left to us from previous generations. Each year, SNC receives donations of land from owners who want to protect it from development. As the population in Eastern Ontario increases, our forests, wetlands, and

natural areas will decline. With a goal to double its land holdings in the next 10 years, SNC hopes to leave its own legacy for the future by protecting more land. To ensure landowners that their land will be protected, SNC joined the Ontario Land Trust Alliance, a Province-wide network of members who adhere to a set of standards and practices regarding land protection. Anyone wishing to donate land for protection can contact SNC.



Medicinal Plant Project



The above photo is of a Cardinal Flower. It was one of the many plant species catalogued through the Medicinal Plant Project.

Through a project made possible by the Trillium Foundation, First Nation communities and other partners, SNC is wrapping up a two year study of the plants that grow in its managed forests. This project utilizes inventory methods established under the Ecological Land Classification (ELC) for Southern Ontario and traditional knowledge from the First Nations. 600 ELC plots were finished in the 2007 field season, and 158 plant species collected for mercury testing by the St. Lawrence River Institute.

In total, over the last two years of field work, 800 ELC plots have been completed and 354 plant species sent for mercury testing. To date, close to 600 species of plants have been recorded, along with fungi, bird and wildlife species. There is a media kit being released in March 2008.



Tree Planting in 2007



Students from Pleasant Valley Corners Public School during a tree planting excursion.

The 2007 tree planting season saw a return to the usual sale of 100,000 trees for South Nation Conservation. The previous year's tree sales were down by 25%. The return to normal sales was a result of the many funding sources that were available to landowners interested in planting trees. These included: City of Ottawa Green Acres Program, Trees Ontario Foundation, Green Cover Canada, Ontario Power Generation, Wetland Habitat Fund and the Ontario Pork Council. Trees were planted again in partnership with landowners, Municipalities, United Counties of Prescott and Russell, MNR Stewardship, Scouts Canada and with local school groups. Special funding from Green Cover Canada for the South Branch of the Nation River also assisted in the refill planting of trees along a stretch of this riparian buffer that was established 15 years earlier.

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Chesterville Dam

Controlling a large portion of the South Nation River watershed is the Eric T. Casselman Dam (Chesterville Dam), located in Chesterville, Ontario, in the township of North Dundas. The dam was originally created to provide flood control and to supply water for the Nestle Canada Inc. plant.

In 2007, SNC undertook a series of repairs to the dam. These included refurbishing the steel gate and surrounding control structure to remove rust and peeling paint, and repairing a major leakage problem that had been observed between the wooden stop logs and concrete sills at the bottom of the dam.

Dam Leakage Repair

In September 2007, SNC hired ODS Marine to undertake the leakage repair project. The project included the installation of a coffer dam in order to divert the water from the bay. This procedure allowed SNC to carry out an inspection of this bay, and complete necessary repairs.

Once the coffer dam was installed and the water was drained from the work area, it was found that there was a raised area in the gains. This hindered the logs' ability to make a proper seal on the bottom of the bay, and thus allowed large amounts of water to pass. These raised areas were subsequently removed allowing the logs to rest flush with the bottom of the bay.

The project cost was approximately \$60,000. Fifty percent of the funding to undertake this project was granted to SNC by the Ministry of Natural Resources (MNR) under the provincial Water and Erosion Control Infrastructure (WECI) Program.



Chesterville dam steel gate.

Steel Gate & Structure Refurbishing

Fifty percent of the funding to undertake this project was also granted to SNC by MNR under the provincial WECI Program. The budget for the project was \$40,000 (\$20,000 from SNC and another \$20,000 from MNR).

The objective of the project was to protect the structure and steel gate from corrosion, extending the lifespan of the steel, and to increase the aesthetic appeal of the dam.

As a first step in the project, SNC staff inspected the steel gate and welded 8 holes to ensure that no water would leak into the gate.

To ensure that no sediment or other deleterious material would enter the watercourse during the work, all openings in the deck were covered and the entire structure was encased with a large, durable tarp.



Coffer dam installation.

Esker Studies

Often referred to as natural underground pipes, eskers are the most productive groundwater aquifers in Eastern Ontario. Despite this, however, they remain poorly understood.

In 2007, the Raisin-South Nation Source Protection Region, in partnership with the Geological Survey of Canada, the Ontario Geological Survey, the Ontario Ministry of the Environment, and the University of Ottawa, continued to perform detailed studies of the Vars-Winchester Esker (also known as the Morewood Esker) and the Chrysler-Finch Esker, the source of municipal drinking water for eight towns and villages in the South Nation River watershed.

Field investigations were completed in 2007 on the Vars-Winchester Esker, and remain ongoing for the Chrysler-Finch Esker.

Preliminary results concerning the Vars-Winchester Esker have helped to pinpoint the exact location, depth, and internal composition (geology) of the esker. Groundwater flow patterns and the interaction between surface water and the esker aquifer were also being brought to light.

In the future, working groundwater computer models based on the data collected will be developed to determine the vulnerability and sustainability of the water supply.

This collaborative study enables the Source Protection Committee to develop effective source-water protection plans based on sound science.



Drilling for core samples to determine the composition of the esker.

Watershed Evaluation of Beneficial Management Practices (WEBs)

The Little Castor River subwatershed is one of seven watersheds in Canada that is part of a national research project. The WEBs program aims to determine how effective Beneficial Management Practices (BMPs) are in decreasing inputs of various nutrients and bacteria to the river. The WEBs study at SNC focuses on evaluating the impact of two BMPs:

Controlled Tile Drainage

- Seven on-farm economic surveys were conducted to assess the financial capacity of farmers to assume the cost of the Beneficial Management Practices (BMPs). For corn (in 2006 Canadian prices and BMP costs), the yield increase attributed to controlled drainage was 4.4%, a gross benefit of \$25.86 per acre. The cost of installation and maintenance of the control structure was estimated at \$13.50 per acre. Therefore, the net benefit is \$12.36 per acre.
- The participation of three more landowners increased the controlled drainage BMP coverage to 90% of the watershed contributing area. This included the installation of 24 inline water level control structures on several more fields along the Blanchard Municipal Drain.

- Crop yields were once again improved in the controlled drainage field in 2007. Yield gains were observed upwards of 5%.
- A rigorous soil survey was conducted in 2007 by AAFC soil pedologists. This provided updated information on the physical, chemical, and biological properties of the soil, vital for hydrologic modeling.
- Characterization of crop biomass and greenness associated with controlled tile drainage is currently under analysis in collaboration with the University of Ottawa.
- Pesticide risk assessment frameworks, which can be scaled to watershed levels, are currently in development.



Restricted cattle access to a waterway.

Restricted Cattle Access

- Watershed monitoring continued in 2007 for the Restricted Cattle Access BMP. All data collected is currently being analyzed and summarized by a Masters student from University of Ottawa.
- Information gathered indicated that livestock were the main source of fecal contamination in a stream. There were greater bacteria and nutrient loads in the unrestricted pasture stream system than there was for the restricted pasture system. Generally, water quality was improved modestly by livestock exclusion practices.

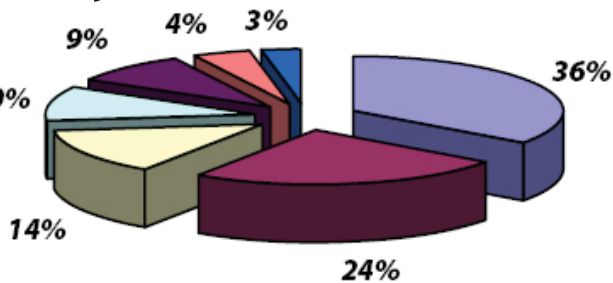
2007 Financial Summary *

* Financial statements are available upon request.

Revenues

- Municipal Levy (\$1,984,635)
- Source Water Protection (\$1,388,026)
- Partnerships (\$774,370)
- User Fees (\$584,802)
- Other (\$519,053)
- Grants (\$242,723)
- M.N.R. (Section 39) (\$176,409)

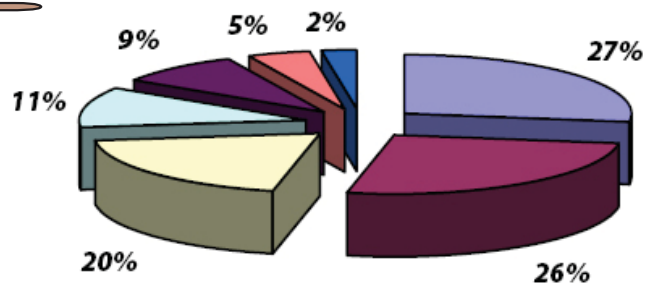
TOTAL: \$5,670,017



Expenditures

- Conservation Programs (\$1,451,537)
- Source Protection (\$1,389,294)
- Planning & Engineering (\$1,050,478)
- Lands Management (\$604,078)
- Administration (\$460,361)
- Finance (\$246,285)
- Communication (\$130,319)

TOTAL: \$5,332,352



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From left to right, Trillium Grant Review team member, Joanne Haley; MPP for Stormont-Dundas-Charlottenburg, Jim Brownell; DEAG Director, Karen Switzer-Howse; SNC Chair, Gaston Patenaude and MPP for Glengarry-Prescott-Russell, Jean-Marc Lalonde hold up an Ontario Trillium Foundation plaque celebrating the Healthy Home Guidebook grant.

Trillium Grant for Rural Healthy Home Guidebook Project

In August 2007, South Nation Conservation, in partnership with the Dundas Environmental Awareness Group, received a \$144,000 grant from the Ontario Trillium Foundation to expand on the success of its Healthy Home Guidebook Project.

Since 2002, the Healthy Home Guidebook has been used by a number of agencies across the Province as a tool for the delivery of environmental health programs and services to rural homeowners. Prior to the Guidebook, there was little in the way of consolidated information for the average rural homeowner on topics such as proper maintenance of drinking wells and septic systems, managing household hazardous waste, reducing greenhouse gas emissions or managing pesticide use on their lawns and gardens. The next phase of the Project will see the updating and coordination of all information, translation and reprinting of the Guidebook as well as the delivery of Interactive Healthy Home assessments, programs and workshops throughout Eastern Ontario.

Black Ash Centre Partnership

In May 2007, South Nation Conservation staff took part in the inaugural meeting of the Black Ash Centre at the State University of New York's College of Environmental Science and Forestry campus, located in Syracuse, New York.

Among others, SNC staff joined representatives from the Akwesasne

Task Force on the Environment, the Haudenosaunee Environmental Task Force, the Mohawk Council of Akwesasne, the St. Regis Mohawk Tribe, and the Seneca Nation of Indians – Environmental Protection Department.

The centre will provide a focal point for collaboration, research and information-gathering for those

interested in the preservation of Black Ash, used primarily by Native peoples in basket weaving and other traditional crafts. This specific tree species is crucial in the management of water resources in South Nation Conservation's 4,000 km² drainage basin extending from northeast Brockville to Plantagenet.

2007 SNC Governance

Board of Directors

Gaston Patenaude, Chairman, Prescott-Russell
 Claude Cousineau, Vice Chairman, S, D & G
 Floyd Dingwall, Past Chairman, S, D & G
 Lawrence Levere, Leeds-Grenville
 Barclay Cormack, Leeds-Grenville
 Ken Hill, Prescott-Russell
 Denis Pommainville, Prescott-Russell
 Bob Cox, City of Ottawa
 Rob Jellett, City of Ottawa
 Doug Thompson, City of Ottawa
 Alan Perks, City of Ottawa
 Lianne Acres-Hanna, S, D & G
 Johnny Whittiker, S, D & G
 Alvin Runnalls, S, D & G

Citizen Committees

Communications
 Forestry
 Fisheries
 Clean Water
 Low Water

SNC Board member Lawrence Levere as town crier, posing with his wife, Lynda, between greeting guests at SNC's 60th Anniversary Banquet.



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