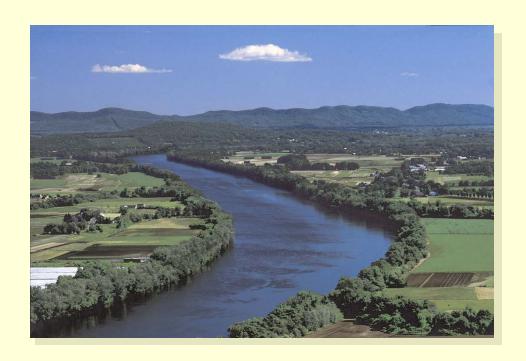
#### Welcome



Fisheries Panel Discussion

Paul Ducheney
Superintendent - Electric Production
City of Holyoke Gas & Electric Dept.

NHA Northeast Regional Meeting November 16, 2010



#### Who is HG&E?



- Municipal corporation
- Electric, Gas, Hydroelectric & Telecommunications Utility
- Founded in 1902 through the purchase of Holyoke Water Power Assets
- Acquired Hadley Falls
   Dam from Northeast
   Utilities in December 2001



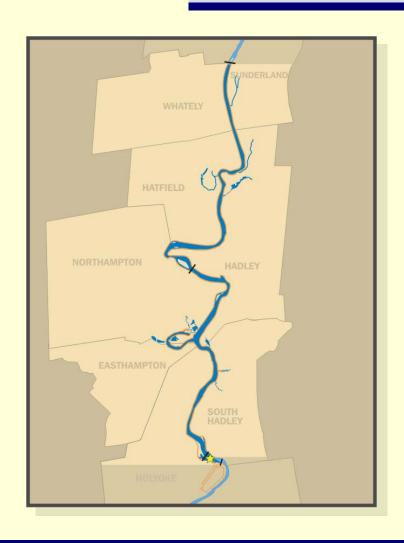
#### What do we do?



- Service 18,000 retail customers in Holyoke & Southampton
- 47MW of Electric Production from 30 Hydro Units
- ▶ 78% of 2009 Electric Supply from renewable sources
- Electric Rates 40% LowerThan Neighboring Cities



#### Where is Holyoke?





- 90 Miles West of Boston,150 Miles North of NYC
- Responsible for 18 Miles of CT River Impoundment Area
- One of the Earliest Multi-Level Cascading Canal Systems



## Welcome to Holyoke





#### **Environmental Stewardship**

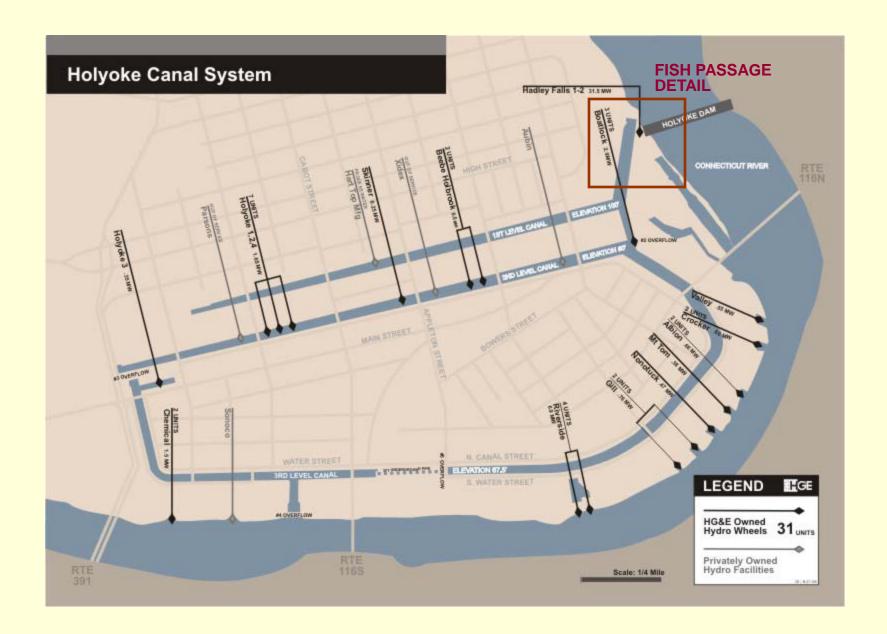
"HG&E's Hydro Division mission includes balancing hydroelectric generation with purposeful environmental stewardship that includes protecting valuable natural, cultural, and scenic resources and providing public recreation facilities. The Division strives to have an economically viable project while fulfilling the environmental mandates with which HG&E must comply."



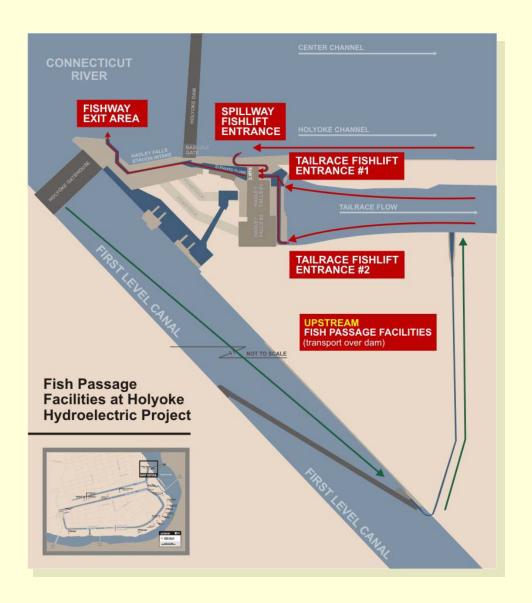
#### **Environmental Stewardship**

- Upstream Fish Passage
  - World's First Fish Elevator System
  - "Natural" Fishway
- Downstream Fish Passage
  - Shortnose Sturgeon Exclusion Device
  - Full Depth Canal Louver Assembly
- Eel Passage
- Other Threatened & Endangered Species Initiatives





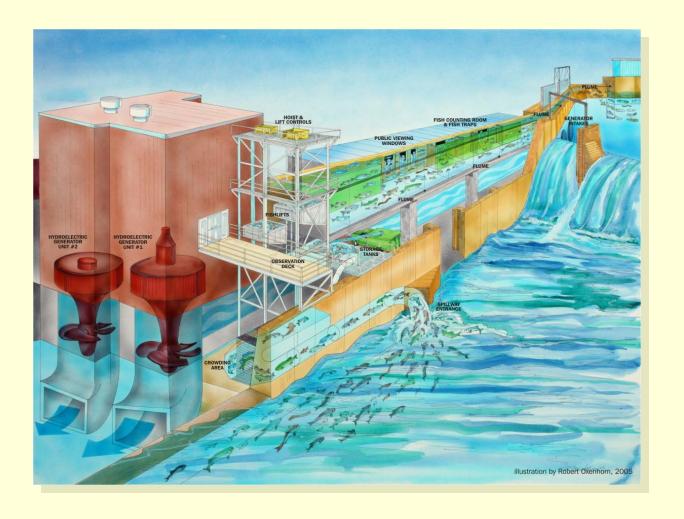




# Upstream Fish Passage Facilities

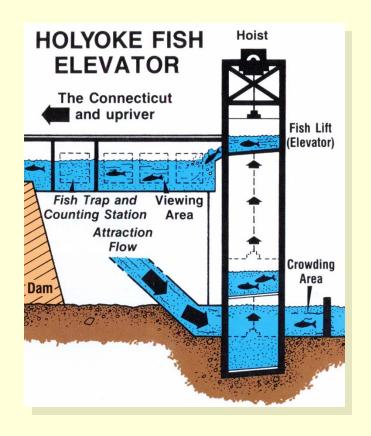


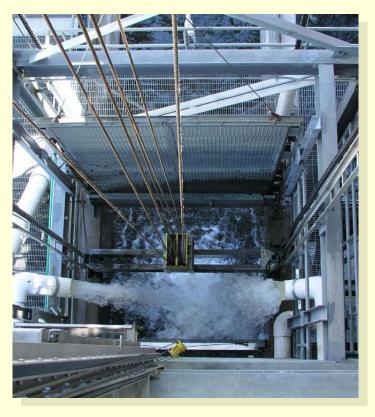
### **Upstream Fish Passage**





#### **Upstream Fish Passage**







#### "Natural" Fishway in Bypass Reach

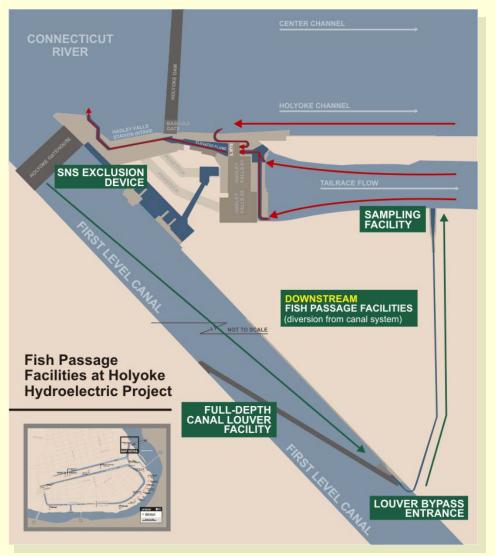




#### "Natural" Fishway in Bypass Reach

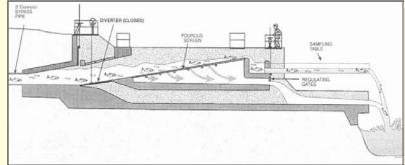






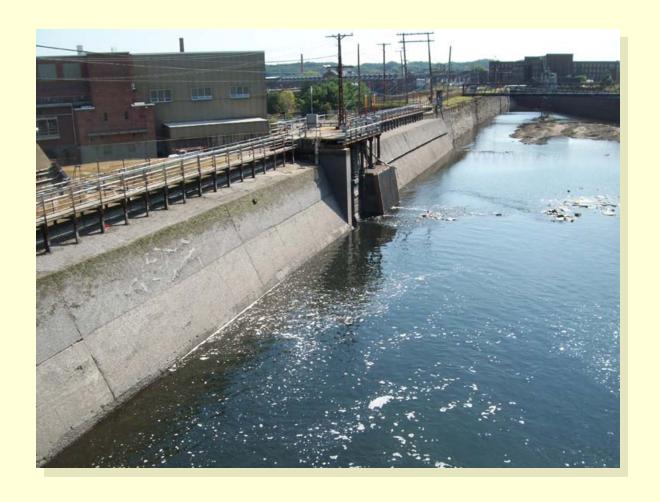
# Downstream Fish Passage Facilities

- Shortnose Sturgeon Exclusion Device (2003)
- Full Depth Canal Louvers (2002)





#### **SNS Exclusion Device**





## **Full Depth Louver Assembly**





#### **Full Depth Louver Assembly**



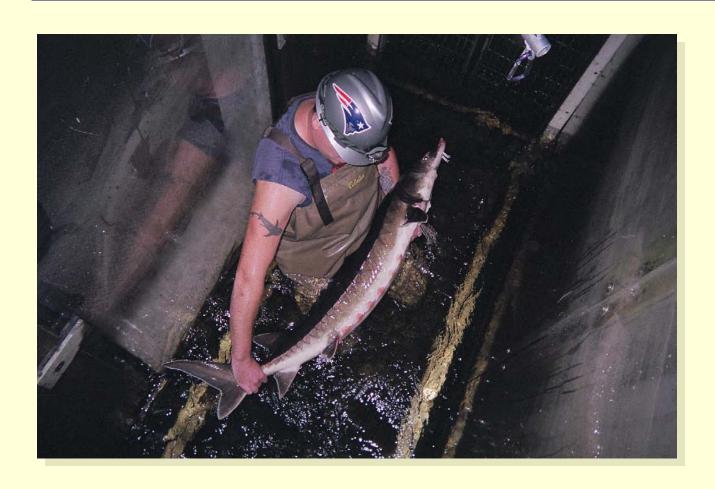


#### **Full Depth Louver Assembly**



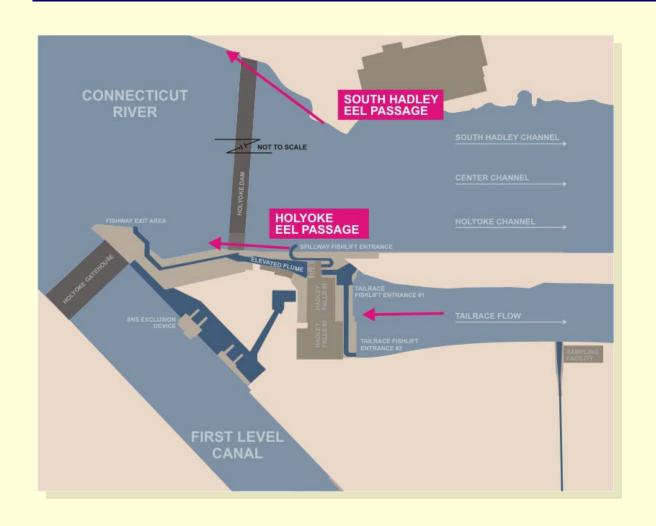


# **Atlantic Sturgeon**





#### **Eel Passage Facilities**





### South Hadley Eel Passage





# South Hadley Eel Passage





# South Hadley Eel Passage





## Holyoke Eel Passage





# Holyoke Eel Passage





## Holyoke Eel Passage







#### Other T&E - Atlantic Salmon



photo credit: Gilbert Van Ryckevorsel



#### Other T&E - Yellow Lampshell Mussel





- Conduct Surveys
- Installed Concrete
  Weir in Canal
- Public Education Efforts



#### Other T&E – Puritan Tiger Beetle



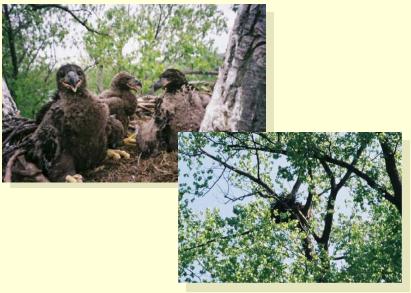


- Translocation Project from Cromwell, CT
- Public Education Efforts / Kiosks



#### Other T&E – Bald Eagle Nesting





- 20+ Eaglets Hatched
- 2006 OSAR Award Winning Project



# Thank you



