



Environmental Markets for Washington Farmers & Ranchers

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Our Goals for this Workshop

- Understanding the concept of environmental markets**
- Getting an up-to-date picture of the status of these markets in Washington**
- Evaluating your opportunities to participate**
- Understanding where to go from here**



What's an Environmental Market?

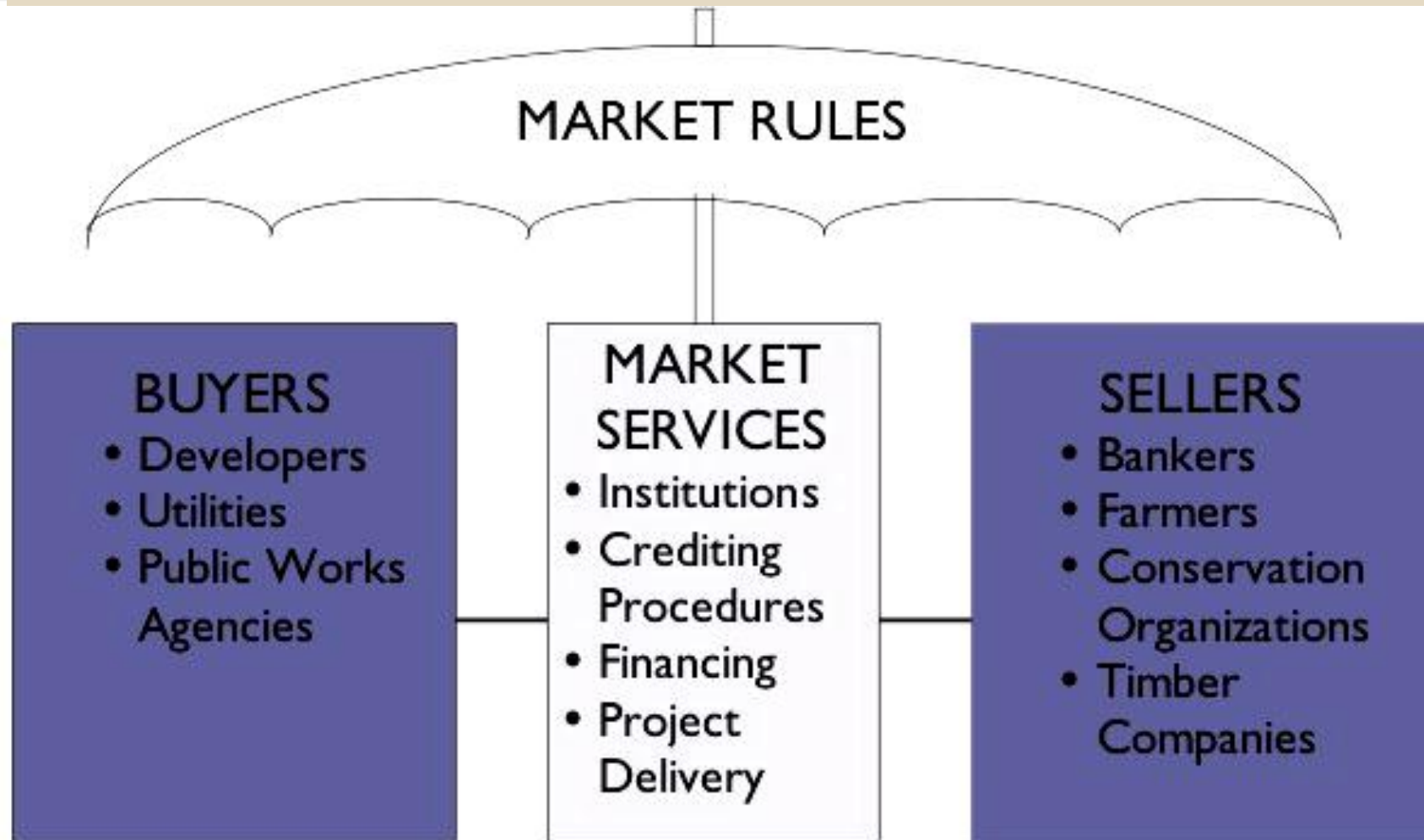
- Programs for buying and selling credits for improving the environment
- Often driven by regulatory requirements
- Also known as conservation and mitigation banks, water quality trading, and ecosystem service markets
- May be tiny and unorganized (garage sales) or large and formal (Costco)



What Drives an Environmental Market?

- **Environmental regulations limit environmental impacts**
- **Regulatory agencies allow flexibility in meeting regulatory limit**
- **Developers/permittees buy credits or offsets to meet limit**
- **Third parties supply and get paid for credits or offsets**
- **Brokers sometimes help with transactions**

Diagram of an Environmental Market





Environmental Markets Operating in the US



- Successful air quality market in NE**
- 50 active water quality markets, including 7 statewide programs**
- 415 wetland markets (2005)**
- 119 habitat conservation markets**
- Lively carbon market (\$387M in US, \$144B worldwide in 2009)**
- Renewable energy credit markets in 29 states**



Why AFT is Interested in Farmer/Rancher Involvement



- ❑ **Ag perspective**: dependable added income stream to help with ag viability
- ❑ **Conservation perspective**: encourage conservation improvements where they might not occur otherwise
- ❑ An intersection between ag & environmental benefits

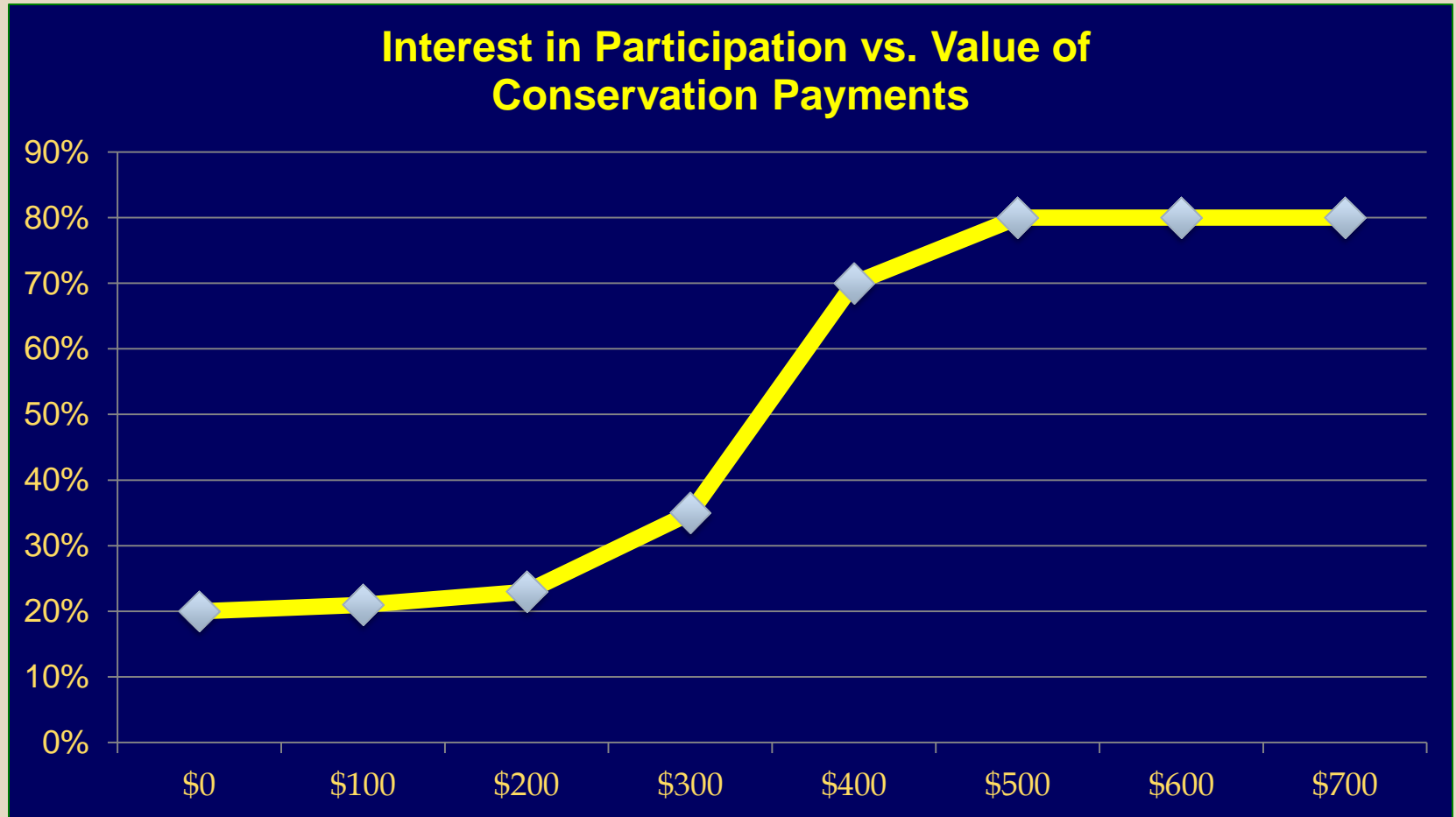


Our Premise



- If conservation is more profitable to farmers and ranchers then...**
- Farmers and ranchers will undertake far more conservation projects, and...**
- Water quality, habitat, and other environmental resources will significantly improve, and...**
- Conservation actions will become more profitable to farmers and ranchers...**

Theory on Price Versus Participation





What we Learned from Working on the Guide

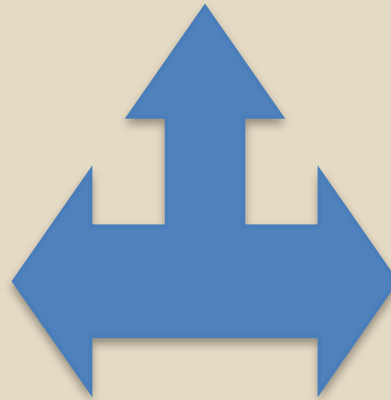
- Great deal of national and worldwide interest in markets and ag involvement**
- Washington lags a bit in market development**
- Markets likely to develop and grow in years ahead**
- Need farmers involved if markets are to develop appropriately**

Why Washington Lags

Sellers
(Farmers,
Mitigation
Bankers,
Conservation
Groups)

Regulators
(Federal, State,
and Local
Environmental
Agencies)

Buyers
(Utilities,
Developers,
Brokers)





What Farmers & Ranchers Can Do to Stimulate/Guide Markets



American Farmland Trust

- Understand who's buying what kind of credits**
- Identify potential conservation assets on their own farms**
- Band together to increase effectiveness of ag interest**
- Participate in decisions on markets**



Best Immediate Prospects In Washington

- Methane digestion for greenhouse gas and renewable energy markets
- Irrigation efficiencies and changes in seasonal use of water for water markets
- Wetland restoration for mitigation markets



Best Long-Term Prospects In Washington



- Buffer restoration and practices for water quality credits**
- Changes in tillage and fertilizer use for carbon (and water quality?) credits**
- Installation of wind and solar generators for renewable energy credits**
- New markets for habitat, biodiversity, flood storage?**



Determining Which Markets to Pursue

- What is your land most suitable for (areas and practices)?**
- Maximizing revenue from conservation actions**
- Increasing value by conserving larger, more connected areas on adjoining farm and ranch land**

Environment as a Liability



Environment as a Marketable Asset





A Potential Market Solution





Practices that Can Produce Credits

- Conservation tillage**
- Precision fertilizer application**
- Conservation rangeland management**
- Cover crops & wildlife-friendly rotations**
- Strip cropping and contour farming**
- Irrigation efficiencies**

Stacking Incentives and Markets



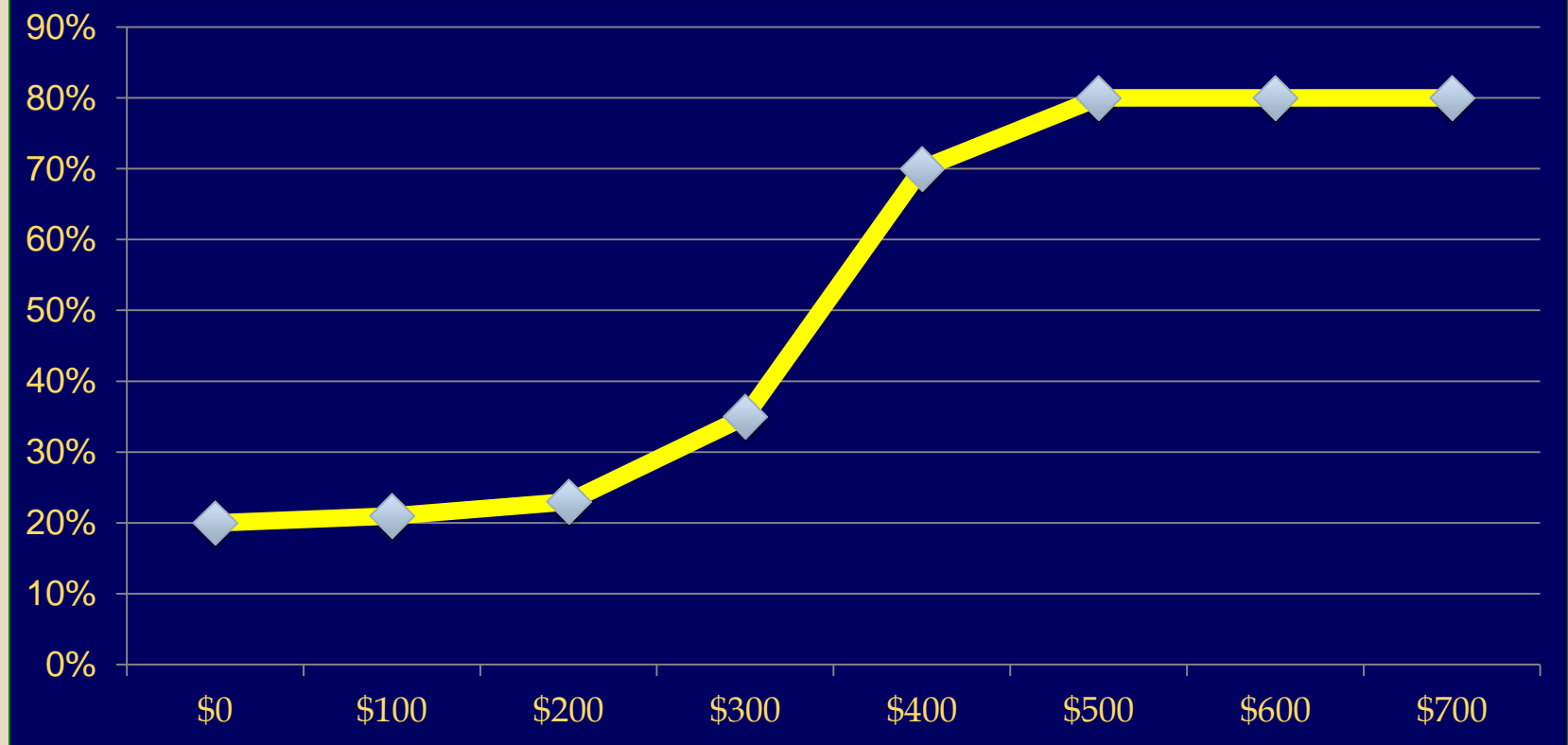



Why Stack?

- CREP buffer is worth \$100-200 per acre per year (twice soil rental rate)**
- May also produce nutrient credits (adds \$250-400 per acre per year)**
- Possibly also/instead habitat and greenhouse gas credits**
- If markets are available and fully used, income from the buffer could double or triple**

Theory on Price Versus Participation

Interest in Participation vs. Value of Conservation Payments





A Stacking Example: Clean Water Services (OR)



- Utility to reduce effluent temperature to meet permit requirement
- Buffers as effective and far cheaper
- Used CREP incentives as first layer
- Doubled rental rates and contributed 100% of installation and maintenance
- Annual payments higher than net crop income for all local crops
- Program is fully subscribed, with 28 participating farmers

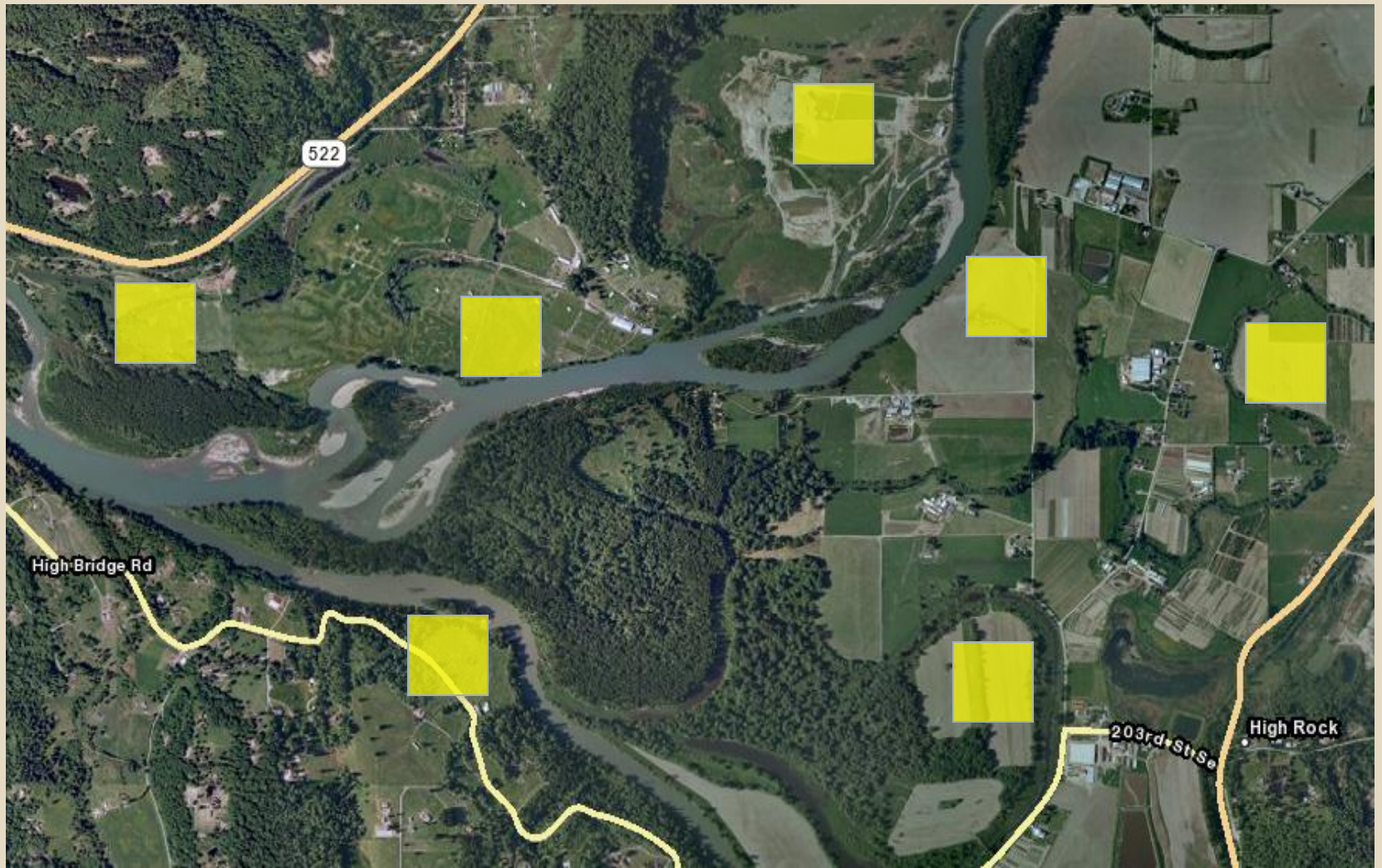


Benefits of Cooperation Among Farmers and Ranchers

- Greater clout in market development**
- Understanding and mastering complex regulatory requirements (baseline, ratios, certification/verification)**
- Sharing risks and common costs**
- Increasing environmental value (and prices) when neighbors cooperate**

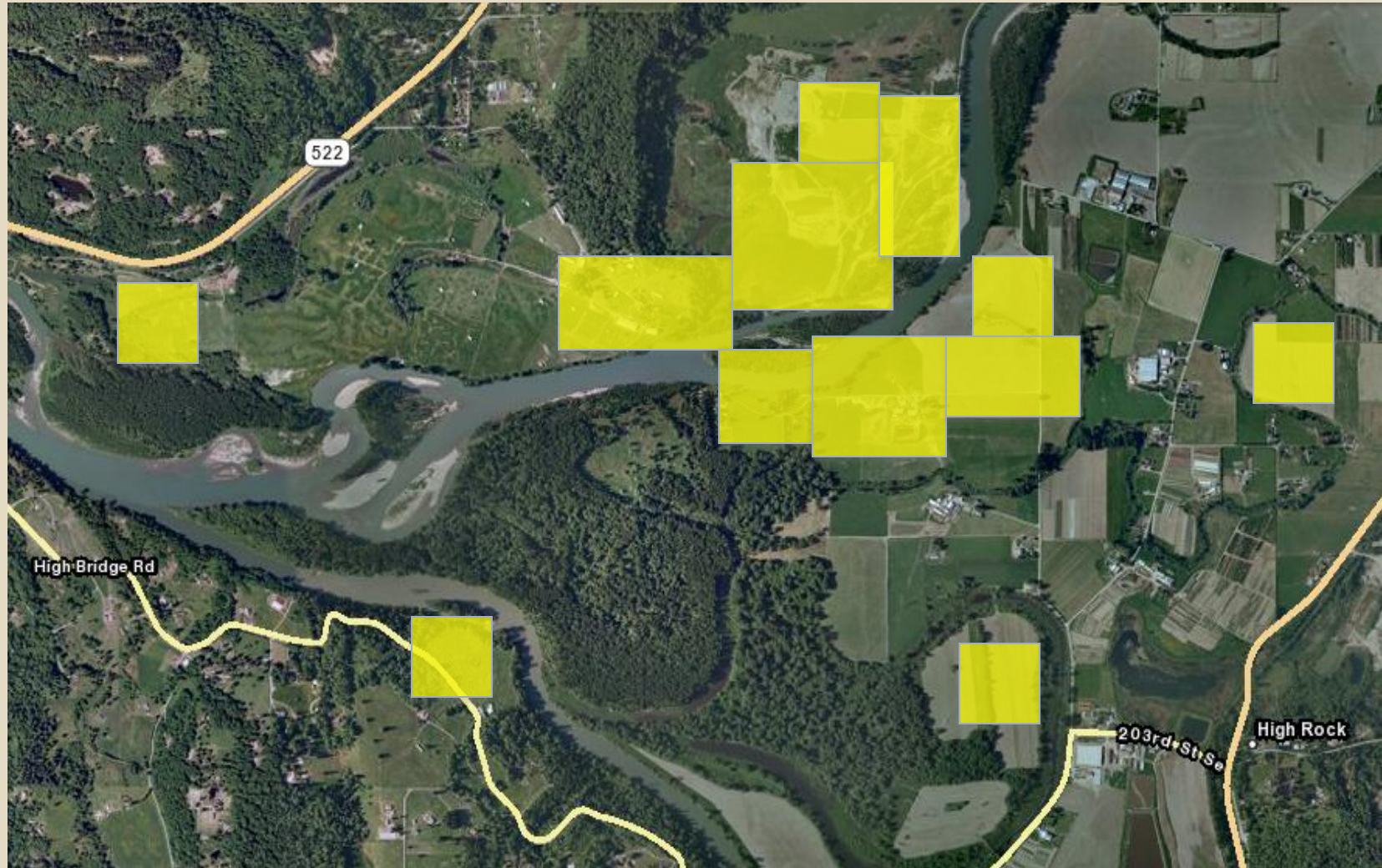


Moving from a Scattershot Approach...





To a More Strategic Product





One Option: A

Conservation Cooperative?



- Borrowing concepts from traditional commodity marketing cooperatives**
- Share costs of credit production (planting, maintenance, etc.)**
- Share costs of verification, monitoring and other market requirements**
- Share risks of credit failure**
- Seek new market opportunities**



Participating in Market Development



- DoE policies on water quality trading (comment by 11/22)
- WCI on ag participation in regional GHG markets (offset policies)
- WSDOT on mitigation opportunities
- New local market initiatives in Whatcom County, Yakima Basin, Walla Walla, etc
- Let us know how we can help



A Few Specific Examples

- Swans & cattle graze together**
- Public education by PNW Direct Seed**
- Dairy digesters combine multiple benefits from single facility**
- Irrigators join forces for water leases**
- Etc. . . .**



**Questions,
Comments,
Suggestions . . .**

More information at:

www.farmland.org/environmentalmarkets

Diagram of an Environmental Market

