

**REPORT OF THE
DEPARTMENT OF CONSERVATION AND RECREATION**

**A Feasibility Study
Regarding the Development
of a Park, Recreation Area, or
Wildlife Area on Paradise Creek,
Portsmouth, Virginia**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



SENATE DOCUMENT NO. 10

**COMMONWEALTH OF VIRGINIA
RICHMOND
2003**

W. Tayloe Murphy, Jr.
Secretary of Natural
Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 302

TDD (804) 786-2121 Richmond, Virginia 23219-2010 (804) 786-6124 FAX (804) 786-6141

December 11, 2002

The Honorable Mark R. Warner, Governor
Commonwealth of Virginia
Capitol Square
Richmond, Virginia, 23219

Members of the Virginia General Assembly
Commonwealth of Virginia
General Assembly Building, Capitol Square
Richmond, Virginia 23219

Subject: SJR 85-Feasibility Study Regarding Paradise Creek, Portsmouth, Virginia

Dear Governor Warner and Members of the 2003 General Assembly:

This report was directed by Senate Joint Resolution 85 of the 2002 General Assembly. The Department of Conservation and Recreation (DCR) was requested to study the land use along Paradise Creek in the City of Portsmouth and determine the feasibility of establishing a public park, recreational area, and wildlife preserve in the City of Portsmouth. DCR was also asked to identify ways that the Commonwealth could assist the City in the development of these facilities. The Department is grateful for the time and efforts provided by the City, the U.S. Navy, The Elizabeth River Project, and numerous other organizations in the research and development of this report.

The study has shown that Paradise Creek is truly a unique watercourse within the Elizabeth River System. Within the heart of this heavily urbanized area and in the midst of a myriad of industrial complexes, including the Norfolk Naval Shipyard, this tidal creek contains an abundance of wildlife. We have found that the local communities and organizations are significantly interested in restoring the water quality and scenic values of the corridor for the benefit of the citizens of Portsmouth.

Working with these community partners, the Department's study determined that a park in the Paradise Creek corridor is feasible, provided the City is able to negotiate a land purchase, lease, or other conveyance with private landowners along the creek. The report recognizes the outstanding cooperative efforts that are already taking place among the City, the Navy, The Elizabeth River Project, and the Department of Conservation and Recreation and other stakeholders. The report also suggests that the partners in the Paradise Creek restoration effort could use a number of existing state programs to help restore the stream corridor and develop a Greenway, park, and wildlife area.

It is my hope that this report will provide ideas or identify programs that will assist the City and its partners in their efforts to restore Paradise Creek.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Joseph H. Maroon".

Joseph H. Maroon, Director

An Agency of the Natural Resources Secretariat

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PREFACE

The Department of Conservation and Recreation (DCR), through Senate Joint Resolution Number 85 of the 2002 General Assembly, was requested to conduct a study of the existing and future land use along Paradise Creek in Portsmouth and to recommend ways that the Commonwealth could participate in the development of a public park, recreational area, and wildlife preserve. This study identifies several options that are available to the City of Portsmouth.

The Department of Conservation and Recreation wishes to thank all the personnel who helped in this study by providing information, answering countless phone calls, and participating in the meeting held in the Cradock Recreation Center on August 6, 2002, to discuss all aspects of the Paradise Creek issue. Among those contributing greatly to this report are the Portsmouth City Manager's Office and the Portsmouth Director of Comprehensive Planning, who provided input and assistance on behalf of the City related to existing and proposed land use. The U.S. Navy, Norfolk Naval Shipyard, the Naval Engineering Branch, the Norfolk Naval Shipyard Restoration Advisory Board, and the Commander, Navy Region Mid-Atlantic, all provided assistance and information about the Navy's property and the issues related to their remediation projects. The Elizabeth River Project representatives were most helpful in setting up site tours, coordinating the meeting location, and providing a wealth of information about the community and all of the ongoing efforts to restore Paradise Creek.

We would also like to thank the Department of Game and Inland Fisheries, the Virginia Marine Resources Commission, the Department of Environmental Quality, the DCR Suffolk District Office of Soil and Water Conservation, and the Hampton Roads Planning District for their assistance. There are certainly countless volunteers and community groups that have a strong interest in seeing the Paradise Creek Five Year Restoration Plan and the "Paradise Creek Greenway" become a reality. We believe that, with the spirit of cooperation exhibited during the conduct of this study, it will become an outstanding restoration effort.

EXECUTIVE SUMMARY

The 2002 General Assembly requested the Department of Conservation and Recreation to study land use along the Paradise Creek corridor in the City of Portsmouth and make recommendations to the Governor and the 2003 General Assembly about ways that the Commonwealth can participate with Portsmouth in the development of a public park, recreational area, and a wildlife preserve. The Department was directed to consult with the City of Portsmouth, the U. S. Navy, the Norfolk Navy Shipyard Restoration Advisory Board, the Elizabeth River Project, and the Hampton Roads Planning District Commission, as well as other state and federal agencies. Senate Joint Resolution Number 85 also pointed out that Paradise Creek is located near the historically significant Norfolk Naval Shipyard and the World War I-era Cradock Community, which are on both the State and the National Registers of Historic Places.

Paradise Creek is a distressed urban tributary to the Elizabeth River, draining over 2.9 square miles of the central portion of the City of Portsmouth. Paradise Creek is located in the South Branch of the Elizabeth River, which has the highest priority for clean up and presents a microcosm of the challenges faced in restoration of the Elizabeth River. Lands along the north shore of the creek are zoned M-2 and are dedicated to heavy industrial use, primarily by the U. S. Navy. Along the southern shore, there is a mix of industrial and residential zoning. From the mouth of the creek at the site of Giant Cement Virginia to Victory Boulevard the land use is zoned M-2 for industry. Upstream of Victory Boulevard, the land use is residential. The primary residential area is the Cradock neighborhood, which is listed on both the State Landmarks Register and the National Register of Historic Places.

FINDINGS

- The City's Comprehensive Plan (1989) proposed a community park for the southern portion of the city that would serve the Highland Biltmore neighborhoods, Cradock, Brighton-Prentis Park, and the Downtown area. The Comprehensive Plan cited as one potential location a site on Paradise Creek. Since this plan was adopted, no community park has been established to serve these neighborhoods. The Comprehensive Plan also referenced the fact that there was very little shoreline access within the City available to the public. The Plan noted that additional boat ramps could be located along Paradise Creek. The City is in the early stages of updating its Comprehensive Plan, and it is anticipated that the numerous recommendations related to the need for a park in the Paradise Creek corridor will be closely examined in light of the demonstrated needs and strong community support.
- Once all the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requirements have been completed at the seven Navy sites near Paradise Creek, the properties will be managed by the Commander, Navy Region Mid-Atlantic (CNRMA) for long-term maintenance and control. Due to the toxic nature of the materials encapsulated in two of the three areas, they are not suited for recreational use. The Navy has no plans to sell or lease the property. They estimate that \$80,000 per year will be required for maintenance of the area once all the remediation is complete. Due to liability issues, environmental constraints, and maintenance costs, extensive deed restrictions are expected to be attached to the properties, and the Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ) will have to approve any proposed future uses.

- Over all, there appears to be strong community support for any and all efforts that are linked to cleaning up the Paradise Creek corridor and improving the water quality of this vital community resource. The Elizabeth River Project has established a stakeholder group of diverse interests and expertise to provide input and help develop an aggressive five-year plan for cleaning up Paradise Creek. They have received a \$100,000 grant from EPA to help implement the plan.
- The Virginia Departments of Conservation and Recreation, Environmental Quality, Game and Inland Fisheries, and the Virginia Marine Resources Commission, as well as other State agencies are already actively partnering with the City, the Elizabeth River Project, and the Navy to help implement the five-year plan to restore Paradise Creek by 2007. These agencies are providing technical assistance and monitoring expertise. It is hoped that these efforts will be able to continue despite budget cutbacks in almost all the program areas.
- In spite of the issues related to pollution and bottom contamination, the creek corridor contains quite a diverse population of wildlife. The abundance of wildlife in this heavily developed urban area is probably due, at least in part, to the large tracts of land east of Victory Boulevard that have not been developed. Also, the Navy's remediation projects have provided undeveloped open space with vegetated surfaces, tree cover, and woody vegetation along the fringes of the closed landfills and adjacent wetland areas.
- The Department of Conservation and Recreation (DCR) administers the federal Land and Water Conservation Fund (LWCF). The City could apply for LWCF dollars to acquire and /or develop a site on Paradise Creek for a local park. This is a 50% reimbursable grant program, and the City would have to compete with other localities for available funds.
- Virginia Recreational Trails Grants are funded with federal dollars, and this program is also administered by DCR. The City could apply for a grant to construct trail facilities, boardwalks, and overlooks. This is a competitive, reimbursable, grant program and is available to non-profit organizations as well as localities; a 20% match is required.

The City of Portsmouth, the Elizabeth River Project, the U. S. Navy, and many other partners already have a collective goal of restoring Paradise Creek and using the lessons learned in this sub-watershed effort to attack a bigger goal of restoring the Elizabeth River. The Paradise Creek Watershed Management Plan could easily achieve the added benefit of creating the "Paradise Creek Greenway" with a trails network along the southern shore, boardwalks, wildlife viewing areas, a boat ramp, and a community park east of Victory Boulevard. There could also be wildlife habitat and forested buffers established on part of the Navy's restoration areas as well as on the restored industrial properties. The environmental education program of the City schools could be strengthened through the collective efforts of all the partnering organizations to create an "outdoor classroom" along the creek corridor.

While some state assistance is available, the success of this project will be attained largely through the cooperation of the City of Portsmouth, the Elizabeth River Project, the U. S. Navy, and the dedicated group of local participants. It should also be noted that a key element of the process will be the acquisition by the City of Portsmouth of a piece of land along the south shore of the creek for water access and a public park site.

A Feasibility Study Regarding the Development of a Park, Recreation Area, or Wildlife Area on Paradise Creek, Portsmouth, Virginia

PURPOSE OF THE REPORT

The 2002 General Assembly requested the Department of Conservation and Recreation to study the land use along Paradise Creek corridor in the City of Portsmouth and to make recommendations to the Governor and 2003 General Assembly about ways that the Commonwealth can participate with Portsmouth in the development of a public park, a recreational area, and a wildlife preserve. The Department was directed to consult with the City of Portsmouth, the U. S. Navy, the Restoration Advisory Board, the Elizabeth River Project, and the Hampton Roads Planning District, as well as other state and federal agencies.

Senate Joint Resolution 85 also pointed out that Paradise Creek is located near the historically significant Norfolk Navy Ship Yard and the World War I era Cradock Community, which are on the State and National Registers of Historic Places. The resolution also called attention to the strategic location of the creek in relation to the core of the Norfolk Metropolitan Area, as well as its natural significance as a component of the Elizabeth River System.

The Department of Conservation and Recreation has been directed to complete the report by November 30, 2002, and submit findings and recommendations to the Governor and 2003 General Assembly.

CORRIDOR DESCRIPTION

Paradise Creek is a distressed urban tributary to the Elizabeth River, which drains more than 2.9 square miles of the central portion of the City of Portsmouth. Chesapeake Bay Program monitoring has shown the Elizabeth River, in terms of pollutants, to be the most toxic of three Regions of Concern for the Chesapeake Bay. Paradise Creek is located in the South Branch of the Elizabeth River, which has the highest priority for clean up. Paradise Creek presents a microcosm of the challenges faced in the Elizabeth River. (See Map 1, Location Map, on page 5 and Map 2, Study Area, on page 6)

In 1999 the U. S. Environmental Protection Agency added the Shipyard to the National Priorities List (NPL) or “Superfund” list of contaminated properties. Under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Navy developed a plan for remediating a total of seven sites at three different locations along Paradise Creek. Also on the north shore of the creek, a private business struggles with a brownfield site that is related to a bankrupt scrap metal operation. The Southeastern Public Service Authority (SPSA) operates the Refuse Derived Fuel Plant, which is one of the corridor’s largest industrial operations, a regional waste processing plant that burns refuse to generate power and recycles other materials. This site has high volume run-off during storm events but lacks adequate facilities to treat storm water. Storm water is also introduced into the creek from heavily traveled streets and large parking facilities that do not have storm water controls in place.

The south side of Paradise Creek consists of a unique mix of commercial, industrial, and residential areas. Above the study area of this report, the U.S. Navy completed a removal action on one of the Norfolk Naval Shipyard Installation Restoration sites. As part of the site restoration, 1.9 acres of sustainable tidal wetlands were successfully created at the New Gosport Landfill. This effort helped to demonstrate the Navy’s commitment to work with the community in restoring the creek. Creation of the wetland also resulted in a significant cost savings compared to the expense of filling the area with soils to match the pre-existing elevation. The site was a former Navy housing complex, which had been demolished several years previously. Between 1969 and 1970, the Navy used the New Gosport Landfill for the disposal of abrasive blast material from dry dock operations, which are now handled in accordance with Environmental Protection Agency (EPA) regulations. This material was later identified to have lead contamination. In 2001 and 2002, with the input of the local community, the Navy converted a portion of the property to a tidal wetland and riparian buffer, and in the process planted thousands of wetland plants, native shrubs and trees.

The Cradock neighborhood consists of some 800 homes that were developed to provide military family housing during the World War I era. In the past, Cradock youngsters grew up playing in the creek’s shallow waters, and Cradock Middle School, in the center of the neighborhood, is literally only a stone’s throw from the wetlands that adjoin the creek. The school uses the creek for outdoor classes in ecology, raises “pet” oysters, and participates in clean-up efforts. This neighborhood also was the location for the nation’s first shopping center. The Cradock neighborhood is listed on the State and National Register of Historic Places. There has been some encroachment into the wetlands adjoining the creek, but several

of the landowners have offered to cooperate with the clean-up efforts and participate in the wetland restoration.

East of Victory Boulevard, there are three tracts of land, currently undeveloped and totaling approximately 80 acres, which border the lower section of Paradise Creek. One of the parcels next to Victory Boulevard and fronting on the creek is a former marina site. All the structures associated with the marina operation have been removed, and the land is now vacant. However, it is understood that commercial fishing boats were once docked there.

The second parcel, which is more than 35 acres, is known locally as "the mudflats." It is owned by the Peck Land Company, and at one time was considered to have potential for industrial use. At some point, the site was apparently used as a dredge spoil site. Careful examination of the land reveals numerous water control structures and berms that were used to contain spoil from dredging projects in years gone-by. Much of the upland portion of the property contains dense stands of phragmites, which is another indicator that dredge spoil has been placed on the site in the past.

The remaining parcel at the mouth of Paradise Creek is approximately 35 acres and is owned by the Giant Cement Company of Virginia, Inc. The central structure on the property is a massive bulk storage building for handling and shipping portland cement. Apparently the material is transported to the site by ship or barge and is placed in the building via an enclosed conveyor system. The material is later re-handled into rail cars or transport trucks for shipment to cement companies throughout the region. Part of the land adjacent to cement company structures is a raised area that is 6'-10' higher than surrounding land, indicating that the site has been filled at some point in the past. Next to the berm area is an apparent wetlands area containing a dense stand of phragmites.

According to numerous test results, the Paradise Creek bottom is contaminated with heavy metals and pesticides. The U. S. Army Corps of Engineers is evaluating the merits of dredging some sections of Paradise Creek to remove the contaminated sediment as part of its ongoing program to help restore the Elizabeth River. At this time it is not known if the Navy will be required to dredge some sections of the creek or its adjacent wetlands as part of remediation requirements associated with its landfills near the northern shore.

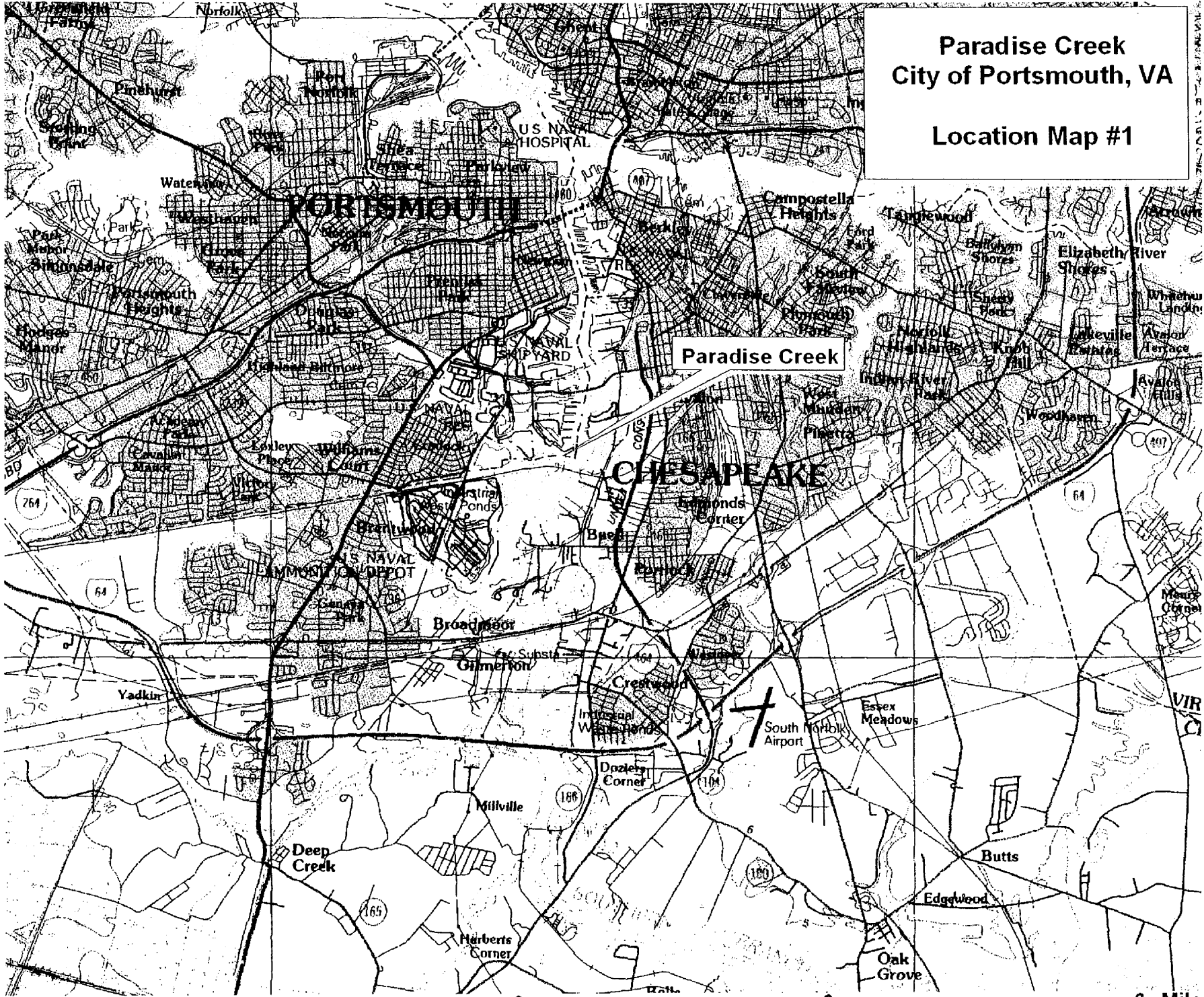
Paradise Creek, in spite of the issues related to pollution and bottom contamination, contains quite a diverse population of wildlife. The abundance of wildlife in this heavily developed urban area is probably due, at least in part, to the large tracts of land east of Victory Boulevard that have not been developed. Also, the Navy's remediation projects have provided undeveloped open space with vegetated surfaces, tree cover, and woody vegetation along the fringes of the closed landfills and adjacent undisturbed wetland areas. These areas provide an outstanding screening buffer between the environs of the Paradise Creek corridor and the heavy industrial uses occurring only a short distance from the creek. Collectively, these areas offer a wide variety of habitat types in close proximity to the Elizabeth River.

The Department of Game and Inland Fisheries (DGIF) biologists as well as numerous other researchers have studied the Paradise Creek corridor for several years, and they report

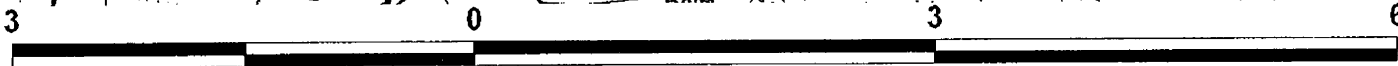
that the population of wildlife found in the corridor is diverse and of fairly high quality. However, the area is used primarily as a feeding area and contains no significant rookeries of shore birds. There is also a fairly good population of small mammals found in the “mudflats” and other near-by parcels. According to the Department of Game and Inland Fisheries, clean up of the Paradise Creek corridor will be of tremendous benefit to wildlife species using the corridor and could provide many exciting wildlife-viewing opportunities.

Paradise Creek
City of Portsmouth, VA

Location Map #1

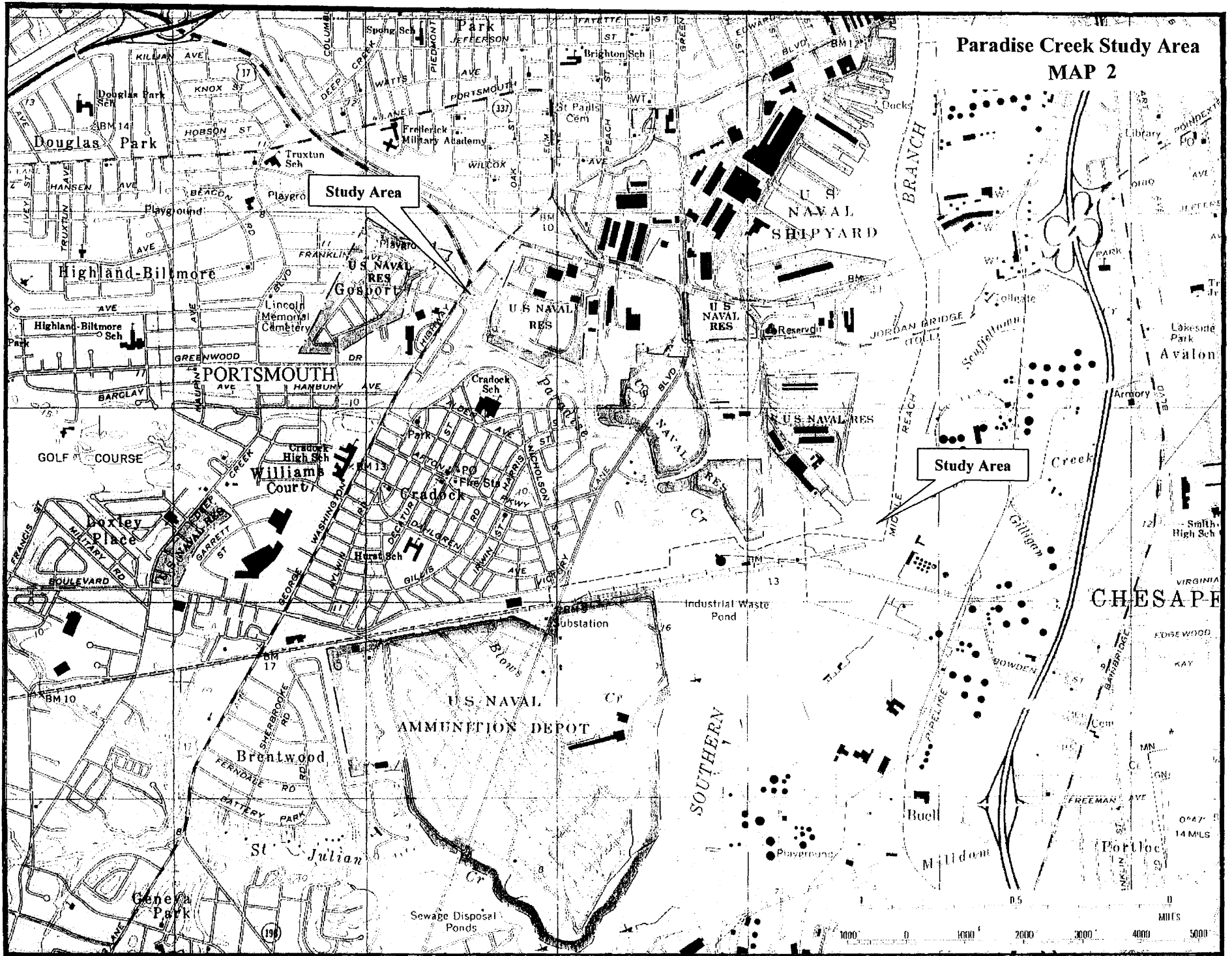


6 Miles



5

Paradise Creek Study Area MAP 2



Study Area

Study Area

0 1000 2000 3000 4000 5000
0 1 2 3 4 5
MILES

CITY OF PORTSMOUTH

Existing Land Use in the Corridor

The existing land use pattern along the Paradise Creek corridor between George Washington Highway (Route 17) and the Elizabeth River is a mixture of residential and industrial uses. (See Map 3 on page 9)

The land use along the entire length of the northern shore of Paradise Creek is industrial and is zoned M-2. Historically an industrial area, most of the land along the northern shore up to Victory Boulevard is comprised of federally-owned property, specifically property owned by the U. S. Navy. Beyond Victory Boulevard is the Southeastern Public Service Authority (SPSA) Refuse Derived Fuel Plant, one of the largest industrial operations on Paradise Creek, and the Peck Iron and Metal site (Peck Land Company), which is the largest private landowner on the creek.

The land use along the southern shore of Paradise Creek is a mix of industrial and residential. From the mouth of the creek, the site of Giant Cement Virginia, to Victory Boulevard the land use is industrial and is zoned M-2. Beyond Victory Boulevard, the land use along the southern shore of Paradise Creek is residential. The primary residential area is the Cradock neighborhood, which is listed on both the State Landmarks Register and the National Register of Historic Places.

References to Existing Plans

The following are excerpts from planning documents referencing Paradise Creek in terms of long-range goals, objectives, policies and proposals for physical development.

- City of Portsmouth Comprehensive Plan (1989)

The City's Comprehensive Plan (1989) proposed a community park for the southern portion of the city that would serve the Highland Biltmore neighborhoods, Cradock, Brighton-Prentis Park, and the Downtown area. The Comprehensive Plan cited potential locations as being the Bide-A-Wee golf course and/or a site on Paradise Creek. Since this plan was adopted, no community park has yet been established to serve these neighborhoods (pg. 5.5).

The Comprehensive Plan (1989) also referenced the fact that there was very little shoreline access within the City available to the public. The Plan noted that additional boat ramps could be located along Paradise Creek (pg. 5.7).

In addition, to improve overall public access to the shoreline, the Comprehensive Plan referenced Paradise Creek as a potential area to be developed for a public access park (pg. 5.7).

City of Portsmouth Open Space - 2000 Plan (1984)

The long-range recreation, parks, and open space plan for Portsmouth “Open Space – 2000 Plan” (1984), a collaborative effort among the Department of Parks and Recreation, the Office of City Planning, and the City Manager’s Office, noted the following regarding Paradise Creek:

Needs Assessment (Section V): Regarding the major needs gaps identified in the southern district, among the the list of ten recommendations is boating access on Paradise Creek (pg. 80).

Priorities for Implementation and Projected Costs for Selected Plan (Section VI): In terms of Class IV; Future Needs (6-15 years), there is a reference for the provision of an additional boat ramp at Paradise Creek (pg. 101).

Proposed Future Uses of Adjacent Lands

The City of Portsmouth is beginning the process of preparing a new Comprehensive Plan, *Portsmouth 2025*, a long-range policy document that will set the framework and guiding principles for the future. The planning effort is being led by the Planning Commission with the assistance of the Citizen 2025 Committee, the staff of the Department of Planning, and the consulting firm of Wallace Roberts & Todd, LLC.

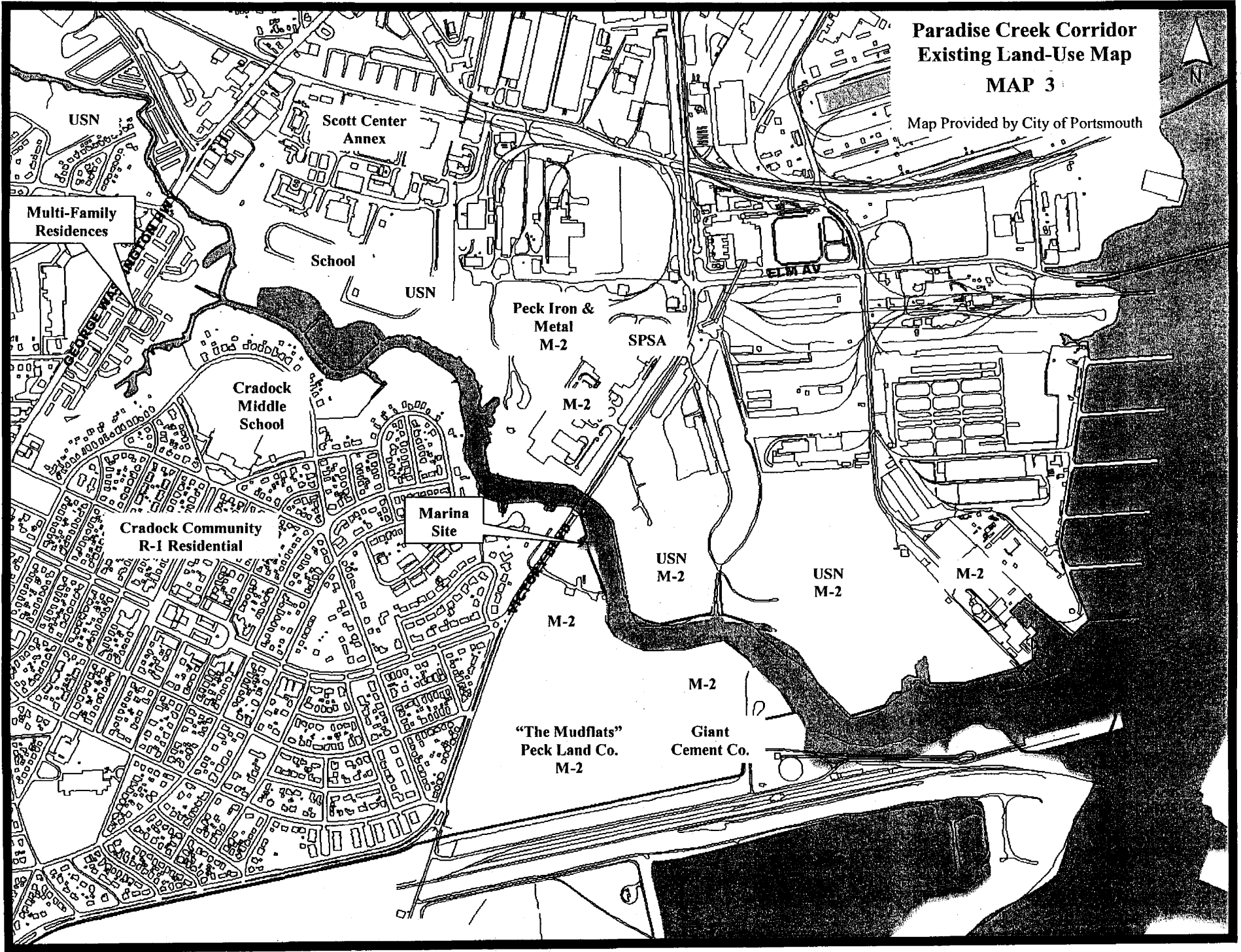
Once completed, *Portsmouth 2025* will present a vision of what the community could be like in 20 years and will identify the strategies required to move towards that vision. As a part of this process, the Comprehensive Planning Team will be revisiting land use in the Paradise Creek area. The recommendations referenced in the Comprehensive Plan of 1989 and the Open Space Plan of 1984 regarding Paradise Creek will be reexamined and implementation measures prioritized.

Additional planning studies and documents regarding proposed future uses of adjacent lands along Paradise Creek would also be referenced during the comprehensive planning process. Included would be the Department of Conservation and Recreation's (DCR) study of Paradise Creek as an open space corridor consisting of a public park, recreational lands and a wildlife habitat (per Senate Joint Resolution 85) and the Watershed Management Plan for Paradise Creek. The latter is a five-year restoration and conservation plan being developed jointly by the Paradise Creek Restoration Plan Steering Committee under the auspices of the Elizabeth River Project (ERP).

The City is working with the Elizabeth River Project staff and other key stakeholders on the Watershed Management Plan.

**Paradise Creek Corridor
Existing Land-Use Map
MAP 3**

Map Provided by City of Portsmouth



NAVY USES AND CONSTRAINTS

The shipyard has occupied some of the lands along the Elizabeth River since before the Revolutionary War. The Norfolk Naval Shipyard is the oldest continuously operating shipyard in the country and is listed on the National Register of Historic Places. Since before World War II, the Navy used remote sections of the shipyard for on-site disposal of a myriad of building debris, waste chemicals, lead-based paints, solvents, blast grit and other materials associated with repairing and rebuilding the naval fleet. Many of these materials were disposed of between World War II and the early 1970s before there were restrictions on handling and disposing of hazardous materials. As the nation's environmental awareness increased in recent years, concerns were raised about the possible environmental effects of prior work methods and practices at numerous military installations. In 1975, the Department of Defense initiated the Installation Restoration Program to identify contamination and to remediate problems associated with past environmental releases of hazardous substance or petroleum products. Currently, the shipyard complies with the National Environmental Policy Act, subsequent EPA regulations, and State regulations, and employs the best available technology for handling pollutants generated at the shipyard. However, the older pre-existing sites are being evaluated under the Installation Restoration Program.

In 1999 the U. S. Environmental Protection Agency added the Shipyard to the National Priorities List (NPL) or "Superfund" list of contaminated properties. EPA's primary concern was potential impacts to Paradise Creek and the Elizabeth River due to the landfill sites. Under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Navy developed a plan for remediating a total of seven sites at three different locations along Paradise Creek. The combined size of these sites is approximately 75 acres. The Environmental Protection Agency and the Virginia Department of Environmental Quality are evaluating the Navy's plans to investigate the sites and develop final remedial actions and goals.

The sites located near the mouth of Paradise Creek are addressed as one operable unit (OU) identified as the Paradise Creek Disposal Area, NNSY OU #2. NNSY Sites 3 through 7 are being investigated and evaluated in OU #2; their location and proximity to Paradise Creek are illustrated on Map 4, Page 13. The sites within the Paradise Creek Disposal Area are described as follows:

Site 3, Paradise Creek Landfill, is a sanitary landfill that was used as the shipyard landfill from 1945 through 1983. The different types of waste at the site include: salvage waste, abrasive blast grit, boiler fly and bottom ash, residential trash, and industrial wastewater treatment plant sludge.

Site 4, Chemical Holding Pits, is an area of five chemical waste pits that received waste from 1963 to 1977.

Site 5, Oil Reclamation Area, is an Underground Storage Tank (UST) site where the soils are contaminated with petroleum products associated with the tank, which was removed in 1982.

Site 6, East Disposal Area, is an area that was used for disposal of solvents when the Site 4 pits were full. The area was used from the mid-1960s to 1977.

Site 7, Bermed Disposal Area, is an area used from the late 1950s through the 1970s. The type of waste and quantity disposed of here is unknown.

These five sites comprising NNSY OU #2, Sites 3 through 7, total 70 acres. They are being investigated as a single operable unit under CERCLA to determine the further remedial actions required to address potential risk to human health and the environment resulting from the constituents disposed of at these sites. Site 3 – Paradise Creek Landfill, is a permitted sanitary landfill that was closed in accordance with state regulations; post closure requirements of the landfill are also maintained in compliance with the applicable state regulations. The site currently has a soil cap to minimize exposure of the waste to people and the environment. Stormwaters are channeled off the site via a system of berms and drainage ditches to prevent recharging of the groundwater through the waste in the landfill. The cap is planted with grasses to protect the cap from erosion. The Navy has a detailed prescribed maintenance program with scheduled mowing of the caps to prevent woody vegetation, which might penetrate the cap, from becoming established.

The site is being investigated under CERCLA to determine what actions need to be taken to address NNSY OU #2. Although the investigations are not yet complete, the conceptual proposed action for this OU is an engineered soil cover with stormwater controls over the entire area to minimize the potential for erosion. To complete this action the Navy intends to acquire portions of adjoining properties to allow installation of the final cover. The current steep slopes of the landfill will be stabilized by removing existing vegetation, adding additional soil to provide 3:1 slopes, and re-establishing non-woody type vegetation to provide long-term stability. The proposed cover will consist of a leveling layer, a vegetative support layer, topsoil, and vegetation such as grasses and native wildflowers. If required, the Navy will conduct removal actions in the wetlands. Access to the property will be controlled with fences and signs to ensure there is no exposure to the community and that the integrity of the cap is maintained. The Navy estimates \$80,000 per year for maintenance of the area once the action is complete. The property will require annual maintenance and periodic re-evaluation of the final remedial action because the waste will most likely be left in place at the completion of the remedial action. As a result of having the waste left in place there are liability issues, which will impact the ability of the Navy to transfer ownership or sell the property.

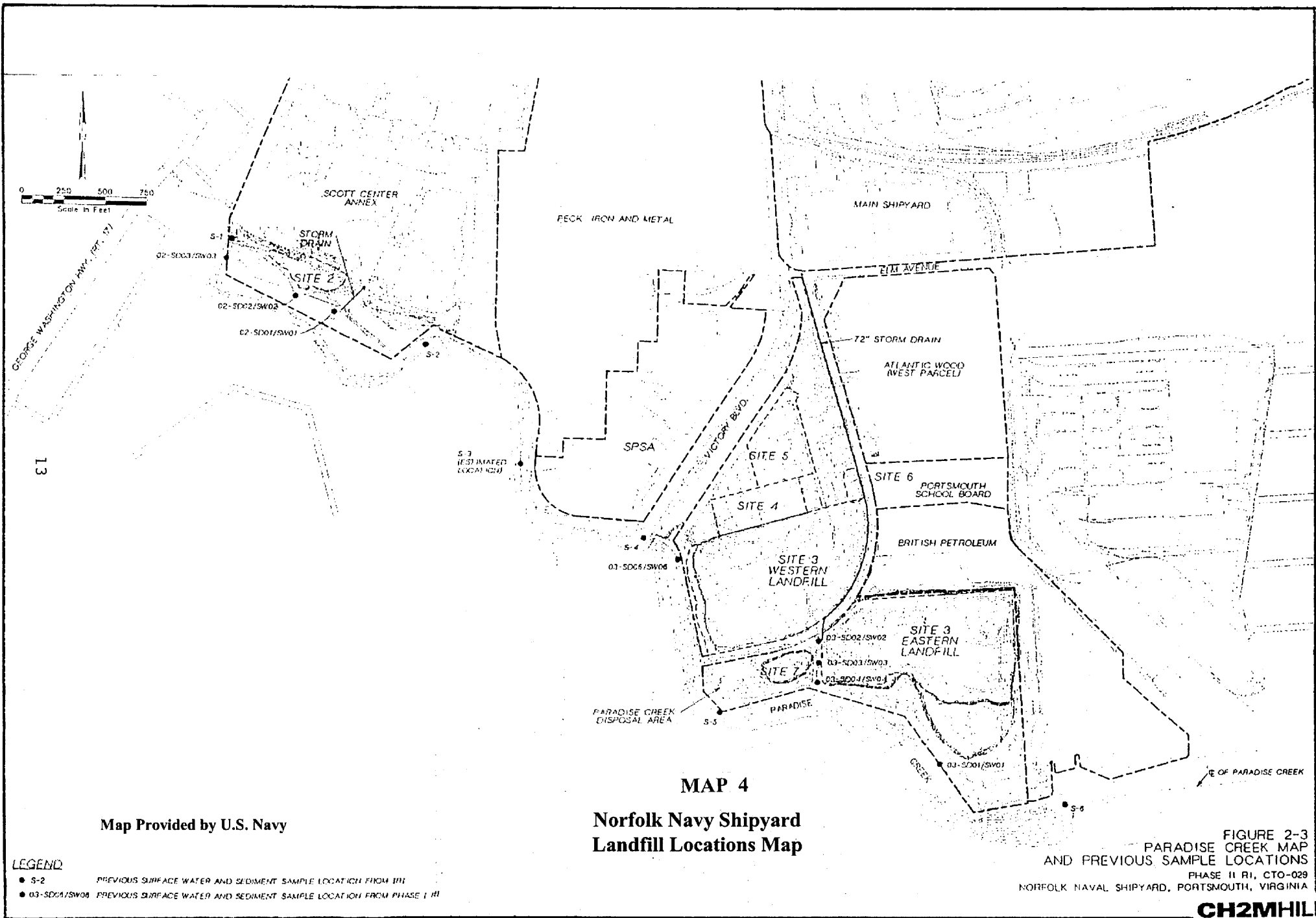
The second Navy area along Paradise Creek is the Scott Center Landfill, Site 2, a small (less than one acre) former disposal area just east of George Washington Highway. In the 1950s, the site was occasionally used for disposal of waste generated from dry-dock operations. Waste at the site includes: abrasive blast grit, paint residues, sanitary wastes, solvents, and other industrial waste products. The base of the landfill is comprised of dredge materials from nearby waterways.

Under the CERCLA process, the Navy will remove materials from the wetland as required, stabilize the slopes, add soil to create a 3:1 side slope, and re-vegetate the slopes to provide proper stabilization. A final cover system will consist of a leveling layer, filter fabric, and aggregate base. The area will be paved with asphaltic concrete pavement and will ultimately be used for a parking lot. A natural riparian buffer, including some wetlands, will remain in those segments of the property that have not been impacted by the waste material.

The third Navy area along Paradise Creek is the former New Gosport Landfill located near the headwaters of the creek. From 1969-1970 the Navy disposed of blast grit materials along Paradise Creek and in a low-lying area adjacent to the creek; the entire area impacted by this landfill was approximately five acres. The Navy completed a Removal Action under CERCLA in 2001 to remove all the blast grit material. In lieu of backfilling the excavated areas, the Navy created a new 1.9-acre tidal wetlands at the location of the former landfill.

Once all the CERCLA requirements have been completed at these seven Navy sites, the properties will be maintained by the Commander, Navy Region Mid-Atlantic (CNRMA) for long-term maintenance and control. Due to the toxic nature of the materials encapsulated in two of the three areas, they are not suited for recreational use. The Navy has no plans to sell or lease the property. Due to liability issues, environmental constraints, and maintenance costs, extensive deed restrictions are expected to be attached to the properties, and EPA and DEQ will have to approve any proposed future uses. At this time, the Navy has plans to ensure the proper actions under CERCLA are taken, but there are no plans to change the use or ownership of the property. However, at a future date, consideration may be given to utilizing it for the main shipyard's remote parking, or it may be used in some way by the Navy to support its mission.

For the foreseeable future, the Navy will leave the landfill sites along Paradise Creek as a riparian buffer of up to about 200 feet from Paradise Creek. Unless additional remediation is required, the existing wetland systems will remain intact, and the capped areas will be managed as green open space, creating a vegetative buffer along the north shore of the creek. "No Mow" signs will be erected to protect established riparian areas and ensure continued compliance with the Chesapeake Bay Restoration Act of 2000, the Federal Agencies' Chesapeake Ecosystem Unified Plan (FACEUP), and the Chesapeake 2000 agreement.



0 250 500 750
Scale in Feet

GEORGE WASHINGTON HWY. (RT. 171)

13

Map Provided by U.S. Navy

LEGEND
 ● S-2 PREVIOUS SURFACE WATER AND SEDIMENT SAMPLE LOCATION FROM III
 ● 03-SD01/SW01 PREVIOUS SURFACE WATER AND SEDIMENT SAMPLE LOCATION FROM PHASE I III

MAP 4
Norfolk Navy Shipyard
Landfill Locations Map

FIGURE 2-3
 PARADISE CREEK MAP
 AND PREVIOUS SAMPLE LOCATIONS
 PHASE II RI, CTO-029
 NORFOLK NAVAL SHIPYARD, PORTSMOUTH, VIRGINIA

CH2MHILL

COMMUNITY INTEREST AND SUPPORT

The Elizabeth River Project is a non-profit, grass roots organization set up to coordinate water quality improvements on the Elizabeth River watershed. Their mission is to restore the Elizabeth River to the highest practical level of environmental quality through government, business, and community partnerships. One of their key goals is to restore Paradise Creek by 2007. They plan to use the restoration effort as a model for their long-term goal of restoring the Elizabeth River. The Paradise Creek restoration will be an outstanding demonstration of how to restore vital habitat, clean out sediment, and reduce urban runoff.

The Elizabeth River Project is the key group that has developed community support and coordination among local, state, and federal agencies and numerous local community organizations. In September of 2002, the EPA provided a \$100,000 grant for the Elizabeth River Project to implement the Corridor Management Plan and assist with Paradise Creek clean-up projects.

The Elizabeth River Project staff worked with the U.S. Navy to convert a portion of the restored New Gosport site to a wetland and helped to get 2,000 native trees and other wetland seedlings planted in the new wetland, saving the Navy thousands of dollars. They have coordinated with the SPSA Refuse Derived Fuel Plant to develop buffer plantings and are working to reduce site run-off into Paradise Creek wetlands.

The Cradock Community is lending its support in a number of ways. Many of the residents are participating in clean-up days and are considering possible restoration efforts on the wetlands that adjoin the neighborhood. The Cradock Business Owners Association, Cradock's Helping Hands, Cradock Civic League, and other community groups are playing active roles in clean-up days, providing information brochures, etc., to help keep the community informed. The Restoration Advisory Board--Norfolk Navy Shipyard is a citizen group that meets regularly with the Navy to discuss community-related issues. Their close coordination with the Navy has been beneficial to the Paradise Creek restoration effort.

The City of Portsmouth is partnering with the Navy, industrial property owners, and community organizations in efforts to clean up sediment, develop storm water improvements, and restore wetlands along the creek. The City Comprehensive Plan has identified the need for a local park in the Cradock area and a possible boat ramp on Paradise Creek. The City schools from the area are participating in a number of ways to clean up the creek and learn about its wildlife.

Over all, there appears to be strong community support for any and all efforts that are linked to cleaning up the Paradise Creek corridor and improving the water quality of this vital community resource. The Elizabeth River Project has established a stakeholder group of diverse interests and expertise to provide input and help to develop an aggressive five-year plan for cleaning up Paradise Creek.

OTHER INTERESTS

Over the past four years, the Department of Conservation and Recreation, Division of Soil and Water Conservation (DSWC), has been working closely with the Elizabeth River Project to foster greater participation and technical support related to the reduction of non-point source pollution in the Elizabeth River. DSWC is actively providing planning assistance for the Paradise Creek Watershed Management Plan development and has staff dedicated to this process. They also provide technical assistance in the areas of storm water management and stream restoration engineering for associated projects.

The U. S Army Corps of Engineers, Norfolk District, is considering the merits of dredging a portion of Paradise Creek as part of a four-city program to clean up sediment in the Elizabeth River corridor. The Environmental Protection Agency (EPA) provides advisory help in a number of areas, especially related to runoff.

The Virginia Department of Environmental Quality (DEQ) provides assistance in monitoring the creek for water quality issues and keeping track of the health of the stream. The Virginia Institute of Marine Science (VIMS) is providing information about toxics and their impact on wetlands and other related issues.

The Elizabeth River Project has received a Community Legacy Grant to make the Paradise Creek project a model clean-up project for the Bay. Grant funds have also been awarded through the Chesapeake Bay Small Watershed Grants program, Chesapeake Bay Program, and the Fish and Wildlife Foundation. Matching grant funds were provided by several local private businesses and state License Plate monies.

CONCLUSIONS AND RECOMMENDATIONS

Portsmouth's Comprehensive Plan of 1989 showed a need for a park to serve the central section of the city that includes the Cradock Community and suggested that a site on Paradise Creek would be an appropriate location. Also, the Plan cited a lack of public access to the shoreline of the City and stated that an additional boat ramp could be located on Paradise Creek. The 1989 Comprehensive Plan also notes that the Paradise Creek Corridor has great potential to support a public access park. Since the 1989 Plan was adopted, the City has been unable to acquire a suitable site for a boat ramp or a community park in the vicinity of Paradise Creek. The City is in the early stages of updating its Comprehensive Plan, and it is anticipated that the numerous recommendations related to the need for a park in the Paradise Creek corridor will be closely examined in light of the demonstrated needs and strong community support.

The 2002 *Virginia Outdoors Plan* has identified an unmet need for outdoor recreational facilities in the Hampton Roads Region that includes nature study areas, picnicking opportunities, hiking trails, bank or pier fishing sites, and boat access points. These needs have also been identified in the City's Comprehensive plan for more than a decade.

The Paradise Creek Corridor has the potential to help the City of Portsmouth satisfy some of its unmet citizen needs. If the City is able to acquire some of the undeveloped land along the south side of the Creek, there could be a unique opportunity to create a community park east of Victory Boulevard that would serve communities of the central section of the City of Portsmouth. Apparently Peck Land company has indicated a willingness to make 20 acres of land available for public purposes. The old marina site at Victory Boulevard is on the market and could easily be developed as a boat ramp with a large parking area, rest rooms, and related support facilities.

The Paradise Creek corridor has all the elements of a greenway, and perhaps that is what the City, the Elizabeth River Project, the Navy, and all the other partners are working to achieve although it has not been defined in just that way. It seems as if one could say that the establishment of a "Paradise Creek Greenway" would encompass many of the stakeholders' objectives. The 2002 *Virginia Outdoors Plan* describes a greenway as a linear corridor established to protect, preserve, and maintain existing natural resources. Greenways usually link population centers with businesses and recreational opportunities. Greenways can provide an extensive internal trail system, parkland, wildlife protection/viewing opportunities, and undeveloped open space, as well as non-motorized transportation opportunities using utility rights-of-way, abandoned railroads, and watercourses. Within a defined greenway, land may be dedicated to other purposes and not in the public estate or even available for public use. Certainly the Paradise Creek corridor fits these criteria as well.

Senate Joint Resolution 85 of the 2002 General Assembly requested that the Department of Conservation and Recreation study existing and proposed land use and recommend ways that the Commonwealth can assist in the development of a public park, recreation area, and wildlife preserve. The creation of a Paradise Creek Greenway could

enable the City, with the assistance of the many partners described in this report, to accomplish all these objectives along Paradise Creek. The Senate Resolution also asked that the study identify ways in which the Commonwealth could participate in the development of this park or wildlife preserve. There are a number of programs at the state level that the City may be able to utilize in its efforts to establish a park or wildlife area in this section of the City. These programs are described below.

- The Virginia Marine Resources Commission (VMRC) manages the Saltwater Fishing License fund. They usually partner with the Department of Game and Inland Fisheries (DGIF), which has federal dollars available, to make matching grant funds to localities for the development of boat ramps and fishing piers. This is a competitive grant process, and the City would need to provide a portion of the funds for the project.
- The Department of Conservation and Recreation (DCR) administers the federal Land and Water Conservation Fund (LWCF). The City could apply for LWCF dollars to acquire and /or develop a site on Paradise Creek for a local park. This is a 50%/50% reimbursable grant program, and the City would have to compete with other localities for available funds.
- Virginia Recreational Trails Grants, also funded with federal dollars and also administered by DCR, could be used to construct trail facilities, boardwalks, and overlooks. This is also a competitive, reimbursable, grant program and is available to non-profit organizations as well as localities; a 20% match is required.
- There are a number of easement holding organizations in the Tidewater area of Virginia that could assist with the development of an easement program. The City and/or the Elizabeth River Project, in their ongoing efforts to protect open spaces, could seek easements from the landowners along the creek.
- The City's Transportation Plan calls for the eventual replacement of the George Washington Highway and Victory Boulevard Bridges over Paradise Creek. The City should ensure that the bridges are designed and constructed in such a way as to enable the development of stream-side walkways and trails under the replacement structures.
- The City Bikeway Plan should be examined to ensure that bike routes into the Paradise Creek corridor are considered. The Virginia Department of Transportation's (VDOT) road construction procedures permit the construction of bike lanes in conjunction with road construction projects if the routes are on the City's approved Bikeway plan.
- The Hampton Roads Planning District staff has planning expertise available to assist local governments. They may be in a position to assist in the development of the Paradise Creek Restoration Plan and may be able to develop conceptual plans for what a future "Paradise Creek Greenway" could look like.
- The State budget shortfalls for Fiscal Years 2003 and 2004 have reduced available state funds for water quality improvement, shoreline stabilization, and erosion and sediment control. As the budget situation improves, the Governor and General Assembly may be in a position to restore funds for these types of projects, which would assist in improving water quality and establishing additional plantings for stream corridor buffers and wildlife habitat.
- The Virginia Departments of Conservation and Recreation, Environmental Quality, Marine Resources Commission, and Game and Inland Fisheries, as well as other State

agencies, are already actively partnering with the City, the Elizabeth River Project, and the Navy to help implement the five-year plan to restore Paradise Creek by 2007. These agencies are providing technical assistance and monitoring expertise. It is hopeful that these efforts will be able to continue despite budget cutbacks in almost all the program areas.

- In addition to the Virginia programs, there may be funding sources available through the Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA), the National Park Service (NPS) Chesapeake Bay Gateways Program, and other federal programs that could provide assistance in helping the City and its partners as they work to restore Paradise Creek and create a public park and wildlife area.

The City of Portsmouth, the Elizabeth River Project, the U. S. Navy and many other partners already have a collective goal of restoring Paradise Creek and using the lessons learned in this sub-watershed effort to attack a bigger goal of restoring the Elizabeth River. The Paradise Creek Watershed Management Plan could easily achieve the added benefit of creating the "Paradise Creek Greenway" with a trails network along the southern shore, boardwalks, wildlife viewing areas, a boat ramp, and a community park east of Victory Boulevard. There could also be wildlife habitat and forested buffers established on part of the Navy's restoration areas, as well as on the restored industrial properties. The environmental education program of the City schools could be strengthened through the collective efforts of all the partnering organizations to create an outdoor classroom along the creek corridor.

While some state assistance is available, the success of this project will be attained largely through the cooperation of the City of Portsmouth, the Elizabeth River Project, the U. S. Navy, and the dedicated group of local participants. It should also be noted that a key element of the process will be the acquisition by the City of Portsmouth of a piece of land along the south shore of the creek for water access and a public park site.

2002 SESSION

ENROLLED

SENATE JOINT RESOLUTION NO. 85

Requesting the Department of Conservation and Recreation to study future land use along Paradise Creek and to recommend ways the Commonwealth might participate in the development of a public park, a recreational area, and a wildlife preserve.

Agreed to by the Senate, February 4, 2002

Agreed to by the House of Delegates, March 5, 2002

WHEREAS, the Environmental Protection Agency (EPA) has placed lands and tidal wetlands along Paradise Creek within the Norfolk Naval Shipyard, located in the City of Portsmouth between the George Washington Highway (U.S. Route 17) and the southern branch of the Elizabeth River, on the National Priority List, setting in motion Superfund remediation efforts by the United States Navy and research by its Restoration Advisory Board to suggest what land uses might be acceptable once EPA standards have been met; and

WHEREAS, the Norfolk Naval Shipyard Restoration Advisory Board and the City of Portsmouth are in agreement that an open space corridor, consisting of park and recreational lands and a wildlife habitat, is an acceptable future use for this stretch along Paradise Creek; and

WHEREAS, Paradise Creek is situated in the Colonial-era core of the Norfolk Metropolitan Area where urban density is high and public open space is limited; and

WHEREAS, the preservation of open space will result in the addition of public park and recreational lands, the enhancement of wildlife habitat, and restoration of the Elizabeth River, into which Paradise Creek flows; and

WHEREAS, the Norfolk Naval Shipyard and the World War I community of Cradock, which borders Paradise Creek, are listed on our State and National Registers of Historic Places; and

WHEREAS, as Virginia's fourth most fiscally stressed municipality, it would be difficult for Portsmouth to fund development of a waterfront park, recognizing that the metropolitan area has no regional park authority; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Department of Conservation and Recreation be requested to study future land use along Paradise Creek and to recommend ways the Commonwealth might participate in the development of a public park, a recreational area, and a wildlife preserve. In conducting its study, the Department of Conservation and Recreation shall communicate with appropriate federal agencies, the United States Navy, the Elizabeth River Project, the Hampton Roads Planning District Commission, and the City of Portsmouth.

All agencies of the Commonwealth shall provide assistance to the Department of Conservation and Recreation for this study, upon request.

The Department of Conservation and Recreation shall complete its work by November 30, 2002, and shall submit its findings and recommendations to the Governor and the 2003 Session of the General Assembly.

Paradise Creek Study Area
APPENDIX 2

Photo provided by City of Portsmouth



AGENDA

SENATE JOINT RESOLUTION 85

PARADISE CREEK PARK AND OPEN SPACE STUDY

Cradock Community Center
4300 George Washington Highway
Portsmouth, Virginia

Tuesday, August 6, 2002

10:00 am

WELCOME AND INTRODUCTIONS	JOHN DAVY
PURPOSE OF THE STUDY	JOHN DAVY
INTRODUCTION OF PARTICIPANTS	ALL
PARADISE CREEK CLEAN UP EFFORTS	LYLE JACKSON
EXISTING AND FUTURE LAND USE	CITY REPRESENTATIVES.
• CITY COMPREHENSIVE PLAN	
• PARKS AND RECREATION PLANS	
NAVY PROPERTY – IDENTIFY SITES AND DISCUSS FUTURE PLANS	NAVY REPRESENTATIVES
PRIVATE PROPERTY – ISSUES, CONSTRAINTS SITE LIMITATIONS	CITY REPRESENTATIVES
IDENTIFY PROGRAMS THAT COULD ASSIST IN PROTECTING THE CORRIDOR	ALL
CONCLUSIONS	JOHN DAVY
SEEK TECHNICAL INFORMATION AND ASSISTANCE	
WRAP UP – WHAT’S NEXT	JOHN DAVY
ADJOURN	

LIST OF INVITEES

Ms. Marjorie Mayfield Jackson, Executive Director
Elizabeth River Project
801 Boush Street, Suite 204
Norfolk, Virginia 23510

Ms. Janette Whiley
Community Co-Chair Norfolk
Naval Shipyard Restoration Advisory Committee
53 Afton Parkway
Portsmouth, Virginia 23702

Mr. Tim Reisch, Remediation Project Engineer
U. S. Navy - LANTDIV
Code 128, Naval Facilities Engineering Branch
1510 Gilbert Street
Norfolk, Virginia 23511-2699

Mr. Robert Baldwin
Director of Planning and Community Development
City of Portsmouth
Post Office Box 820
Portsmouth, Virginia 23705

Mr. John Carlock, Director of Planning
Hampton Roads Planning District Commission
The Regional Building
723 Woodlake Drive
Chesapeake, Virginia 23320

Mr. Milton Johnston, Waste Manager
Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, Virginia 23462

Ms. Martha Little, Chief of Environmental Planning
Chesapeake Bay Local Assistance Department
The Madison Building
101 North 14th Street, 17th Floor
Richmond, Virginia 23219

Mr. Tony R. Watkinson
Acting Chief, Habitat Management
Virginia Marine Resources Commission
2600 Washington Avenue
Newport News, Virginia 23607

Ms. Valerie Walker, Installation Restoration Program
Manager
Regional Environmental Group
Naval Weapons Station Yorktown
Yorktown, Virginia 23691-0160

Mr. Lyle Jackson
Paradise Creek Project Manager
Elizabeth River Project
801 Boush Street
Norfolk, Virginia 23510

Mr. Mike Host, Director, Environmental Division
U. S. Navy - Norfolk Naval Shipyard
Norfolk Naval Shipyard Building M-22, 3rd Floor
Portsmouth, Virginia 23709-5000

Mr. Daniel M. Struck
Portsmouth City Manager
Post Office Box 820
Portsmouth, Virginia 23705

Dr. Lydia P. Patton, Director
Portsmouth Parks and Recreation
Post Office Box 820
Portsmouth, Virginia 23705

Mr. Devlin Harris, Remedial Project Manager
Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23240-0009

Mr. Ernie Brown, Director
Southern Rivers Watershed
Department of Conservation and Recreation
203 Governor Street, Suite 206
Richmond, Virginia 23219

Mr. Ray T. Fernald
Non Game and Environmental Program Manager
Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, Virginia 23230

Ms. Janice Neilsen, Installation Restoration Program
Manager
U. S. Navy -- Norfolk Naval Shipyard
Norfolk Naval Shipyard, Building M-22, 3rd Floor
Portsmouth, Virginia 23709-5000

Ms. Cheryl Barnett, Head, Regional Environ Group
Department of the Navy Commanding Officer
Navy Public Works Center Code 90
9742 Maryland Avenue
Norfolk, Virginia 23511-3095

Meeting Summary

Senate Joint Resolution 85
Paradise Creek Park and Open Space Study

Tuesday, August 6, 2002

Cradock Community Center
4300 George Washington Highway
Portsmouth, Virginia

Mr. John Davy, Director of the Planning and Recreation Resources Division of the Virginia Department of Conservation and Recreation, opened the August 6, 2002, meeting at approximately 10:10 am and thanked the more than 20 attendees for their participation. He described the requirements of Senate Joint Resolution 85 and the process to be used to obtain information from the participants at the meeting. The final report is to be completed by November 30, 2002, and presented to the Governor and 2003 General Assembly.

Mr. Lyle Jackson of the Elizabeth River Project (ERP) described their organization and its role as a grass-roots private non-profit organization dedicated to helping clean up the Elizabeth River and its tributaries. The ERP selected Paradise Creek and decided to develop a five-year year corridor management plan with a goal to make the Paradise Creek Corridor Management Plan a model that could be exported to other segments of the Elizabeth River system or other streams outside this watershed. The ERP has worked to create partnerships among the different stakeholders along Paradise Creek. He described the Navy's efforts to clean up and restore wetlands at the Gosport Housing site. The ERP has received a \$100,000 grant from EPA and \$60,000 from other sources to assist in clean-up projects. The ERP has worked with the industrial property owners to seek to set aside part of the undeveloped land. Giant Cement has apparently agreed to manage about 22 acres for open space and the Peck Land Company has indicated a willingness to set aside about 25 acres of its land known as "the mudflats" for public purposes. They have also indicated they will permit riparian buffer plantings on other sites the company owns.

The abandoned marina site at Victory Boulevard on Paradise Creek, which consists of approximately 4.5 acres, is on the market and would be ideal for a future boating access point. The U.S. Navy's remediation projects will assist in providing additional undeveloped open space and wildlife habitat along the north shore of the creek. The ERP is working with the City of Portsmouth Public Works Department to develop techniques to handle storm water and clean-up the runoff from the streets and parking lots of the community. They are working with EPA, the State, and private industry to develop plans to reclaim a "Brownfields" site, to restore wetlands, and to create new forested buffers along the creek. The ERP has initiated clean-up days to remove trash from the creek and organized volunteer groups to produce newsletters and provide educational material about the efforts to clean up Paradise Creek.

Dr. Lydia Patton, Deputy City Manager, made a presentation on existing land use along the Paradise Creek corridor and described the recommendations in the City's Comprehensive Plan for this section of the City. The 1989 Comprehensive Plan has indicated a need for a community park in this section of the City, and the Paradise Creek corridor has been identified as one of the favored sites. The Plan has also recognized a local need for additional boating access in the Paradise Creek Corridor. As of 2002, the City has not acquired lands that would help to meet these identified needs. The City is in the early stages of updating its existing Comprehensive Plan. The results of the Senate Joint Resolution (SJR) Number 85 study, as well as the strong local support, will be taken into consideration when the consultants formulate recommendations for future park acquisitions and boating access needs. Dr. Patton indicated that the City is supportive of the SJR Number 85 study and is hopeful that it will result in recommending steps actions that can be taken to create additional park and open space for the citizens of Portsmouth. She agreed to provide a more detailed description of Paradise Creek land use along with a map from the City's Comprehensive Plan.

Ms. Jan Neilsen made a detailed Power Point presentation about the 70+/- acres along the north shore of the creek that are owned by the U. S. Navy. The seven sites belonging to the U. S. Navy had been used from the World War Two era until the 1970s when the National Environmental Policy Act mandated that all landfills meet requirements to protect the environment. These sites lay dormant until 1999, when under the provisions of the CERCLA process the Navy was required to develop remediation plans for all Installation Restoration sites. As required by CERCLA, the Navy has developed specific plans to cap each site with an approved cap, provide for long-term monitoring and testing of each site, and ensure that the material within the contained landfills is not disturbed or that contaminants do not migrate into surrounding areas. The areas are enclosed within a high-security chain link fence, and public access to the sites is prohibited without specific authorization of the Norfolk Naval Shipyard. The Navy has an ongoing program to monitor and test the old landfills to ensure that the pollutants remain encapsulated. They are also required to maintain a vegetative cover of grasses that will stabilize the soil and prevent the establishment of trees and woody plant material that might penetrate the caps. It is estimated that the Navy spends about \$62,000 annually maintaining and monitoring the sites, which because of environmental constraints and liability issues, can never be transferred to another entity or sold for other uses without the specific approval of EPA and the State DEQ.

Mr. Don Schwab of the Department of Game and Inland Fisheries (DGIF) indicated that the Paradise Creek corridor has been monitored for several years by their biologists and that the corridor has a rather diverse wildlife population that is in good health. According to their information, the section of Paradise Creek within the study area is not heavily polluted, and the existing undisturbed areas east of Victory Boulevard and the Navy lands on the north shoreline are major contributors to the diverse populations found here. He pointed out that the planned clean-up projects will help improve existing habitat and provide additional wildlife viewing opportunities. DGIF has federal funds available for the development of boat ramps and fishing piers. In the Tidewater region of the state, they usually partner with the Virginia Marine Resources Commission (VMRC) to use state Saltwater Fishing License funds to assist local governments with the development of ramps and piers. The usual match is 25%state, 25% local, and 50% federal funds.

Ms. Taryire West of the Virginia Institute of Marine Science described the Salt Water Fishing License Fund and how it can be used to match local funds and federal dollars provided through DGIF to assist local governments in the tidal localities in the development of fishing piers and boat ramps. VMRC also has water quality monitoring programs that have assisted in identifying toxics found in the creek. She also indicated that the U. S. Fish and Wildlife Service may have funds available to assist with habitat restoration projects.

Mr. Devlin Harris of DEQ described his agency's role in working with the City and the Navy to monitor the pollutants and address environmental concerns related to the landfills and water quality issues. The DEQ field office is investigating a reported tire dump on one of the sites and will work with the owner and the SPSA to recycle the tires. They have no information about previous soil tests on soils east of Victory Boulevard.

Mr. John Carlock of the Hampton Roads Planning District staff described the Planning District's role in assisting with local planning issues, and he told how they have participating in the planning efforts related to Paradise Creek. He pointed out that their regional public access study has identified unmet needs for public access throughout the region and that a boating access site on Paradise Creek would help to satisfy that strong demand.

John Davy of DCR pointed out that the Department of Conservation and Recreation (DCR), Soil and Water Conservation Division, Suffolk Field Office has worked with the City of Portsmouth and the ERP for several years in the development of the Watershed Management Plan for Paradise Creek. There were some state funds available for watershed planning in the past. However, due to budget constraints, most of these funds have been eliminated; however, the Suffolk Field Office continues to provide technical assistance. John also mentioned the federal Land and Water Conservation Fund grant program and the Virginia Recreational Trails Grant Program as possible sources for funds. DCR administers both programs, and the City can submit applications for either or both programs, which are competitive.

After the presentations were completed, there was a period of questions and answers about the various programs and their limitations. This was followed by a brainstorming session, in which the participants identified a number of approaches that the city could take to preserve the Paradise Creek Corridor and help improve the water quality, wildlife habitat, and meet the park and open space needs identified by the community and the City.

The meeting adjourned at 1:00 pm.

