What are environmental markets?

Environmental markets are a voluntary means to reduce the cost of compliance with environmental regulations or to further the environmental goals.
Environmental markets can...

- Provide environmental benefits
- Expand revenue for working lands
- Reduce costs and increase flexibility of restoration or compliance requirements
- Increase opportunities for investment
- Accelerate conservation activities
- Improve accountability/effectiveness of existing conservation programs
What is bought and sold?

Ecosystem Services
(benefits people obtain from ecosystems)
<table>
<thead>
<tr>
<th>Sector</th>
<th>Volume</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wetlands</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banks</td>
<td>$1.3 - $2.2 billion</td>
<td>(2014)</td>
</tr>
<tr>
<td>In-Lieu Fees</td>
<td>$0.65 billion</td>
<td>(2014)</td>
</tr>
<tr>
<td><strong>Species and Habitat</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$2.0 - $3.4 billion</td>
<td>(2011)</td>
</tr>
<tr>
<td><strong>Carbon and Greenhouse Gas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voluntary</td>
<td>$0.08 billion</td>
<td>(2013)</td>
</tr>
<tr>
<td>CA Regulatory</td>
<td>$0.25 billion</td>
<td>(2014)</td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trading</td>
<td>$0.01 billion</td>
<td>(2012)</td>
</tr>
<tr>
<td>PWS</td>
<td>$0.005 billion</td>
<td>(2012)</td>
</tr>
<tr>
<td><strong>Water Quantity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-stream buybacks</td>
<td>$0.02 billion</td>
<td>(2011)</td>
</tr>
</tbody>
</table>
Who are the buyers and sellers?

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Individuals</th>
<th>Governments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Markets for private ecosystem goods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Land trust conservation easements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Private environmental incentive payments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Consumption-based donations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cap and trade markets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Incentives to private parties for provision of ecosystem services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Federal grants for environmental protection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Public goods and services financed by taxes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fees to government agencies for access to ecosystem goods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fees (taxes or charges) for license to discharge</td>
<td></td>
</tr>
</tbody>
</table>
“USDA asserts no direct or indirect interest in credits generated with Farm Bill funds.”

(a) However, USDA retains the authority to ensure that Farm Bill program purposes are met. In addition, any requirements or standards of an environmental market in which a participant simultaneously enrolls to receive environmental credits must be compatible with the purposes and requirements of the USDA program contract.

(b) The participant must meet all operation and maintenance (O&M) requirements for program-funded activities.

(c) Participants may not use program funds to implement conservation practices and activities that the participant is required to establish as a result of a court order.
Environmental Markets & USDA

- In the 2008 Farm Bill, Congress instructed USDA to establish uniform guidelines for science-based methods to measure ecosystem services benefits … and facilitate the participation of farmers, ranchers, and forest landowners in emerging ecosystem services markets.
- USDA established the Office of Environmental Markets (OEM)
USDA investments facilitate market-based approaches and improve government programs

Example: FSA Conservation Reserve Program (CRP) performance data

CRP improves water quality.
- Prevented 226 million tons of sediment, 623 million pounds nitrogen and 124 million pounds phosphorus from leaving the field.

CRP enhances wildlife habitat.
- Independent studies identified benefits to Prairie Pothole ducks, ringed-neck pheasants, sage grouse, northern bobwhite quail, and other grassland birds.

CRP sequesters carbon.
- Sequestered 51 million metric tons CO2 equivalent.
Office of Environmental Markets

What we do:
• Develop Tools
• Provide Information
• Create Opportunities
What is a tool?
Properties of Effective Tools

- User-friendly
- Transparent
- Meaningful
- Appropriate
- Consistent
- Accepted
- Cost Effective
- Science-based
- Meet Regulatory Criteria
Welcome to the USDA’s Environmental Markets Website

Environmental markets are an innovative policy approach to increasing funding for environmental conservation and are often viewed as a complement to traditional conservation programs. Current active and pilot markets exist for greenhouse gasses, water quality, water quantity, wetlands, and habitats.

Use this site to find more information about different types of environmental markets, market resources and tools, and more information about environmental market activities at USDA.


Environmental Markets in the News

- Water quality trading program awarded for innovation
- California Air Resources Board approves rice cultivation carbon offset protocol

Stay Connected
Welcome to the USDA-EPA Water Quality Trading Roadmap

The Roadmap is a web resource that provides information on water quality trading in one searchable database.

Use the search bar to explore a topic, or search by type of document using the brief, permit, statute, law, and policy filters.

- Learn more about the Roadmap
- Learn more about USDA and EPA's Partnership on water quality trading

Designing a Program | Selling Credits | Purchasing Credits

Water Quality Trading Roadmap

Find the answer to your question

Search filters applied
Topic
Water Quality Trading

Water Quality Trading
+ Brief
+ Permit
+ Statue

Related Answers

How are National Pollutant Discharge Elimination System (NPDES) permits involved in trades? New

Under Florida's water quality trading administrative code, "at least one of the trading parties must have an existing, approved and active water quality trading program. Click here to learn more about incorporating trading in NPDES permits and more.
EnviroAtlas: Connecting Ecosystems, People, and Well-being

http://enviroatlas.epa.gov

Interactive Mapping Application

Eco-Health Relationship Browser
What is EnviroAtlas?

A web-based tool giving users ability to view, analyse, and download information to inform decisions concerning the places in which we live, work, derive resources, and play

- Multi-agency effort – EPA, DOI, USDA
- Geospatial indicators and indices of the supply, demand, and benefits
- Drivers of change
- Reference data (e.g., boundaries, land cover, soils, hydrography, impaired water bodies, wetlands, demographics, community design)
- Analytic, mapping, and interpretive tools
EnviroAtlas Market Plug-in

Data and analytics on markets and payments for ecosystem services

Market Fundamentals
- Map of programs
  - Water, carbon, biodiversity
  - Active and developing
  - Public, private, PPP
- Map of opportunities
- Map of barriers
- Map of outcomes
- Map of investment levels
- Map of growth

Markets in Context
- Markets vs climate risk
- Markets vs conservation priorities
- Markets vs ecosystem service value
- Markets vs public health indicators
- Markets vs economic indicator
- Markets vs productive lands
- Markets vs public & private lands
Can CMS efforts contribute to markets for wetlands, water and habitat?

Yes!
How can CMS efforts contribute to other environmental markets?

• Basic science and data
  "improving the accuracy, quantitative uncertainties, and utility of products for supporting national and international policy, regulatory, and management activities."

• Market innovation
  "development of carbon Monitoring Reporting and Verification [MRV] systems which can support current carbon trading protocols."
Market-based approaches will not work everywhere

Market-based approaches work where:

- There is a strong "driver" (regulatory or financial)
- Participants have different abatement costs
- Uncertainty can be reduced
- Stakeholders and regulators work together to design and implement trading programs
Market-based approaches work if...

... the Buyers, Sellers and Regulators are Confident in the Efficiency & Credibility of the Programs

...and the Public’s Interest is Protected
On-line Links

USDA Environmental Markets Home Page:
http://www.usda.gov/environmentalmarkets

USDA – EPA Water Quality Trading Roadmap Tool:
Questions?

e-mail: chartley@oce.usda.gov