Donaldson Run Stream Restoration
Arlington, VA

August 22, 2013
Northern Virginia Urban Forestry Roundtable
Storm sewer network = 334 miles
Streams = 28.5 miles
Storm sewer network = 334 miles
Stream Restoration Benefits

- Sediment and nutrient reductions – Bay TMDL & MS4 permits
- Infrastructure protection
- Habitat improvement
- Recreation and aesthetics
- Education
Tributary A Stream Restoration

- Constructed August 2005-March 2006; repaired April 2007 (100 year flood)
- ~3,000 linear feet
- Lee Heights and Zachary Taylor Parks
- $1.2 million; additional $300,000 for repair
Severe streambank erosion and habitat degradation.
Successes

- Dramatic reduction in erosion
- Protection of infrastructure
- Safe and accessible recreation
- Improved in-stream habitat
- Outreach and education
Tributary A water with visibly lower sediment content

Tributary B water with visibly higher sediment content
Access and Recreation
Bioassessment of all County streams done in 2011-2012 by contractor showed that restored reach had greatest aquatic biodiversity.
Key lessons learned

- Stronger specs and contractor oversight
- Better tree protection & smaller equipment/LOD
- Local planting plans
- More intelligent biolog use
- Soils management
- Invasive management plan
- Plant maintenance
Planting Information

- 114 trees >10” removed

- Planted* March 2006
  - 400 overstory trees
  - 200 understory trees
  - 1000 shrubs, another 1500 as live stakes
  - 1500 herbaceous plugs
  - 115 lbs seed (both upland & riparian)

- Planted* April 2007 (post-repair)
  - 20 trees, 100 live stakes, 110 tubelings, 400 plugs
  - Re-seeded
  - A few other supplemental planting events as well
June 2010
Lee Heights Park
April 2007
Zachary Taylor Park
August 2010
Zachary Taylor Park
Questions

www.arlingtonva.us
Residents
Environment
Watershed Management

Jason Papacosma
jpapacosma@arlingtonva.us