Transforming a Brownfield to a Brightfield

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Renewable Energy Procurement Boot Camp
Solar PV Site Land Use Challenges

- Emergency Services Training Site (Police & Fire)
- Stockpiling Public Works Materials
- State Bonding $ used for improvements 1999
  - Office of M&B approval to proceed
- City Dump Site 1950-1980
  - Phase I Assessment 1999
  - VIC Program April 2002
  - Phase II Assessment June 2002
  - Additional Assessment September 2002
  - Restrictive Covenant July 2007
    - No disturbance wo/MPCA approval
  - RAP November 2007

Renewable Energy Procurement Boot Camp
Solar PV Site Land Use Challenges

- RAP and Covenant Requirements
  - Construction Contingency Plan & Site Health and Safety Plan
  - Routine inspections of site/LEL monitoring
  - **NO PENETRATIONS!**
Solar PV Project Specifics

- Solar PV size = 400 KW = 470,070 kwh/year guaranteed (80% derated from actual) (Actual = 587,587 kwh/year) ~15% of the WWTP Annual Load

- Utility costs = 0.737/kwh and annual increases = 1.5%

- Solar System Payback = 18 years (~14 years using higher than guaranteed system output)

- At year 30, system has generated $370,000 – after paying for itself

- Pricing = $1,467,000
  - Xcel Grant = $958,360

“Solar project funding provided, in part, by customers of Xcel Energy through a grant from the Renewable Development Fund.”
It was not a “pretty” site
Until we got done with it!
Ballast Piers 18”H x 30”D - 410 total
Pier Layout

Layout of piers using nylon line
First rows being installed
Ballasted Fencing
Independent Support Rails

Flexible Conduit

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e-Gauge Monitoring System & Work Zone Cam Time Lapse Video

http://www.ci.hutchinson.mn.us/departmentsfacilities/public-works/park-garage/greenstep-cities/
Benchmarking Renewable Energy Procurement Boot Camp
City of Hutchinson Solar PV Project History

- October, 2011: Westwood: Renewable Energy Suitability Study
- June – Sept, 2012: Staff and Council discussions regarding Solar PV project
- October, 2012: Signed “Agreement Letter” to Develop a Solar PV System
- March 2013: Xcel Energy RDF Proposal Submitted
- March 12, 2014: Xcel Award Letter received by the City
- April 23, 2014: Planning meeting to move forward
- May – September: Updated Xcel Award requirements
  - Further developments per the Term Sheet and site requirements
- October 14, 2014: Term Sheet executed with AMERESCO
- December 23, 2014: Energy Service Agreement w/AMERESCO
- June 19, 2015: Xcel Grant Contract approved
- October – November 2015: Construction of System 11/25/15 Commissioned