

Dow's Valuing Nature Journey
*How a multinational chemical
corporation is realizing value through
nature based solutions*

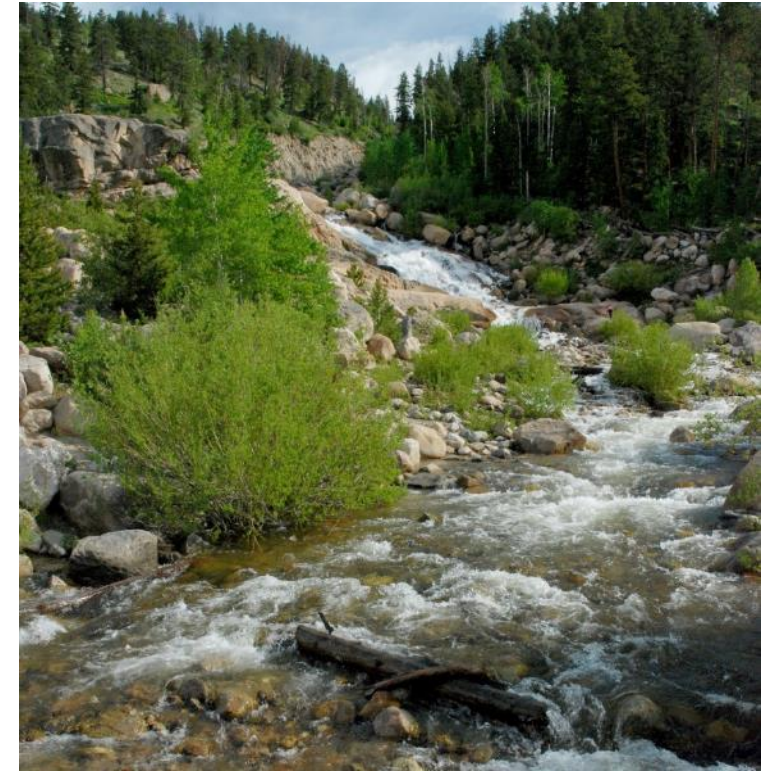
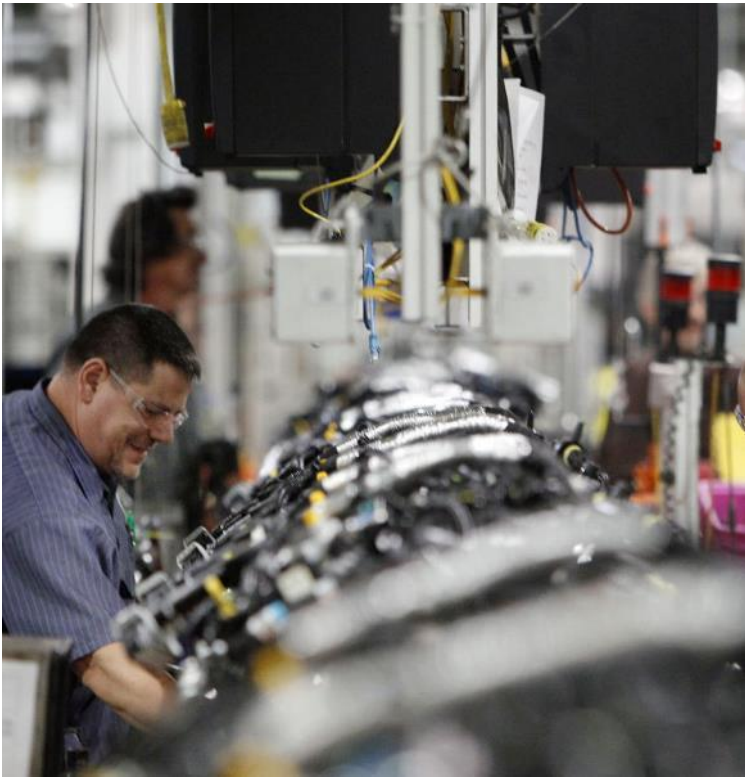
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The Dow Chemical Company

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The Nature Conservancy





Nature Informing Business Decisions



Improved
Business
Performance



Improved Business
Decisions



Improved
Conservation
Outcomes

The Nature Conservancy: Eight Year Collaboration



Provide Food and
Water Sustainably



Build
Healthy Cities



Tackle
Climate Change



Protect Land
and Water

Building Case via Pilots

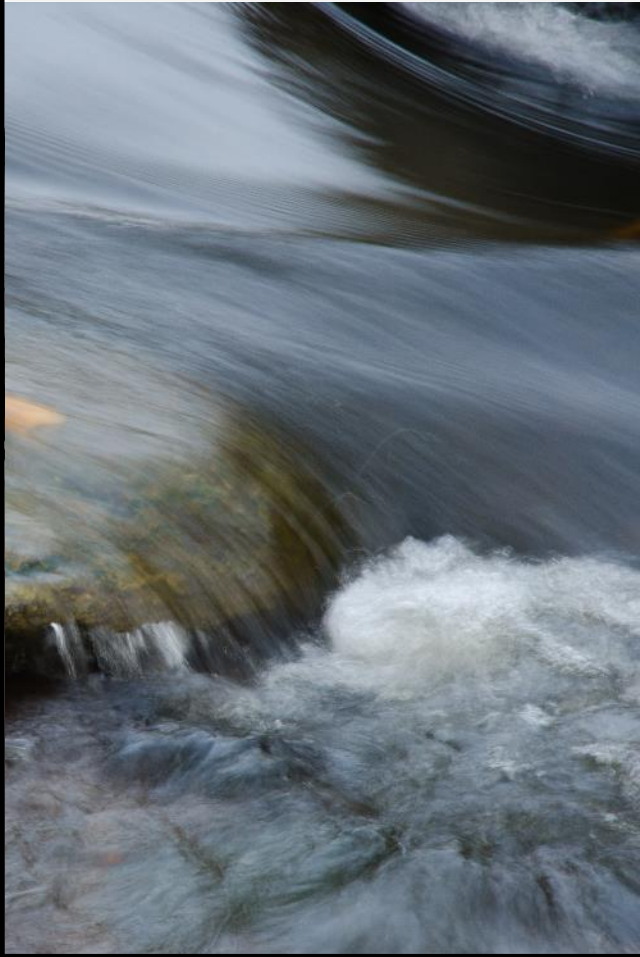
AIR QUALITY



COASTAL PROTECTION



WATER SUPPLY



AGRICULTURE



Jennifer Molnar

Valuing Nature Goal

Incorporating nature into all of our business decisions

Better for Business, Better for Nature

Deliver \$1 billion in value through projects that are good for business and better for nature

Screen all capital and real estate projects, business development and new products for potential benefits and impacts to nature by 2020



What is Nature?



Flood Protection



Climate Regulation



Air Quality

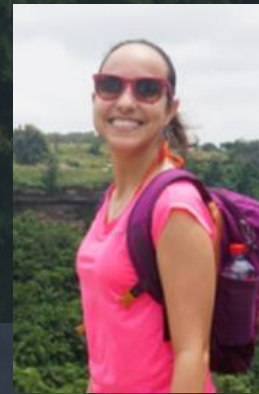


Water Quality

Nature is the Earth's collective inhabitants and nonliving environments interacting as functional ecosystems and providing services such as clean water, clean air, and healthy soil.

DRIVING CULTURE CHANGE

TOP / DOWN



BOTTOM / UP



Sensible and Defensible Science

Nature Screen

Identify

2025 Sustainability Goal: Valuing Nature

We will apply a business decision process that values nature. We will deliver business value and natural capital value through projects that are good for business and good for ecosystems.

Project Description

* Required field

Project Name:

Project Site:

Project Manager Name:

Project Owner: Regulatory Cost Savings Service Multiple

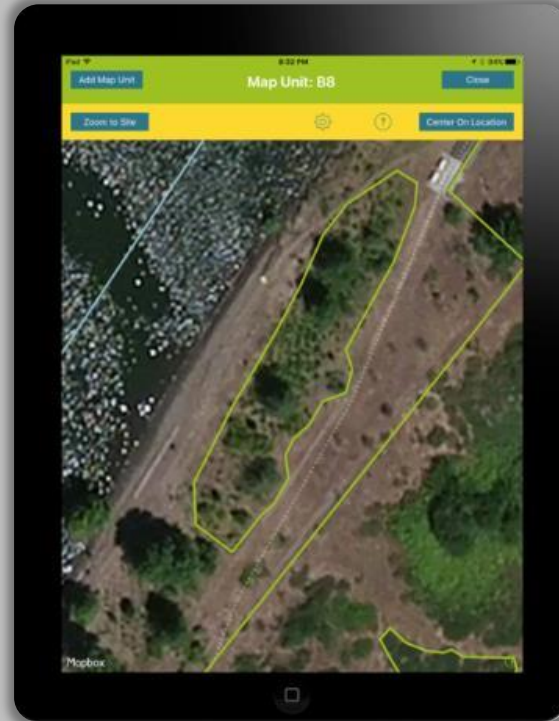
Project Boundary: --SELECT ANSWER--

Nature Screen

| Initial Screening Questions | Action | Project Comment |
|---|----------------------|----------------------|
| What is the anticipated total installed cost of the proposed project? <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Will the proposed project significantly impact the water profile (ie fresh water consumption, storm processes in water management, discharges) of the affected site? <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Will the proposed project significantly impact the consumption of materials (including energy) and/or discharge of waste including air emissions of the affected site (On-Gas and non-On-Gas)? <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Does the proposed project include any land use change in such a way that local biodiversity, soil health, or erosion control may be impacted? <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Have you considered engineered natural technologies (ENT) in your proposed project? Claim lines of ENT are provided below. <input type="text"/> | <input type="text"/> | <input type="text"/> |

ESII Tool

Measure & Compare



Nature Scorecard

Understand

Dow Nature Scorecard Results Tab Responsible: *Luiza Bertagni* Date: *Monday, June 11, 2018*

| ASSET INFORMATION | | ENT PROJECT INFORMATION | |
|------------------------|---------------------------------|-------------------------|------------|
| Name | FREEPORT | Project Name | Wetlands |
| Country | United States | Project Description | 0 |
| Ecoregion | Gulf Coast Prairies And Marshes | ENT Solution | 0 |
| Ecoregion Crisis Class | Vulnerable | End use | 0 |
| Water Intake Type | Purchased | Proposed land cover | 0 |
| | | Native species | 0 |
| | | Project CAPEX | \$ 500,000 |

Indicators

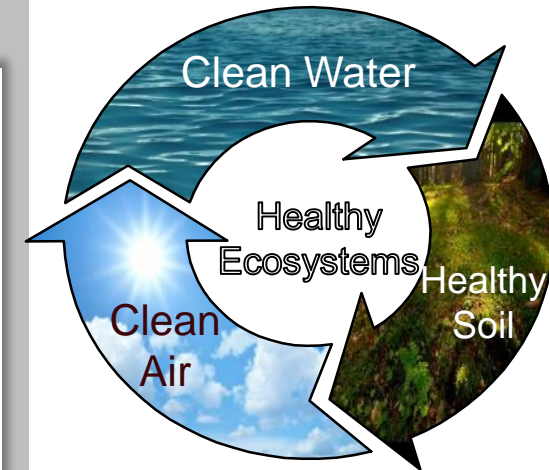
| NATURE PILLARS | | |
|-------------------|-------------------------|---------------------------------------|
| | Pillars Relevance Index | Project's Performance Relative to Dow |
| Clean Water | 23% | 20% |
| Clean Air | 30% | 15% |
| Healthy Soil | 30% | 60% |
| Healthy Ecosystem | 17% | 20% |

Weight for Nature:

| BUSINESS | | |
|---------------------|--------------------|--------|
| Does it reduce | Regulatory risk | High |
| Does it reduce | Risk to operations | Medium |
| Does it help to get | License to operate | Low |
| Does it open a new | Market opportunity | High |
| Does it benefit | Public Relations | Medium |

Business Relevance Index:

Nature Value Markup:



Dow Riverside Wetland Restoration Project, Midland MI

Problem: 37 acre ash pond site on the Tittabawassee River set for closure

Goal: Close the Ash Pond in a way that best reduces(O&M) costs and liability, while meeting State Agency Requirements and enhancing ecosystem services.

Solution: 23-acre functional wetlands with recreational amenities that improves natural habitat along one mile of riverfront

Business Value: Reduces ongoing O&M costs and liability, design reached in record time! \$2 MM NPV



ESII
tool

For more information on this case study:
<https://www.ncbi.nlm.nih.gov/pubmed/30240924>

Value is Real

...projects that are good for business and better for ecosystems

2025 Valuing Nature Goal Progress

Overall Progress Toward
2025 Valuing Nature
Goal



82 Projects to Date:

- 60% benefited **Clean Water and Air**
- 49% addressed **Soil Quality** improvements
- >50% benefited **Healthy Ecosystems**
- 9 projects positively impacted **Clean Water, Clean Air, Healthy Soils, and Healthy Ecosystems**



We have tools to determine which projects are better for business but not better for Nature

Final Tool in the Toolbox

How does one ***understand the importance*** of a project's ecosystem impacts, both to Dow and to nearby ecosystem?

Nature Scorecard Goals

Clean Air



Water Quality



Ecosystem Health



Groundwater Quantity



Surface Water Quantity

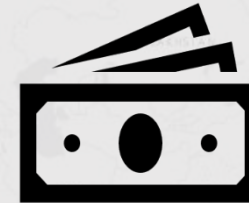


- Bottom-up natural capital impact assessment of multiple different types of projects
- Intuitive to use on the front-end (“sensible”) and understandably “defensible” on the back-end (i.e., we can write an academic article about the scorecard’s development)



Nature Scorecard Goals

- Produces a final single number that can be used to compare projects both within a site and across a site
- Can be completed in a reasonable amount of time



NPV: \$5 M
ROI: 55%



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Everything Comes Back to Nature

- Nature based solutions address key risks such as water scarcity and climate disruption
- Collaboration is key- science, perspectives, skillsets, stakeholder relationships and priorities
- Empowering communities and driving policies accelerate investment in Nature-based solutions
- Shared Risks becomes Shared Opportunities