


RiverSmart Homes

Clean Water Starts in Your Yard



**DD
OE**
DISTRICT DEPARTMENT
OF THE ENVIRONMENT

**Using GIS Enabled Tools for Tracking, Reporting and
Communicating: ideas for the average administrator**

Using Technology for Outreach

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Before RiverSmart

After RiverSmart

Goals for RiverSmart Homes

- Educate District's Citizens about stormwater pollution.
- Reduce lot-level stormwater pollution, especially on existing properties.
- Reduce N,P,K and TSS pollution.
- Make it easy for people to do the right thing.

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How it Works

1. Homeowner calls DDOE
2. DDOE inspector performs stormwater audit
3. Inspector sends homeowner audit results
4. Homeowner chooses what to have installed
5. DDOE contacts nonprofit partner to install requested items
6. DDOE inspects work to ensure it was done and follows up with homeowners



IT for tracking RiverSmart Homes

- In the one year of the program we have had over 750 people sign up.
- We have completed about 110 audits and our non-profit partners are installing requested items.
- Administratively intensive, use MS Access to keep track of all the data, in addition to scanned paper files, and excel SS for nonprofit partners
- Paper audit forms, copied and scanned multiple times

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Work Flow

- Client signs up
- Inspector makes an appointment (client info goes in database)
- Property audit with homeowner
- Inspector generate a report for homeowner
- Homeowner selects BMP features for installation
- Inspector shares homeowner report with partner (non-profit) organization(s)
- Inspector re-inspects site to ensure BMPs properly installment
- Inspector generates a final report on aggregate pollution load reductions from all installed BMPs

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GIS Tool Development: Partnership



GIS Tool OUTCOME:

Make it easier to implement, track and report on the RiverSmart Homes Program.

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GIS Tool OUTPUTS

- Generate easy to read reports for our customers. We have three **customers: Homeowners, EPA Region Three** to whom DDOE must report, **City Council** to whom DDOE must report.
 - What we recommend to individual home owners.
 - What is actually implemented on each property.
 - Aggregate load reductions from implemented RiverSmart Homes practices.
 - Track by sewer type (MS4, CSO)
 - Track by watershed
 - Track by Subwatershed
- Generate GIS maps that can be used in making reports to the EPA and City Council. Generate site map to be used in report to individual home owners.
- Track cost and payment amounts for each property
 - Track costs on number of features implemented: rain barrel and shade trees
 - Track costs on area installed for the following features: rain gardens, BayScaping and permeable pavement

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How GIS Tool Works

- Inspector Checks out data (GIS Layers) from network to ArcPad
- Using ArcPad, loaded on Tough Book Laptop Inspector Conducts Stormwater Audit
- Inspector Checks Data back in and generates PDF reports using ArcMap

RiverSmart Homes GIS Tool by the Numbers

- The hardware: \$2,500 / laptop
- Licenses: \$900 / licenses for ESRI software
- Tool Development: \$30,000
- Time to Delivery: 8 months and on going

RiverSmart Homes GIS Tool Lessons Learned

- Put Process Before Technology
- Utilize off the shelf systems and existing tools that can match your needs
- Include Program Staff often and early in development
- Work to overcome the communication barriers between program staff and programmers
- Utilize mobile comp for homeowner outreach
- Training, Training, Training

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GIS Tool NEXT STEPS

- Move Data online
- Allow Citizens to manage their stormwater profile online
- Keep the citizen stormwater network engaged
 - Workshops and Special Events
 - Specified reminder emails
 - Newsletters
 - Etc.

