

2005 - 2010 STRATEGIC MANAGEMENT PLAN
FOR THE
RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM



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**2005 - 2010 STRATEGIC MANAGEMENT PLAN
FOR THE
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EXECUTIVE SUMMARY

The purpose of this strategic planning document is to provide a direction for the future development and use of Geographic Information Systems (**GIS**) in Rhode Island for the period from 2005 through 2010. The document traces the background of the Rhode Island Geographic Information System (**RIGIS**) from its inception by the Director of the Rhode Island Department of Environmental Management and the University of Rhode Island in 1985 and the further evolution of the organization through increased participation by other public, private and academic organizations. The existence of a common GIS database and its management by the Department of Administration and the University of Rhode Island were recognized in state law in 1990. The same enabling legislation established the RIGIS Executive Committee as an oversight management body for the system. Procedures concerning the contribution of material into the RIGIS database as well as general policies regarding its maintenance and accessibility are recognized and have been detailed through the acceptance of standards and guidelines. Education and outreach activities within the state as well as participation in and contributions by RIGIS members in regional and national organizations are continuing efforts by and for the GIS community.

This plan outlines eight areas of goals and objectives concerning future interests involving GIS activities or in the development and use of geospatial information.

1. The exercising of leadership through the activities of the RIGIS Executive Committee and the involvement of its members with state, regional and national interests will be an ongoing process for providing direction to the GIS community in Rhode Island.
2. Management of the RIGIS database will include the continued establishment, acceptance and implementation of standards and procedures for its maintenance, enhancement, and growth.
3. Providing effective and efficient access to geospatial information and products emanating from the RIGIS database will focus on the use of new and evolving technologies available through access to the Internet.
4. Institutions of higher education participating in the RIGIS will continue to be recognized and relied upon for their extensive educational and research strengths as well as for their proven capabilities in areas involving outreach activities.
5. Rhode Island state agencies with established GIS programs will be utilized in providing leadership and direction for coordinating efforts to promote best use of geospatial data in a state government information technology enterprise environment.

6. Cities and towns in Rhode Island with existing or developing GIS capabilities will be encouraged to work together to seek out and employ available and common resources including knowledge, data and funding opportunities.
7. Private sector enterprises will be supported through recognition and use of their developing capabilities and expertise in GIS and related geospatial technologies.
8. Funding alternatives will be explored to support general RIGIS activities as well as the specific needs of the RIGIS office at the Department of Administration and the Environmental Data Center at the University of Rhode Island.

An assessment of the Strategic Plan including a review and evaluation of its elements will be conducted on an annual basis to confirm that goals, objectives and strategies remain appropriate or that modifications or adjustments may be in order.

2005 - 2010 STRATEGIC MANAGEMENT PLAN FOR THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM

STATEMENT OF PURPOSE: The purpose of this plan is to present a management strategy for the **Rhode Island Geographic Information System (RIGIS)** for the five year period from January 2005 through December 2010. It is intended to outline a direction for the comprehensive development, use and availability of Geographic Information Systems (**GIS**) technology and geospatial information in Rhode Island. This includes the interests of the present RIGIS participants as well as other organizations or special interest groups that are either currently involved with or might benefit from this technology in the future. A primary goal of the RIGIS is to coordinate common efforts among existing and potential participants in the state. In addition, RIGIS participants provide technical counsel on the implementation of GIS technologies or use of geospatial information.

INTRODUCTION: A geographic information system (GIS) is an organizational structure, a suite of technical tools, and a geographically related database used to assimilate, analyze and depict location related or geospatial information. The Rhode Island Geographic Information System (RIGIS) is a consortium of government entities, academic institutions and private organizations that employ GIS technology and use geospatial information.

RIGIS MISSION: To monitor, coordinate, and provide leadership for activities related to the use of geographic information system technology in Rhode Island, to support initiatives to implement or use this technology, and to manage and provide access to a common and comprehensive database of geographically referenced information that conform to RIGIS-accepted minimum standards for accuracy, completeness and metadata documentation.

BACKGROUND

Initiation of a Coordinated GIS effort for Rhode Island: The Director of the Rhode Island Department of Environmental Management (**RIDEM**) started the precursor to the RIGIS in 1985. This was initially accomplished through an agreement between that state agency and the University of Rhode Island (**URI**) to establish a GIS for the management and analysis of environmental data in Rhode Island. The RI Department of Transportation (**RIDOT**), the RI Department of Administration's (**RIDOA**) Division of Planning (now Statewide Planning Program), and the RI Solid Waste Management Corporation (**RISWMC**, now **RIRRC**) joined this effort shortly thereafter, each supporting the concept of a unified centrally managed database of geospatial information. Overall coordination was accomplished through an informal committee of top-level management from each of these five organizations meeting on an ad hoc basis. Technical management of the database resided at the University of Rhode Island.

From the beginning of development of GIS in Rhode Island, each of the primary four state government organizations involved have supported their own internal GIS efforts. These methods of internal support have also been employed at the Environmental Data Center (EDC) at the URI through contractual awards or grants to the Center. These efforts included the purchase of computer hardware and software, the assignment of operating personnel, and funding for data development for information applicable to their own agencies' or institution's needs. Realizing the benefits of an open, accurate and accessible informational resource, these partnering organizations contributed considerable data into a common RIGIS database. Early on, the Rhode Island office of the USDA/SCS (now NRCS) and the Narragansett Bay Commission also significantly contributed to the database building effort. Initially this RIGIS database was housed at the Environmental Data Center at URI. Until 1991 the EDC/URI used internal staff to perform all data base management functions including assimilation of data, cataloging and distribution. The Statewide Planning Program at the RI Department of Administration assumed responsibilities for data base administrative functions in 1991. At that time, external data distribution duties were also shifted to Statewide Planning. RIGIS data was exchanged between participants and made available to the public on magnetic media. In 1996 a computer data server was established at the URI for electronic download to RIGIS participants and the general public over the Internet.

Rapid development and use of GIS in Rhode Island and participation in the RIGIS has occurred over the years. This has been due not only to the realization of the benefits and advantages of using GIS tools, but to the efforts of the GIS community at large in showcasing this technology. In this State the RIGIS has always been a proponent of this effort and has sponsored or participated in many technical assistance efforts and outreach activities. As a result the use of GIS technology has permeated into all levels of government and it is heavily employed by many private sector companies and organizations as well. In Rhode Island this has been accompanied by rapid expansion and heavy use of the spatial information in the RIGIS database. In its desire to foster development and use of GIS, the RIGIS Executive Committee has expanded its membership to include GIS users from many different disciplines and organizations. Most recently this has included the health and public safety areas (RI Dept. of Health and E911) and a rapidly expanding interest by municipal government. Over a third of Rhode Island's cities and towns now have a functioning GIS, and another third of the cities and towns in the state are developing or considering acquiring these capabilities.

Legislative Establishment: In 1990, legislation was enabled to amend the **General Laws of Rhode Island** to include language pertaining to a state wide geographic information system. **Chapter 42-11-2-(v)**, which is focused on the **RI Department of Administration** now states that the Department shall have the powers and duties to "devise, formulate, promulgate, supervise and control a comprehensive and coordinated statewide information system"...that ..."may include a Rhode Island geographic information system". **Under Chapter 42-11-10-(f)-(6)** pertaining to the **Statewide Planning Program**, the State Planning Council will "establish and appoint members to an executive committee consisting of major participants of a Rhode Island geographic information system with oversight responsibility for its activities." This Chapter also states "In order to ensure the continuity of the maintenance and functions of

the geographic information system, the general assembly may annually appropriate such sum as it may deem necessary to the department of administration for its support." Furthermore, this Chapter states under **42-11-10-(g)-(3)** that "the **Division of Planning** shall manage and administer the Rhode Island geographic information system of land related resources, and shall coordinate these efforts with other state departments and agencies, including the University of Rhode Island, which shall provide technical support and assistance in the development and maintenance of the system and its associated data base."

The same legislative package added language to the General Laws for the University of Rhode Island under **Chapter 16-32-30** whereby, the University was "authorized and empowered to establish in connection with the University and within the Department of Natural Resource Sciences a geographic information system laboratory with suitable facilities for developing and maintaining a level of scientific and technical expertise in the use of computer technology in the management of land-related natural resources. This will include maintaining a statewide data base of land related economic, physical, cultural, and natural resources and providing for controlled access of this data base to the university community; other state, municipal and federal departments and agencies; and the general public...The University shall cooperate with and provide technical assistance to the Division of Planning of the Department of Administration in the management of the statewide geographic information system and shall advise other state, municipal and federal departments and agencies and the general public in its use."

A separate section of the General Laws addresses the University's authorization to fund the GIS laboratory under **16-32-31. Appropriations for geographic information system laboratory.** - "The general assembly may annually appropriate such sum as it may deem necessary for maintaining the geographic information system laboratory within the department of natural resource sciences, and the state controller is hereby authorized and directed to draw his or her orders upon the general treasurer for the payment of said sum, or so much thereof as may from time to time be required, upon receipt by the controller of properly authenticated vouchers."

RIGIS Executive Committee: Oversight policy and guidance of the collective efforts of RIGIS participants is currently formulated by an executive committee of representatives of organizations using GIS technology in Rhode Island. This RIGIS Executive Committee is currently made up of representatives from federal, state and municipal government, academic institutions, and the private sector. (Current Committee membership is listed in Appendix A.) Members are appointed by the State Planning Council, the legislatively authorized central planning organization for the state. There are no specified term limits for its members. A member of the RIGIS Executive Committee selected by majority vote chairs this body at quarterly meetings held throughout the year in public session. The RIGIS Coordinator an employee from the Rhode Island Department of Administration's Division of Information Technology, provides staff support for this body and acts as the principal liaison person among participants and with outside organizations within the state, the northeast region, and nationally. Additional staff support for the Executive Committee is provided on a voluntary basis by its individual members and their organizations.

The Executive Committee deliberates on policy issues pertaining to the content and maintenance of a common and consolidated GIS digital data base and sets distribution policy for RIGIS data base products. It seeks to coordinate efforts for the development of geospatial data within the state. It formulates, adopts or endorses applicable technical standards, coordinates and attempts to limit the development of redundant or like data by its members, and informs participants of the availability of new or updated data. Through the actions of its members, the Executive Committee strives to promote the use of GIS in Rhode Island by offering assistance and advice to parties with an interest in this technology. It supports outreach efforts such as conferences and seminars, and volunteers technical demonstrations through cooperative efforts of its members. Decisions on all issues of policy or procedure are made after discussion and by consensus vote of its members. There is no binding authority for its individual members to conform to Committee decisions or actions. Neither the RIGIS organization, nor its participants are currently funded as a separate state entity or governmental unit to carry out the functions of this Executive Committee.

The RIGIS Database: The RIGIS database currently consists of several hundred individual spatial databases, or data sets, in vector (point, line, polygon) and raster image format. Although originally conceived and built as an information system for the state's coastal and terrestrial natural resource data, it presently includes extensive data in many disciplines. These include transportation and utilities infrastructure, economic and demographic information, historic and cultural data and quality of life themes. Contributors and users have and continue to add information to the RIGIS database through formal and informal data sharing agreements, data exchange transactions, and in house enhancements of existing data sets. A listing of material included in the database is formulated and distributed annually as a "RIGIS Data Catalog" in both electronic and printed form.

Overall data base management is presently being performed jointly by the RIGIS Coordinator at the Statewide Planning Program and the Director of the Environmental Data Center at the University of Rhode Island. New additions submitted by individuals or groups are assimilated, and a preliminary check of their data integrity and completeness is performed. (The contributing organization is relied upon to provide metadata and quality assurance procedures prior to submission of data to the RIGIS.) The data documentation or metadata is inspected, and if found acceptable, the data set or coverage is added to the list of RIGIS data. Maintenance of data in the form of updates and corrections is usually left to the organization that originally developed it. Custodial responsibility or stewardship of individual data sets usually resides with the organization developing those data and with a primary interest and expertise in its thematic content. For instance, the Department of Transportation maintains highway infrastructure information and the Department of Environmental Management delineates wetland resources.

All contributors to the RIGIS database are encouraged to follow standards, and when available, specifications for developing data. Standards and specifications for digital data entry and the writing of metadata files have been accepted by RIGIS members, and are in general use. National Map Accuracy Standards are generally referred to in data development proposals. In the absence of formally accepted

specifications, manufacturers guidelines for hardware and software products are commonly followed. As resources are made available, RIGIS members will continue to develop or adopt standards and specifications for use with GIS tools and related technology. (See Appendix B – Standards and Guidelines)

Information from the RIGIS database is made available through a managed access licensing policy. The consolidated RIGIS database is stored and maintained at the Environmental Data Center at the University of Rhode Island and is considered intellectual property of the RI Board of Governors for Higher Education. Copyright privileges under U.S. law were applied for and established in 1989. All data are distributed under license agreements. An intent of this policy is to preserve the integrity of information emanating from the RIGIS database by limiting secondary distribution. This also serves to alleviate concerns by data contributors that others may take undo credit or make unreasonable profits from an originator's work. This managed, or in some cases, restricted access also lessens security or liability concerns of data developers who are concerned that their data may be changed, improperly interpreted or misused by others.

Information from the RIGIS database is distributed through electronic download from a server maintained by the Environmental Data Center at the University of Rhode Island. The downloading of individual data sets and metadata by electronic transfer is accomplished by using widely distribute Internet browsers available at no cost. Initial agreement to the standard RIGIS license document is required, and data is available at no cost to users.

Requests for RIGIS data on optical or magnetic media are currently processed through the RIGIS Coordinator's office at the Statewide Planning Program. License fees are accessed on the volume of digital data with respect to the media package required to contain it based on a fee structure accepted by the RIGIS Executive Committee. The intent of the license fee structure is to recover data packaging expenses and media costs. License fee are paid to and receipts are deposited in an account with the University of Rhode Island Foundation acting as an agent for the Board of Governors for Higher Education.

Education, Training, and Outreach Programs:

The Department of Natural Resources Sciences at the University of Rhode Island regularly provides formal course work at the undergraduate level in the use of GIS technology. In addition, graduate level courses and seminars are offered as part of programs leading to master's degrees.

Several other institutions of higher education including Brown University and Rhode Island College also offer introductory or advanced courses in this field as part of regular departmental curricula.

The Cooperative Extension program at the URI offers short courses in the use of GIS tools for all Rhode Islanders. These courses generally concentrate on the usage of desktop mapping software and its applications to various disciplines. In addition, the Cooperative Extension program assists Rhode Island municipalities with GIS mapping support for specific activities such as the Watershed Watch Program and other on going natural resource related studies. Brown University has offered workshops for organizations not affiliated with that university.

RIGIS participants at the state and municipal agency levels consistently support internship programs offered for students at the several institutions of higher learning. RIGIS participating agencies at the state government level have included internship programs from the University of Rhode Island, Rhode Island College, Johnson and Wales University, and Brown University.

Short conferences and seminars are organized and offered in the state by RIGIS participants on a special interest basis from time to time. These often are associated with particular applications where GIS tools may be beneficial, such as wetlands interpretation, the use of automated spatial information for utilities infrastructure management, or GIS in business or for economic development opportunities.

RIGIS members regularly participate and actively support regional and national conferences such as the Northeast Arc Users Group, the New England Geospatial Information Summit, and the ESRI Users Conference. GIS users from within Rhode Island often contribute to these events by giving presentations, providing graphic displays, and assisting in their organization. In addition RIGIS members regularly participate in national organizations concerned with GIS or related disciplines such as; NEARC, URISA, NSGIC, GITA, ASPRS, ACSM, and several other organizations.

FIVE YEAR STRATEGIC MANAGEMENT PLAN

GOALS AND OBJECTIVES *(What we want to do)*

STRATEGIES *(How we're going to get there)*

ACTIONS *(What we're going to continue or get started in the near term)*

GOALS and OBJECTIVES -1

Leadership, Policy Formulation and Liaison Activities: Provide leadership, coordinate, and monitor activities related to geographic information system activities in Rhode Island

Strategy a. Exercise Leadership from within the membership of the RIGIS Executive Committee to support the overall community of practitioners of GIS technology and users of geospatial information in Rhode Island.

Actions: 1. Support the RIGIS Executive Committee as the principal focal point and coordinating body for geospatial activities in Rhode Island.

2. Maintain an awareness of advancements and trends in the use of geospatial technology through attendance and participation in conferences, seminars and workshops. (NEARC2005, NEGIS2005, ESRI UC2005, NSGIC2005)

Strategy b. Provide policy and direction for RIGIS Participants and others engaged in activities related to GIS through the formulation, adoption and promulgation of standards and the development of guidance documents.

Actions: 1. Continue to identify, adopt or write needed standards and guidance documents.

(Strategy b.) **Actions:** 2. Continue to publicize the existence of standards and guidance documents created by RIGIS or other established and accepted authorities.

Strategy c. Engage in Liaison activities and participate in organizations within the State, and at the Regional, and National levels. (NEARC, NEGIS, NSGIC, FGDC and URISA.)

Action: Strengthen national ties through participation in the activities of the Federal Geographic Data Committee and the National States Geographic Information Council.

GOALS and OBJECTIVES - 2

Data Base Management: Establish and implement standards and procedures for the development, preservation, enhancement and maintenance of geospatial data in the RIGIS database.

Strategy a. Database Management: Develop and implement standard operating procedures and methods for preservation, inventory and maintenance of the RIGIS database.

- Actions:**
1. Reassess the data model used to distribute the RIGIS database.
 2. Acquire or develop database inventory and management software to manage the core RIGIS database.
 3. Complete conversion of metadata to FGDC standards for all RIGIS geospatial data.
 4. Develop standards and procedures for security of active data and the archival storage of inactive information in the RIGIS database.
 5. Renew, and as necessary, update methods of archival storage to reflect current technology.

Strategy b. Data Acquisition, Maintenance and Enhancement: Encourage RIGIS participants to continue to contribute quality geospatial data into the common RIGIS database and offer standards and methods for developing and enhancing those data.

Actions:

1. Identify geospatial data set custodial responsibilities of RIGIS participants for key data elements in the core RIGIS database.
2. Update “Digital Database Standards for the RIGIS” for automated digital data entry of geographic information.
3. Establish procedures and methods useable by RIGIS participants for data set maintenance including the ability to refresh or upload edited or enhanced data into the RIGIS database.
4. Encourage and coordinate the acquisition or development of new data into the database.

GOALS AND OBJECTIVES - 3

Database Access, Data Distribution and Geospatial Information Dissemination

Provide GIS users with continued effective and efficient access to the RIGIS database for digital geospatial data and provide the general public with an intuitive and informative Internet entry point for viewing dynamic and static maps and related products produced by RIGIS participants.

Strategy a. Continue to offer RIGIS data under license for free download over the Internet.

Strategy b. Join with the FGDC to contribute to and enhance the National Spatial Data Infrastructure (NSDI) with digital data from the RIGIS database.

Actions: Establishment of Metadata Clearinghouse

1. Explore and adopt where applicable and advantageous federal standards for geospatial data such as those offered through the federal government agencies for initiatives such as the National Spatial Data Infrastructure, NSDI, the Geospatial One Stop, GOS, and the National Map.
2. Explore and incorporate software tools and technologies already developed by federal and state governments and private sector companies for identifying and locating geospatial data over the Internet.

Strategy c. Create a user friendly web portal interface for public access to RIGIS data and for the viewing of static and dynamic maps and related geographically related products created and published by RIGIS participants.

Actions: Geospatial Data Information via Web Portal Interface

1. Explore advantages of creating and registering a site in the federal geospatial one stop program (GOS).
2. Incorporate software tools and technologies already developed by federal and state governments and private sector companies for accessing and displaying map products on the web.
3. Develop, offer and encourage the use of a standard for Internet Map Server site look and feel for RIGIS participants.
4. Utilize the RIGIS subcommittee established to pursue this initiative.

Strategy d. Continue offering RIGIS data on optical media to the public.

Actions: GIS Data Distribution on Optical Media

1. Continue to develop standard RIGIS data packages on optical media.
2. Automate the production and delivery process for optical media.

GOALS AND OBJECTIVES - 4

Education, Training, & Outreach Activities

Strategy a. Support programs offering courses of instruction and use of geospatial sciences at public and private institutions of higher education in Rhode Island.

Actions: 1. Encourage the offering of courses within curriculums at institutions of higher learning.

Actions: 2. When advantageous and possible strongly consider the participation of researchers at universities and colleges for involvement in geospatial projects of public or private sector entities.

3. Provide opportunities for internship programs using GIS technology for students to supplement the knowledge acquired through formal course work.

4. Make known the availability of job opportunities to recent graduates.

Strategy b. Publicize the availability of training sessions and workshops for learning more about and using GIS technology.

Action: Provide notification of training opportunities and workshop announcements on web pages of RIGIS participants.

Strategy c. Assist in the organization of and participate in conferences, forums and seminars, and special interest group meetings in areas related to the use of GIS technology.

Strategy d. Encourage the introduction of GIS concepts and the use of geospatial information in public and private school systems throughout the state.

Action: Further relationships between existing GIS users and individual school systems by direct participation in programs such as the Geography Education Alliance or in special events such as the Annual Geography

Bee

or GIS Day.

Strategy e. Encourage the participation in events and contribution to publications related to increasing the awareness of and advantages to using GIS technology.

Actions: 1. Establish a mechanism to periodically notify interested parties

with interests in geospatial technology of occurring events or available opportunities.

2. Organize an annual or bi-annual conference on GIS in Rhode Island

3. Organize and hold bi-monthly or quarterly GIS forums focused on special interest areas using geospatial data.

4. Encourage participation by Rhode Islanders in annual GIS Day Events to further knowledge of the technology by the general public.

GOALS AND OBJECTIVES - 5

State Government GIS Activity Leadership and Coordination: Provide leadership, direction and coordination for GIS activities within Rhode Island State Government.

Strategy a. Provide leadership to State Government entities seeking to take advantage of GIS technology and participation in the RIGIS by providing policy guidance, technical support, and standards specifications for establishing and implementing GIS capabilities within Rhode Island State Agencies, Commissions, and Boards.

Action: Prepare a guidebook of needs and requirements for implementing GIS technology within State government entities.

Strategy b. Coordinate Activities of State Government Agencies, Commissions and Boards actively involved with GIS technology to maximize advantageous cooperative ventures and minimize redundancy of effort with respect to the development and contribution of geospatial information into the common RIGIS database.

Strategy c. Support efficient utilization of resources through pooling efforts for procurement and use of common computer hardware, software and network communications capabilities within state government.

Actions: 1. Encourage the use of Master Price Agreement procurement offerings through the Rhode Island Purchasing Division.

2. Utilize shared use of common software and data resources through networking capabilities within State

Government.

3. Work toward the establishment and implementation of a common Internet Map Service for state agencies

4. Work toward the implementation of a common geospatial data server for state agencies currently utilizing GIS technology

Strategy d. Hardware/Software/Communications: Encourage the acquisition and implementation of improved hardware, software and communications networking capabilities to enhance the ability for storing, sharing and accessing geospatial data within Rhode Island state government

GOALS AND OBJECTIVES - 6

Municipal Government GIS Activity Support and Assistance: Provide support and assistance to Rhode Islands cities and towns for implementing and using GIS technology within municipal government.

Strategy a. Support GIS Activities in Rhode Island's Cities and Towns by offering technical guidance, implementation models, and standards criteria.

Action: Develop guidelines regarding privacy issues and cost recovery efforts for municipalities engaged in or considering cost recovery for GIS development.

Strategy b. Facilitate cost sharing ventures or partnering opportunities with municipal government entities or private organizations with mutual interests in developing GIS related capabilities, data, or products.

Strategy c. Work together with municipalities and regional government organizations to assist in incorporating GIS data and technology from the local level up to regional or state levels.

Strategy d. Work with Rhode Island's cities and towns to develop a long-term strategy to incorporate data generated and maintained by municipal government into an expanded RIGIS database.

GOALS AND OBJECTIVES - 7

Private Sector Support: Monitor and recognize GIS activities and efforts and facilitate opportunities of private sector companies, organizations and individuals.

Strategy a. Recognize, acknowledge, and make known advancements in GIS technology contributed by private companies, organizations and individuals in a fair and unbiased manner.

Strategy b. Seek out and when agreeable to all parties assimilate and incorporate data developed by private parties into the openly available RIGIS database.

Strategy c. Facilitate data development, cost sharing ventures and partnering opportunities among public entities and private organizations with mutual interests in developing GIS related capabilities or products.

GOALS AND OBJECTIVES - 8

Funding: Explore Funding Alternatives or Develop a Funding mechanism for RIGIS activities and/or for providing incentives to prospective GIS users to participate in the RIGIS

Strategy a. Establish a conceptual framework for long term funding of The RIGIS Office at RIDOA and support of the EDC at URI

Strategy b. Define legal context for cost recovery of producing GIS products or providing services.

Strategy c. Explore and develop cost-sharing programs with private enterprise and other government entities.

Strategy d. Identify and publicize the availability of grants and other potential funding sources open to RIGIS Participants.

STRATEGIC PLAN REVIEW, EVALUATION & CONFIRMATION

1. Produce an annual report highlighting accomplishments or failings of the actions taken over the past year. The successive annual reports will be considered addendums to the Strategic Plan.

2. On an annual basis update or modify listed actions to implement the strategies for the coming year(s).

3. On a two-year basis, where necessary, redirect or modify strategies intended to reach goals and objectives.

4. On a three-year basis review the Strategic Plan to validate individual goals and objectives.

5. On a five-year basis reconfirm and/or revise the overall Strategic Plan

APPENDIX A. RIGIS Executive Committee Membership - 2004

State Government

RI Department of Administration, Statewide Planning
and Division of Information Technology -Secretary

RI Department of Environmental Management
Vice Chairperson

RI Department of Health

RI Department of Transportation

Office of the State Geologist

RI Water Resources Board

RI Board of Registration for Professional Land Surveyors

RI E911 Emergency Response System

RI Public Transit Authority

Educational Institutions

The University of Rhode Island
Natural Resource Sciences
Environmental Data Center

Brown University
Department of Planetary Geology

Public and Private Utility Service Providers

The Narragansett Bay Commission
Providence, RI

Municipal Government

Town of South Kingstown

Town of New Shoreham

City of Providence

City of Cranston

Federal Government

Natural Resource Conservation Service
(US Dept. of Agriculture)

US Geol. Survey, Geospatial Programs Office
(US Dept. of the Interior)

Private Sector Enterprises

Mapping & Planning Services
Jamestown, RI

The Beta Group Inc.
Lincoln RI

Applied Science Associates
Narragansett RI

EcoTones Inc. (Chair)
East Greenwich

Non Profit Organizations

The Providence Plan
Providence RI

APPENDIX B. RIGIS Standards and Guideline Documents

1. Digital Database Standards for the Rhode Island Geographic Information System, Version 1.1, The Environmental Data Center, Department of Natural Resources Science, The University of Rhode Island, Kingston, RI, 1989
2. Rhode Island Geographic Information System License Agreement, The University of Rhode Island Foundation, Kingston RI, 1990
3. Metadata Standards and Specifications for the Rhode Island Geographic Information System, Division of Planning, RI Department of Administration, Providence RI. 1993 (*superseded by FGDC Content Standard in 2001*)
4. Content Standard for Digital Geospatial Metadata, Federal Geographic Data Committee, Reston VA, April 1997
5. RIGIS Data Catalog September 2003, Statewide Planning Program, RI Department of Administration, Providence, RI, September 2003
6. RIGIS Standards for Digital Parcel Data Sets for Use in a Geographic Information System, Statewide Planning Program, RI Department of Administration, Providence RI, December 2003

APPENDIX C. List of Acronyms

ACSM – The American Congress on Surveying and Mapping is a non-profit association dedicated to advancing the national interests of the surveying and mapping community.

ASPRS - The American Society for Photogrammetry and Remote Sensing is a non-profit national association dedicated to the interests of the photogrammetry and remote sensing community.

EDC – The Environmental Data Center is a research and GIS applications facility in the Department of Natural Resources Science at the University of Rhode Island.

ESRI – The Environmental Systems Research Institute is a private company with headquarters in Redlands, CA developing and supplying GIS applications software.

FGDC - The Federal Geographic Data Committee is a 19 member interagency committee composed of representatives from the Executive Office of the President, Cabinet-level and independent agencies.

GIS – A Geographic Information System(s) is a collective combination of computer hardware, specialized software, a managed database of spatial and related information, and a core of trained professionals versed in geospatial technology.

GITA – The Geospatial Information and Technology Association is a global nonprofit educational association serving the global geospatial community.

GOS – The Geospatial One Stop is an initiative of the federal government that implements the basic elements of the NSDI by providing an Internet portal (www.geodata.gov) to facilitate data sharing throughout the nation.

IMS – An Internet Map Server is an applications technology for providing access to GIS information through an interactive mapping interface via the World Wide Web network.

NBC – The Narragansett Bay Commission (RI State) is a quasi-state government organization serving as a regional wastewater utility provider.

NEARC – The Northeast Arc (users group) is a regional organization of users of ESRI GIS software from New York, New Jersey, and the six New England states with some participation from Pennsylvania and Delaware. The organization is self-funded and is independent of ESRI for its support and operations.

NEGIS – The New England Geospatial Information Summit an independent regional organization of users of GIS technology from the six New England states. NEGIS generally receives support from the New England chapters of URISA and GITA but does not rely on funding from those organizations.

NRCS – The National Resources Conservation Service of the US Dept. of Agriculture (Formerly SCS) is an agency of the federal government that provides leadership in efforts to conserve, maintain and improve natural resources and the environment.

NSDI – The National Spatial Data Infrastructure is an initiative developed by the Federal Geographic Data Committee that encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data.

NSGIC – The National States Geographic Information Council is a private nonprofit organization consisting of representatives from the fifty states committed to efficient and effective government through the prudent adoption of geospatial information technologies.

RIDEM – The RI Department of Environmental Management is a department of the executive branch of Rhode Island state government.

RIDOA – The RI Department of Administration is a department of the executive branch of Rhode Island state government.

RIDOH - The RI Department of Health is a department of the executive branch of Rhode Island state government.

RIDOT – The RI Department of Transportation is a department of the executive branch of Rhode Island state government.

RIGIS – The RI Geographic Information System is a consortium of public, private and academic organizations jointly participating to further the knowledge and use of GIS in Rhode Island.

RIRRC – The RI Resource Recovery Corporation (formerly RISWMC) is a quasi-state organization responsible for management of solid waste in the state.

RISWMC (Now RIRRC) - RI Solid Waste Management Corporation

SCS (Now NRCS) – Soil Conservation Service of the US Dept. of Agriculture

URISA – The Urban and Regional Information System Association is a non-profit international organization furthering the use of GIS and other information systems technology for the improvement of decision-making in national, state, regional and municipal government.

USGS – The US Geological Survey is a component of the US Department of the Interior, an agency of the federal government.