Waterways and Human Health (HIA WET)

HIA 2013

SESSION GOALS

- What is unique about water-related HIAs?
- What can the practice of HIA overall learn from waterfront HIA cases?
- What are challenges/needs for the future practice of HIA of waterway decisions?

FOCAL QUESTIONS

- **Community**: What are appropriate layers and methods of community engagement for a waterfront-based HIA?
- **Environmental quality and human behavior**: How can HIA account for impacts in which environmental quality, policy decisions, and people's behavioral choices interact to determine health outcomes?
- **Multiple use/multiple values**: What are approaches to balance economic value, environmental quality, and equity in waterfront decisions characterized by high economic cost, cultural value, and multiple uses?

SIMILARITIES/DIFFERENCES

SIMILARITIES

- HIP-funded
- First HIA for lead agency
- "Wet" – geographic scope encompasses a waterfront area; waterway affects health

DIFFERENCES

- Region: Washington, New York, Minnesota, Puerto Rico
- Type of body of water: river, lake, ocean, channel
- Health impacts and pathways
- Community settings

OVERVIEW OF SESSION

- Duwamish River Superfund HIA
  - *BJ Cumming*
- Delayed implementation of the comprehensive development plan for Cano Martin Peña
  - *Brenda Rivera-García*
- Above the Falls HIA: Ensuring health equity in decision-making
  - *Jared Erdmann and Haila Maze*
- Healthy and Rochester's Local Waterfront Revitalization Program (LWRP)
  - *Katrina Korfmacher*
- **Discussion: please hold questions for the end**

[THREE PRESENTATIONS]

HEALTHY WATERWAYS

Incorporating Health Impacts into Rochester's Local Waterfront Revitalization Program (LWRP)

Katrina Smith Korfmacher, PhD
University of Rochester
Environmental Health Sciences Center

Applying HIA to Rochester's Local Waterfront Revitalization Program

New York State's Local Waterfront Revitalization Program

- Develop long-term plan for waterfront
- Unique coastal planning programs (CZMA) guide decisions at all levels of government (consistency review)
- Opportunities for public involvement
- **Not** required to consider health

ROCHESTER'S LWRP …

…must address 13 NYS coastal policies and develop sub-policies, where necessary

(1) Foster appropriate development patterns*
(2) Preserve historic resources
(3) Protect scenic resources / visual quality
(4) Minimize flooding/erosion impacts
(5) Protect/improve water quality and supply*
(6) Protect the waterfront ecosystem
(7) Protect/improve air quality*
(8) Minimize solid/hazardous waste impacts
(9) Provide public access to and recreational use of the waterfront*
(10) Protect/promote water-dependent uses
(11) Promote sustainable use of resources
(12) Protect agricultural lands
(13) Promote development of energy resources

*Most relevant to health

Healthy Waterways and the LWRP

- Rochester's most recent LWRP 1990
- Revision underway; expected completion Dec. 2013
- Waterfront Advisory Committee (WAC)
- Healthy Waterways conducted Jan. 2013-June 2013
- Next steps: public information meetings, WAC input, report drafting/revision/approval

Communications Bureau, City of Rochester

Project Involvement

- Staff
  - University of Rochester Medical Center
    - Environmental Health Sciences Center Community Outreach and Engagement Core
  - Kerry Ivers, Consultant
- Partners
  - City of Rochester
  - Monroe County Department of Public Health
  - Non-governmental stakeholders
- Support: The Health Impact Project

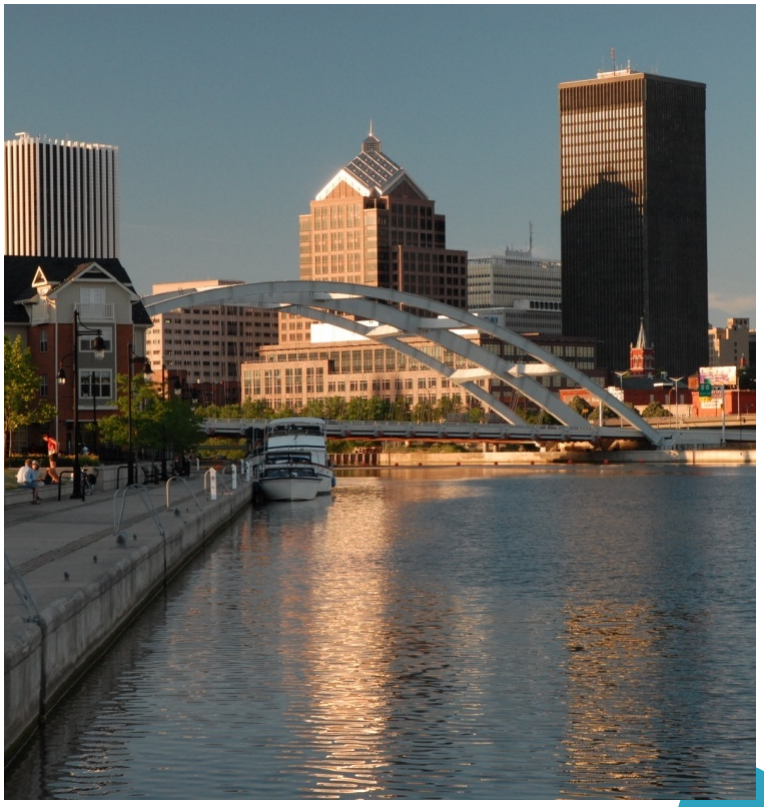
  A collaboration between the Robert Wood Johnson Foundation and The Pew Charitable Trusts

Healthy Waterways: How might the LWRP impact health?

- What are the biggest health issues in Rochester?
- How do these relate to the waterfront?
- How could waterfront changes affect health?

- Goal:

  Make policy and planning recommendations to minimize health risks and maximize benefits in LWRP



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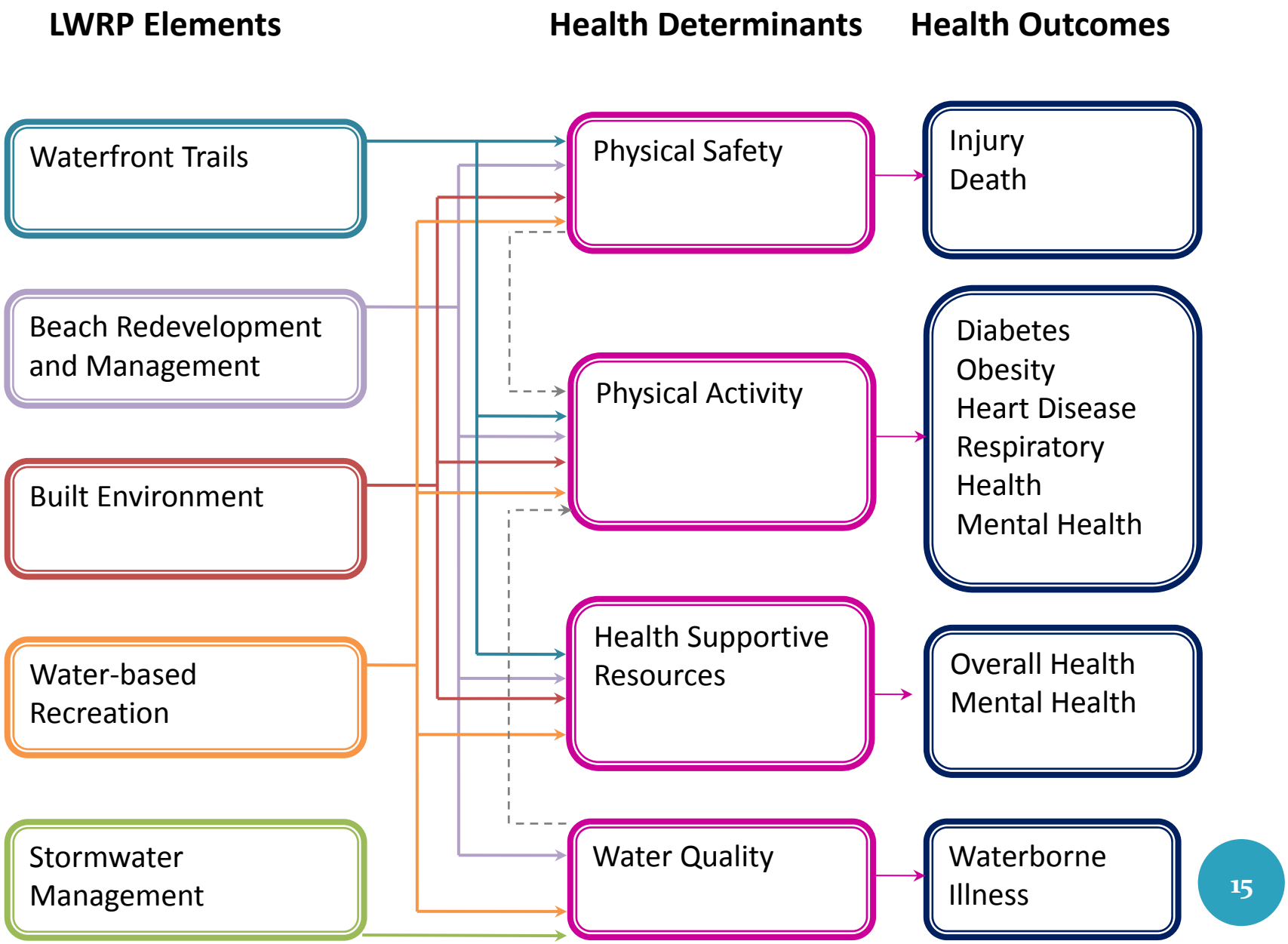
LWRP "ELEMENTS" ASSESSED

- Waterfront trail development
- Beach redevelopment and management
- Built environment (residential/commercial/public spaces)
- Water-based recreation
- Stormwater management (water quality improvement)


LWRP Elements
Health Determinants
Health Outcomes
Waterfront Trails
Beach Redevelopment and Management
Built Environment
Water-based Recreation
Stormwater Management
Physical Safety
Physical Activity
Health Supportive Resources
Water Quality
Injury
Death
Diabetes
Obesity
Heart Disease
Respiratory Health
Mental Health
Overall Health
Mental Health
Waterborne Illness

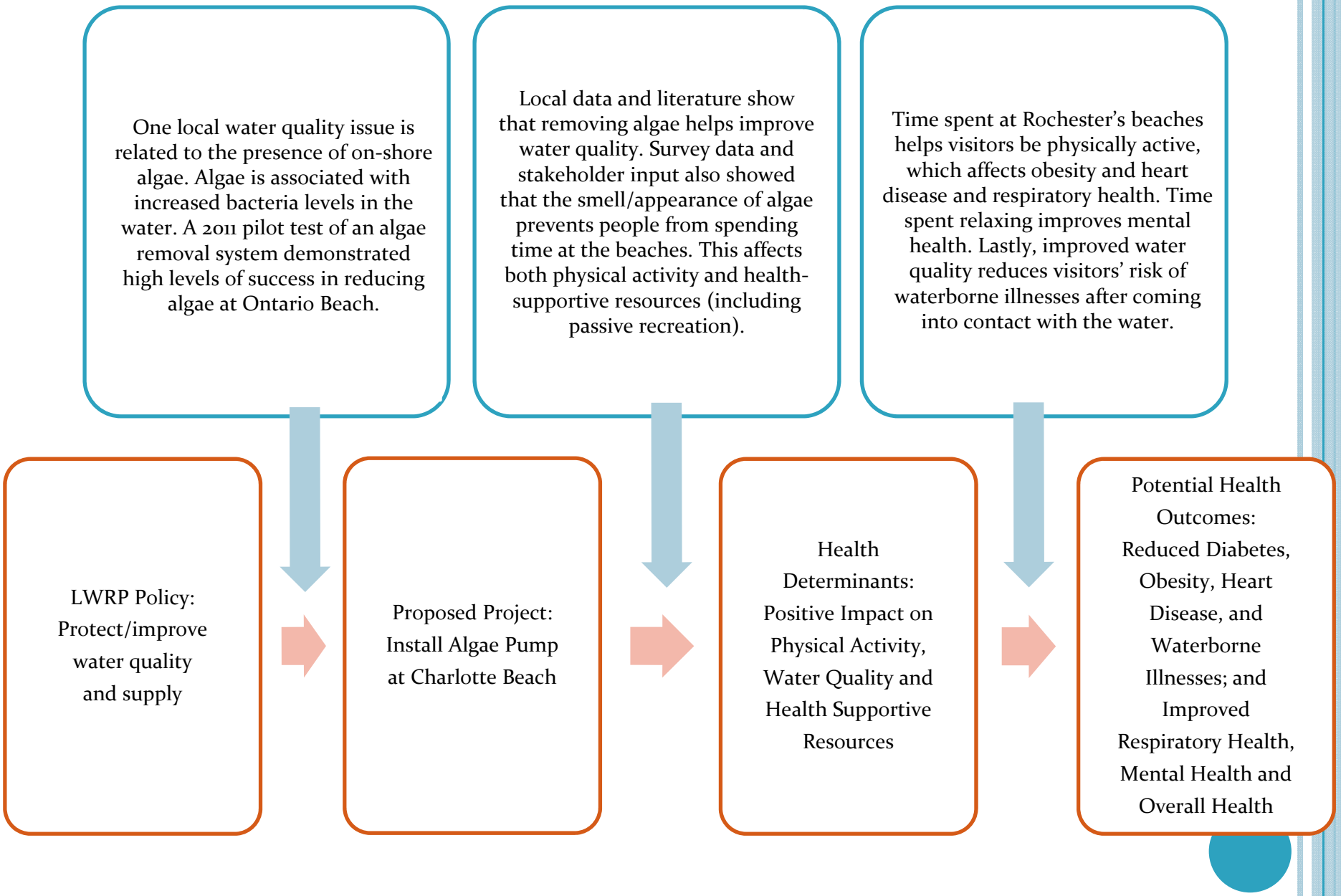
Assessment Example: Beach Redevelopment and Management

Water Quality, Beach Use and Health

- **Beach use can promote health**
  - Active recreation/physical activity
  - Water-based recreation (swimming/boating)
  - Stress reduction/community cohesion (passive recreation)
- **But…water use at beaches can pose health risks**
  - Drowning/injury
  - Water-borne disease (if water quality is poor)
- **Beach use and water quality**
  - No swimming allowed when water quality is poor
  - Algae pump will be installed to remove algae, improve WQ
  - Other efforts to improve water quality being considered

Beach user surveys: Key Findings

- Perceptions of water quality strongly influence beach use
- Swimming does not appear to be a significant source of physical activity for current beach users
  - ~1/3 of Ontario Beach survey respondents were swimming and most only visited the beach 1-4 times in a year
- Perception of violence and high crime rates at both beaches prevents many people from visiting
- User fees (parking) could reduce low-income users


One local water quality issue is related to the presence of on-shore algae. Algae is associated with increased bacteria levels in the water. A 2011 pilot test of an algae removal system demonstrated high levels of success in reducing algae at Ontario Beach.
Local data and literature show that removing algae helps improve water quality. Survey data and stakeholder input also showed that the smell/appearance of algae prevents people from spending time at the beaches. This affects both physical activity and health-supportive resources (including passive recreation).
Time spent at Rochester's beaches helps visitors be physically active, which affects obesity and heart disease and respiratory health. Time spent relaxing improves mental health. Lastly, improved water quality reduces visitors' risk of waterborne illnesses after coming into contact with the water.
LWRP Policy: Protect/improve water quality and supply
Proposed Project: Install Algae Pump at Charlotte Beach
Health Determinants: Positive Impact on Physical Activity, Water Quality and Health Supportive Resources
Potential Health Outcomes: Reduced Diabetes, Obesity, Heart Disease, and Waterborne Illnesses; and Improved Respiratory Health, Mental Health and Overall Health

LESSONS LEARNED

- Hard to quantify water quality/human health connections (monitoring, exposure, surveillance of health outcomes)
- Impact of environmental change modified by human behavior (clean water ≠ more swimming)
- Behavioral choices may be outside scope of policy being assessed (LWRP guides projects, not programs/education)

SESSION SUMMARY:

WHAT IS UNIQUE ABOUT/COMMON TO WATER-BASED HIAS?

- High value of waterfront land → Multiple, sometimes competing, uses: water-based industry, public access, housing
- Environmental pollution → Common due to past water-based uses; hard to monitor and fix
- Watersheds ≠ decision makers → Upstream polluters downstream users
- Human exposure indirect → Recreational activities and subject to human behaviors
- Waterbased hazards → Flooding/drowning
- Communities' understanding → Connect resource to health
- Complexity → Diversity/intensity of interactions between uses and values

DISCUSSION:

- What is unique about water-related HIAs?
- What can the practice of HIA overall learn from waterfront HIA cases?
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SESSION CONTACTS:

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