

What does SCA do?

- Individual Interns
 - Over 50 disciplines
 - Specializations include GIS/GPS and Exotic Plant Management.
- Team Based Interns
 - Initiatives include: Fire, Watershed Monitoring, Exotic Plant Management, boundary survey
- High School Crews
 - Trail Work
 - Revegetation and site restoration
 - Riparian zone and stream restoration
 - Wildlife, fisheries habitat improvement



SCA members mapping noxious weeds.



www.theSCA.org

SCA Provides:

- Recruitment and applications of pre-qualified candidates
- Round-trip travel and living allowance
- Liability, accident and health*
- Comprehensive customer service support
- Intern AmeriCorps education awards (as available) at no cost to you



www.theSCA.org

You Provide:

- Challenging internships that meet your needs
- Supervision and training appropriate to the position
- Intern housing/cost of accommodations
- On-the-job transportation
- Intern evaluation at project completion



www.theSCA.org

Charles River Natural Valley
Storage Area: A Case Study
Using SCA Interns for GIS
2003 - 2009



Why use SCA interns?

- Increased workload without any additional staffing
- Efficient use of budget and staffing
- OMBIL data reporting
- Update of master plan
- Optimal use of current technology
- Training next generation of professionals

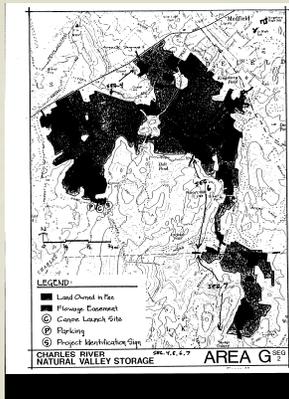
OMBIL Data Reports for Environmental
Stewardship Using GIS

- Master plans
- Land allocation and classification
- Invasive species
- Rare and endangered species
- Cultural resources
- Wetlands, soils, and vegetative cover types

Examples of Master Plan Updates

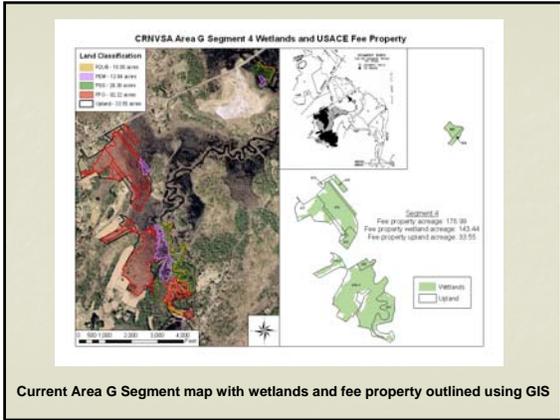
- Current land use classification maps
- Digitizing old exhibits with current information
- Making the plans web-based accessible

Original 1974 Area G segment map



Updated Area G segment map using GIS (circa 1992)





The Charles River

- 80 miles long
- Runs from Hopkinton to the Boston Harbor
- 308 square mile watershed
- Most densely populated watershed in New England
 - 20% of Massachusetts residents live in the Charles River watershed

Dover, MA

Charles River Issues

- Urban and suburban development leads to runoff
- Runoff causes more frequent and severe flooding
- Hurricanes and major rain events result in substantial flooding
- What can we do to alleviate runoff and flooding?
- What has been done?

Dover, MA

History Timeline

- Historical 20th century flood events 1938, 1955, 1968
- The US Army Corps of Engineers generated a \$100 million proposal in 1967
 - Build levees
 - Build a flood-control dam
- 1968 Charles River tidal flow dam was constructed in Boston Harbor
- 1972 Corps studies indicated:
 - upstream wetlands were critical in storing excess floodwaters and therefore reducing flooding on the upper and middle portions of the Charles River
- Based on the study, Congress authorized the 'Charles River Natural Valley Storage Area' in 1974
 - The US Army Corps of Engineers acquired land and easements in the watershed totaling 8,103 acres

Causeway Street, Medfield, MA

Wetlands act as Natural Sponges

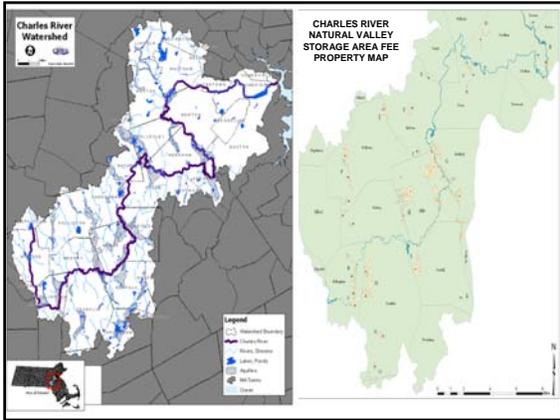
How wetlands work

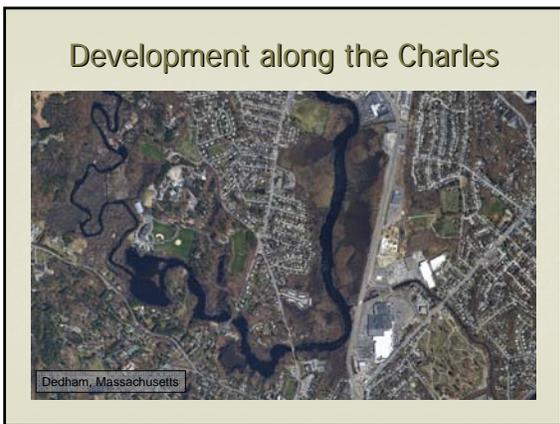
<http://www.solcomhouse.com/wetlands.htm>

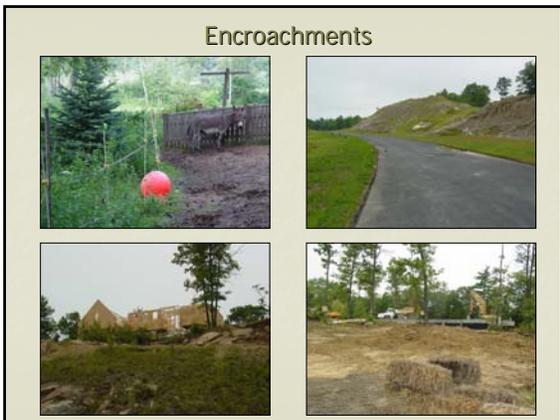
Marshmallows

- Made from the mallow plant (*Althaea officinalis*) that grows in marshes
- First enjoyed by the ancient Egyptians, who combined sap from the mallow plant with nuts and honey







Management Issues for CRNVSA

- Locating property and monuments
- Encroachments and trespassing
- Environmental surveys and inventories
- Real estate requests from towns and the public
- Environmental reviews for proposed work
- Protection and conservation of resources

SCA Intern Duties

- Locate fee and easement boundaries using GPS
- Identify, record, and report encroachments
- Transfer GPS data to GIS database
- Delineate boundaries and prepare work plan for contracted boundary work
- Research and follow up all real estate requests
- Perform GIS/GPS priority assignments as needed

SCA at West Hill Dam Requirements and Logistics

- One year assignments, 40 hour work week
- Two positions, rotated six months apart
- Intranet access with CAC and e-mail account
- Dedicated Corps vehicle and field safety gear
- On-site housing with amenities
- Dedicated workstation for GIS/GPS



Berntsen Monument \$?



Current SCA intern Bryn Loftness using the GPS



Former SCA intern Erica Simek



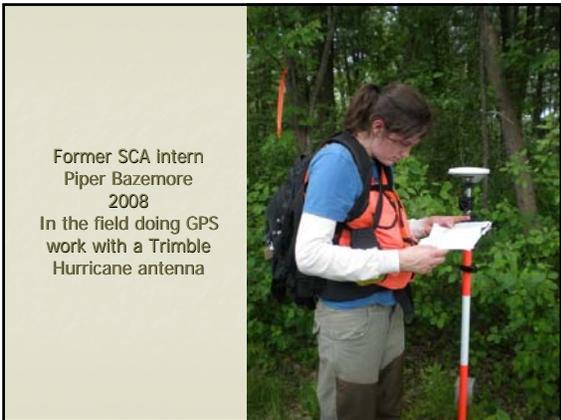
Boundary line and witness post placards



Former SCA interns
Rick Murphy and
Alana Winder
Summer 2005



Former SCA intern
Dylan Smith
2004
Fully loaded with
field gear



Former SCA Intern
Piper Bazemore
2008
In the field doing GPS
work with a Trimble
Hurricane antenna

Current SCA interns Megan McHugh and Bryn Loftness, hard at work at the GIS workstation



Housing for SCA



Project office and SCA dormitory trailer (rented under a GSA schedule contract vs. local rental)

Office kitchen and lounge modified for SCA accommodations

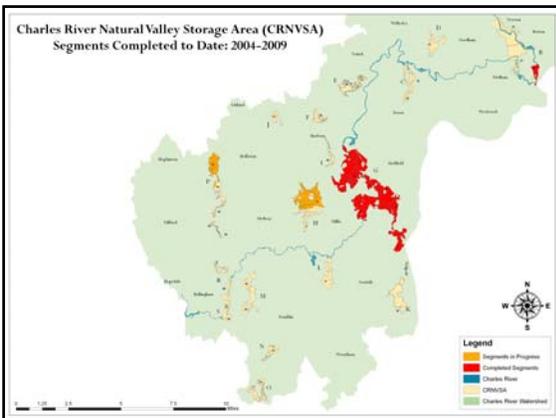


Results and Benefits of Having Long-Term SCA Interns

- Continuous and timely implementation of the project's operation management plan (OMP)
- Continuous presence of Corps contracted personnel on site to interface with the public
- Continuous updating of project's information in real world time and digital access to it
- Ability to respond to critical actions requiring accurate geographic information
- All of the above within budget

COST BENEFIT INFORMATION OF CRNVSA SCA PROGRAM

- Current cost of the two interns for one year is \$44,000 (housing is not factored in)
- Alternate cost of two full time employees or contracted consultant (\$60,000 each) with 50% overhead is \$180,000
- Cost benefit for every dollar spent is 1:4
- Other intangible benefits are 24/7 presences of Corps personnel at the facility. The addition of two skilled personnel/interns to provide focus and emphasis toward successful management of the CRNVS and supportive GIS services for the New England District.



Charles River Trivia

- What 1960's song immortalized the Charles River?

"Dirty Water" by The Standells
is all about the Charles River in Boston



More Charles River Trivia

- Before the Puritans called it the Charles River, what was the Nipmuc name for this meandering river?

Quinobequin
"river that meanders"



Big Tree and Sly Fox sending prayers to the Creator
(Big Tree aka Park Ranger Brad Walley)

The Nipmuc Prayer

Great Spirit, Great Spirit, Almighty Great Spirit.
Hear me. I stand before thee Great Spirit.
Thank you. I thank you for this beautiful day.
I thank you for my health and well being.
I pray each and every day for all my people.
I pray for the future seven generations to be born.
I pray for all the living creatures.
I pray with the rising of the sun each morning.
We thank you for the bountiful harvest.
We give thanks for the beautiful forest.
We give thanks for the beautiful trees and flowers surrounding us.
We give thanks for the lakes and beautiful waterfalls.
We give thanks for all good things.
I have spoken, Big Tree
Amen



Benefits of internship with the USACE?

- Relevant and meaningful experience
- Name recognition of US Army Corps of Engineers on the resume
- Change of pace from ordinary summer job
- Sense of responsibility
- Chance to work outside
- Opportunity to work under a professional who can teach knowledge and skills for the future
- Excellent opportunities for training
- Working with people who share a passion for the environment

"My supervisors have given me every opportunity possible to train in GIS and be the most knowledgeable employee I can be."
Allison Ross, Nashville District Office

"The Army Corps of Engineers allowed me to not only gain experience, but to also add that I worked for a federal agency, which both look good on my resume."
Chris Wood, Ice Harbor Lock and Dam

www.theSCA.org



Getting Started: Two Simple Steps

1. Complete and return SCA online Conservation Intern Request Form
2. Review applications/conduct interviews/notify SCA of your selection

OR

Delegate selection to SCA

www.theSCA.org



FY 2009 Cost Share Estimate

- One **12-week** Intern: \$3,760
- One **6-month** Intern: \$12,055
- One **9-month** Intern: \$16,255
- One **12-month** Intern: \$20,475



www.theSCA.org



Student Conservation Association

For More Information Visit USACE NRM Gateway:
<http://corpslakes.usace.army.mil/partners/sca/sca.html>

Contact :

Ray T. Auger

Partnership Accounts Director
Student Conservation Association

rauger@thesca.org

603-543-1700, ext. 144

www.theSCA.org