

# VIMS Tidal Wetlands Workshop Residential-Scale Case Studies

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**Elizabeth River**  **Project**  
*Making restoration a reality*



# The Revival of Elizabeth

The Revival of



## The Elizabeth River Watershed

A "watershed" is the area that drains into a river when it rains. If you live in the Elizabeth River watershed, rain water runs off your lawn and street, then into storm drains and then the river. Along the way, this runoff becomes a toxic soup of

Great Dismal

**Mission:**  
Restore the Elizabeth River to the highest practical level of environmental quality through partnerships





# River Star Homes

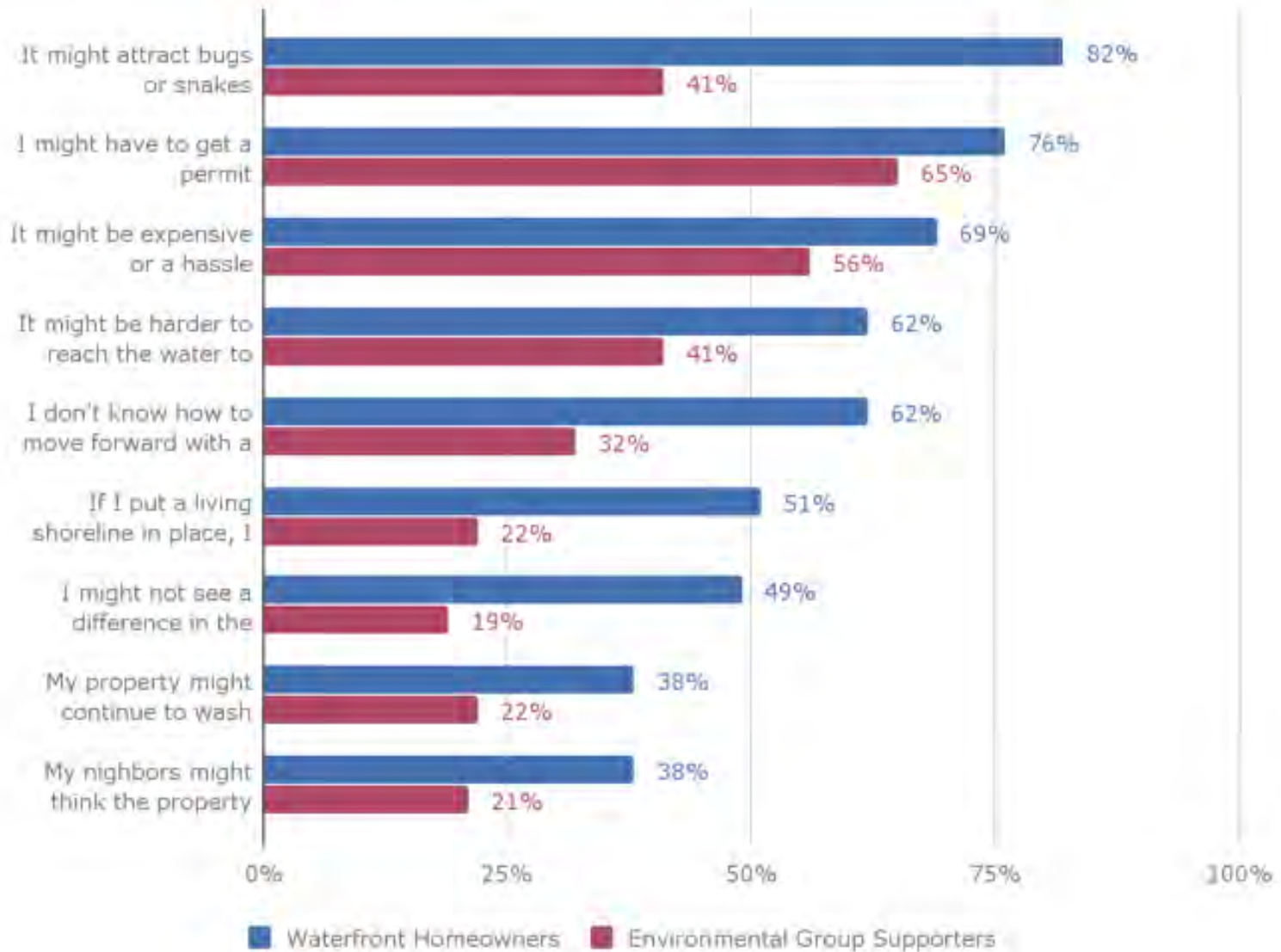
*Recruiting homeowners since 2011*

There are almost 4,700 River Star Homes in the Elizabeth River Watershed committed to seven behavior changes for environmental sustainability.

- ✦ 2014 – began contracting with the City of Norfolk
- ✦ 2015 – began contracting with the City of Chesapeake
- ✦ 2017 – began contracting with the City of Virginia Beach

# Living Shoreline Benefits & Barriers Survey

- ✦ Survey conducted with Water Words that Work
- ✦ Audience - waterfront homeowners, including ERP supporters
- ✦ Key results –
  - ✦ ERP supporters think highly of living shorelines, waterfront homeowners do not
  - ✦ Environmental groups are most trusted source for information on living shorelines
  - ✦ Feel good messages are most persuasive
  - ✦ "Bugs & Snakes", permitting process, and cost all big barriers
- ✦ Incorporated into process for finding projects



# Living Shoreline Process

- ❦ River Star Homes Living Shoreline Process
  - ❦ Outreach to new & existing RSH and community
  - ❦ Homeowner signs up for site visit, ERP determines if site will work



# Living Shoreline Process



- ✦ River Star Homes Living Shoreline Process
  - ✦ Project designed by contractor or in-house by ERP
  - ✦ ERP completes permit applications, coordinates with VMRC, USACE, City officials as needed
  - ✦ ERP oversees construction or coordination with contractor, final invoicing, maintains contact with homeowner for maintenance
  - ✦ ERP reports BMP dimensions, pollution reduction credits

## Site Scale Examples – Westminster Ave

- ✦ Hybrid Living Shoreline
    - ✦ Oyster reef and Coir logs used
  - ✦ 165 linear ft. & 1,350 sq. ft.
  - ✦ CBPA coordination required
    - ✦ No tree removal after April 15<sup>th</sup>
  - ✦ Cost share from City of Norfolk and NFWF
  - ✦ Homeowner referred to ERP by Norfolk Env't. planning Manager
  - ✦ Riparian Buffer being designed
- ✦ Key Take Away: Some sites need multiple approaches





# Site Specific Examples – Oaklette Drive

- ✦ 200 Linear ft., 2,200 sq. ft. living shoreline along entire shoreline
- ✦ Riparian buffer installed fall 2017
- ✦ Experienced rills in sand from upland high-velocity stormwater run off
- ✦ Key Take Away: upland protection sometimes crucial for success



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- ✦ Riparian buffer installed fall 2017
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- ✦ Key Take Away: Maintain clear understanding of client expectations vs reality



# Site Specific Examples – Oaklette Drive

Check-in 5/18



Check-in 5/18



# Key Take-Home Messages

- ✦ Understand perceived barriers to living shorelines
- ✦ Project completion is dependent on multiple factors
  - ✦ Time of year, site acquisition, contractor scheduling, permitting process, cost
- ✦ Every project site is different, visit many to find a few
- ✦ Manage client expectations – Patience is a virtue!

# Elizabeth River Project

*Making restoration a reality*



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