

## APPENDIX D

### Models for habitat mitigation markets and agriculture

The demand for environmental mitigation does not end with wetlands replacement. Damage to other kinds of environmental values can call for mitigation as well – most notably when that damage occurs to a clearly identified and limited habitat for wildlife that may go beyond wetlands.

Again, these “markets” are structured in various ways. But in this case, their funding is grounded in public demand that we protect wildlife, especially endangered wildlife. Implementation of that demand is through various state and federal laws, most notably through the Endangered Species Act.<sup>1</sup> Note that the agriculture examples typically involve some kind of easement.

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- ***Hickory Pass Ranch - TX<sup>2</sup>***

The Johnston family of Hickory Pass Ranch faced a struggle to remain economically viable and pass their land on to future generations. The ranch is located in the Hill Country, near Austin, Texas. In addition to supporting a 3,000 acre cattle operation, the Ranch is also excellent habitat for the endangered golden-cheeked warbler and so of considerable interest to the U.S. Fish and Wildlife Service. Unfortunately, the Service did not have the funds to buy the property and the Johnston’s didn’t want to sell – preferring that it stay in ranching and pass intact to their three daughters.

Rather than selling the property, the landowner entered into a conservation easement and committed to using standard stewardship management practices. In exchange, U.S. Fish & Wildlife Service will certify the creation of “conservation credits” that can be sold to businesses, developers, and local governments that need to mitigate their impacts on other habitat areas in the region. A draft Regional Habitat Conservation Plan for Williamson County, TX, indicates that the Johnston family may receive payments for these credits through the HCP alone amounting to some \$7 million over the next few years. In addition, it appears the bank received payments for adverse impacts of a key state highway, a major county road, and a private development.

#### Considerations:

The Hickory Pass Ranch case illustrates the possibility for a win-win that can help keep farms in profitable private ownership while also serving environmental needs. Had the U.S. Fish & Wildlife Service had the money, and had the landowner been inclined, this long-standing family ranching operation could have ended up in public ownership. Instead, using a conservation marketplace, it remained in private agriculture. Apparently the management required is somewhat detailed, but the landowner is receiving substantial payment – hopefully in amounts that are worth the effort. This is also an illustration of how an operating agricultural operation can itself potentially become a conservation bank.

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• **Gordon Dairy – Grays Harbor County, WA**<sup>3</sup>

Jay Gordon, the highly respected Executive Director of the Washington State Dairy Federation, is himself operator of a multi-generational family dairy farm near Elma WA. A small patch of the Gordon farm turned out to be a critical habitat area for migratory trumpeter swans whose numbers have been in decline and whose habitat had been affected by removal of dams on the Elwha River which drains out of the Olympic National Park into the Strait of Juan de Fuca along the North shore of Washington’s Olympic Peninsula. Working with the Trumpeter Swan Society and using dam removal mitigation funding from the National Parks Foundation, the Gordon family sold a 55-acre easement on the key property. The easement basically requires that the land continue to be managed for sustainable livestock grazing in the same way the family had been doing as long as they had been in operation.

Payment for the easement was made in a single lump sum, but Gordon wanted to translate that payment into a permanent, income-producing asset for the farm that would be of use, not just to him, but also to future generations that would also live with the easement. Accordingly, he invested the easement payment in a large working barn-storage structure that will be of continuing economic value to the farm business in the years to come.

Considerations:

The translation of the lump sum payment into a farm income producing asset by the landowner, in this example, was a creative way to address discomfort with the permanency of the easement, even though the requirements of the easement should not disrupt farming activities in the foreseeable future.

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• **Farming for Wildlife – Skagit County, WA**<sup>4</sup>

Skagit County farmers Dave Hedlin, Gail Thulen, and Alan Mesman will, together, earn some \$350,000 for three years of labor, expense, and the use of 210 acres (70 acres each) of their land in an innovative integration of active agriculture with environmental services. Hedlin, Thulen,

and Mesman farm the rich Skagit River Delta – an area of tidal estuary and wetland that was diked by settlers when the Valley was settled in the 1860s.

The land they have dedicated to this project has been planted with clover and grass to enrich the soil. About 1/3 will be flooded at appropriate depths to produce habitat that is critical for migratory birds which are in decline specifically because of loss of local wetlands. Another 1/3 will be mowed. And 1/3 will be grazed by livestock or planted with row-crops. These three areas will be rotated so that the birds have habitat available for their migratory stopover, and the farmers take advantage of what they believe will be a substantial increase in fertility and soil productivity in the years when the land comes back from wetlands.<sup>5</sup> In effect, the birds become another rotational crop for the farmers to manage and for which they receive payment. And, for Hedlin, the project will also allow him to shift his 70 acres into organic vegetable production while being paid for the use of the land during the delay required for certification.

This project is a pilot in partnership with The Nature Conservancy and is funded with private and public funds including a grant from the U.S. Environmental Protection Agency. If it proves out in practice to be productive for agriculture, the goal is to potentially interest other farmers in the Valley to participate as well.

Considerations:

This pilot project was, of course, funded through public and private conservation investment, not through money generated by a formal marketplace. But if the practice of rotating agricultural lands with “walking wetlands” works as anticipated – with the farmers reaping a significant enhancement in productivity – it could turn out to pay for itself in the normal marketplace. In addition, the project provides “green market” for these farmers to the extent that they participate in direct sales to consumers. It could also prove to be a way to integrate certain types of wetlands and aquatic resource mitigation into traditional farming operations.

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• **Van Vleck Ranch – Sacramento County, CA**<sup>6</sup>

The Van Vleck Ranch runs 1,500 to 1,700 head of cattle on some 10,000 acres (about ½ of which is leased) in Eastern Sacramento County, CA. The family has been in business here for 150 years. But with high feed costs, fewer grazing acres available with farmers planting grain crops on land previously in irrigated pasture, and a drought, the operation has been struggling this year.

To supplement their income, the family recently sold a conservation easement that preserves 775 acres of their land for a conservation bank that includes the protection of wildlife habitat, a

vernal pool, and Swainson's hawk migration habitat. The purchaser was Westervelt Ecological Services, a real estate development firm involved in conservation banking. With approval of the transaction by the U.S. Corps of Engineers and other regulatory authorities, Westervelt will, in turn, be able to sell conservation banking credits to offset their environmental impacts caused by projects in other parts of the region. The arrangement is a joint venture between Westervelt and the Van Vleck Ranch.

The family will still graze cattle on the land and, according to Stanley Van Vleck: "(The arrangement) allows us to continue using the land in the way that we have for 150 years. Here's something where we can create, in perpetuity, benefits for the community. It also benefits our operations."

Considerations:

The joint venture arrangement between an experienced conservation banker and a private landowner suggested by this example seems useful – allowing the landowner to get on with the business of agriculture while allowing the conservation banker to deal with the details of regulatory approval, sale of credits, etc, and still getting the landowner payment for the environmental services provided.

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• **Bryte Ranch Conservation Bank – Sacramento County, CA<sup>7</sup>**

The Bryte Ranch is a family operation in Sacramento County, CA. Their property contained one of the largest vernal pools in the region. Their grazing on the surrounding property helped maintain unique vernal pool vegetation. The family partnered with a real estate brokerage firm, Charter Properties of Sacramento, to establish a bank that would allow them to continue to use the land for agriculture while receiving income from the sale of conservation credits.

Considerations:

There isn't a great deal of information about this example, but what there is suggests that it might be useful to illustrate, again, mixed conservation and agricultural uses allowing the landowner to extract income from both. Another interesting feature is the involvement of a real estate broker as a professional consultant in arranging this transaction.

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- **Campbell Ranch Conservation Bank**<sup>8</sup>

William and Buel Campbell, brothers now in their 70s, wanted to remain in sheep ranching while protecting their land for the long term. Their property is located in rural Solano County, CA and has been in their family for about 100 years. Fortunately, their land contains vernal pools and associated habitat which are an endangered ecosystem in California.

Working with a real estate firm: “Real Estate Solutions,” they learned about conservation banking and were able to become certified by the U.S. Fish & Wildlife Service as a conservation bank by placing a conservation easement on 160 acres of their land and committing to the continued use of conservation management. They will continue to graze sheep on the land and saw this as a solution for earning capital on the property without hurting the ranch.

U.S. Fish & Wildlife Services spokesman Jim Nickles commented: “We’ve found that selectively done and managed in a way that’s wildlife-friendly, grazing is good for vernal pool habitat.”

Considerations:

This is another example of a real estate firm providing consulting services for the landowner’s establishment of a conservation bank and of the possibilities for integrating active agriculture with the marketing of conservation values for an additional source of farm revenue.

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- **Fitzgerald Ranch Conservation Bank**<sup>9</sup>

Marden Wilber was looking for ways to add to the income of his 803-acre California cattle operation located near Clements in San Joaquin County, CA. He learned that a conservation bank (Wildlands, Inc) would pay to set it up as a conservation bank for the protection of vernal pools on his property. Wilber decided not to establish easements on the surrounding lands as buffers, but did protect 37 acres of pools and surroundings ground on which he became eligible to sell mitigation credits. The bank is intended to protect California tiger salamander, western spadefoot toad, and vernal pool fairy shrimp as well as plants associated with vernal pool habitat. The easement does not apply to the surrounding lands. Those lands continue as grazing lands.

This bank was created by the landowner directly so the owner could realize the full value of the property while remaining in agriculture. Conservation banking was appealing because it allowed

continued ranching without additional restriction while and provided additional revenue. The owner received 62 credits on the 37 acres and will receive about of \$65,000 per credit.

Considerations:

This landowner elected not to include the adjacent grazing lands in the easement but sold into the bank only protection for the pools themselves. Apparently there were delays and complications in dealing with the U.S. Fish & Wildlife Service that slowed the initial marketing of the credits.

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• **Southlands Forest – Decatur, GA**<sup>10</sup>

In the 1990's, International Paper (IP), a large timber landowner in the U.S. South, was struggling to deal with 18 family groups of endangered Red-Cockaded Woodpecker located on 1,300 acres of timberlands in four states – GA, LA, SC, and AL. This put a good deal of their land off limits. It seemed theoretically possible to simply move the bird groups to a single location and thereby free up the balance of their land for harvest and development. But in practice, the birds either don't survive such a voyage or they simply fly away when relocated. Instead, IP decided to simply breed the birds on a single 5,300 acre parcel of ground that was particularly well suited to Woodpecker habitat. The company turned this area, called the Southlands Forest Preserve, into perfect woodpecker habitat, relocating birds where necessary and possible. As of December 2003, they had 12 family groups located there and the project was progressing nicely with a goal of establishing 24-30 groups.

The idea behind the venture is based on an agreement with the U.S. Fish & Wildlife Service that sets the Southlands Forest aside as a conservation bank and allows the family groups located there to be used (and sold) as offset credits to mitigate for the loss of family groups located elsewhere. This, then, allows IP to fully utilize their lands in other locations and, when populations increase sufficiently, to potentially sell credits to others as well. Since woodpecker credits are said to be worth \$150,000 to \$250,000 each (per group), this turned out to be a highly profitable venture. And, because the birds are grouped together in a single, protected location, their population is growing, is healthy, and is much more likely to survive than if it had been left in isolated groups as it was before the project began.

Considerations:

This venture was one that was supported by the environmental group, Environmental Defense and by USF&WS because the smaller populations of birds seemed doomed, in any case. It worked for this very large landowner, but might not translate to a smaller landowner. While harvest is obviously limited on the Southern Forest preserve site, there is still some selective harvest taking place there and natural resource income being realized.

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• **Wildlands, Inc. – WA, OR, GA, NC, CA<sup>11</sup>**

Wildlands, Inc. is a conservation and wetlands mitigation banking firm headquartered in California but also involved in banking efforts here in the Pacific Northwest. They have projects in Skagit County (Nookachamps Mitigation Bank<sup>12</sup>), Snohomish County (Blue Heron Slough Conservation Bank) and Kitsap County (Blackjack Creek Mitigation Project).

Wildlands combines agriculture with conservation in a way that suggests possibilities for ag. The firm runs its own 600-head Hereford-Angus cattle operation, a herd of goats, and longhorn cattle to maintain grass heights at levels to meet habitat goals and the animals suppress invasive plants. This complements and enhances their habitat conservation objectives. Their Sacramento River Ranch in California is planted in 570 acres of wheat, 700 acres of walnuts, and 1,232 acres of irrigated hay, including 640 acres of organic alfalfa and grass hay. Wildlands says: “Relatively minor adjustments to irrigation schedules; weed control practices, and mowing patterns can make a field livable for threatened and endangered species.” They also have an on-site nursery for native plants like elderberries, oaks, cottonwoods, wild rose, ash and willows for restoration projects. According to Steve Morgan of Wildlands, about 10 percent of the conservation banks in California are joint ventures between landowners and conservation bankers.<sup>13</sup>

In addition to using agriculture as a tool to improve conservation values on banked lands, Wildlands also partners with ranchers wishing to increase revenue and protect their land. For example, an adjacent rancher might sell a conservation easement on some of his land and contract to use specified sustainable management practices in exchange for compensation by Wildlands that helps the rancher to sustain his cattle operation.

Considerations:

Wildlands’ operation suggests models for agriculture in two ways: With appropriate legal protections and conservation management, environmental values produced on (and integrated with) active agriculture can also be sold by the landowner as a conservation bank without unduly disrupting the agricultural operation. It also suggests that there are probably opportunities for landowners to work with existing conservation banking firms to form partnerships profitable for both that still allow a traditional farm or ranch to continue in operation.

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## ENDNOTES

<sup>1</sup> (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.) There are also state endangered species acts that drive such mitigation.

<sup>2</sup> Texas's Hickory Pass Ranch program is discussed in a US Fish & Wildlife Services press release (4/11/08) at: <http://www.fws.gov/news/NewsReleases/R2/BC6C6868-4DDC-4892-BC6B96EDA824DB4A.html>, in the Williamson County, TX, Regional Habitat Conservation Plan at: [http://www.williamson-county.org/Portals/0/Departments/Conservation\\_Foundation/RHCPExecSummary.pdf](http://www.williamson-county.org/Portals/0/Departments/Conservation_Foundation/RHCPExecSummary.pdf), and in Environmental News Service (4/12/02) at: <http://www.ens-newswire.com/ens/apr2002/2002-04-12-09.asp#anchor7>. Also see: "A Practical Guide to Habitat Conservation Banking Law and Policy" Ruhl, Glen, & Hartman (ABA, Natural Resources & Environment, Summer 2005) on line at: <http://www.law.fsu.edu/faculty/profiles/ruhl/2005-HabitatBanking20NRESummer.pdf>. Also see "Landowners Bank on Conservation" (ELR 8/04) on line at: <http://www.forest-trends.org/biodiversityoffsetprogram/BBop%20library%20/United%20States%20-%20All%20Not%20Printed/Landowners%20Bank%20on%20Conservation.pdf>.

<sup>3</sup> American Farmland Trust participated in developing this transaction. The best source of information would be making contact with Jay Gordon as indicated.

<sup>4</sup> The Farming for Wildlife project was written up in the New York Times article: "Farmers and Conservationists For a Rare Alliance," Jessica Kowal (New York Times, 12/27/06), at: <http://www.nytimes.com/2006/12/27/us/27farm.html?partner=rssnyt&emc=rss>.

<sup>5</sup> In the Tule Lake National Wildlife Refuge in Northern CA, a similar practice has been underway for several years. Farmers report better yields with fewer pest problems. New York Times article, Ibid. Also see article in Sightings "Back to the Birds" (The Nature Conservancy) at: <http://www.nature.org/magazine/summer2007/misc/art20866.html>.

<sup>6</sup> The Van Vleck conservation easement/bank story was reported in the Sacramento Business Journal for 9/19/08 at: <http://www.bizjournals.com/sacramento/stories/2008/09/22/story8.html?b=1222056000^1703114&t=printable>.

Also see Westervelt site at: <http://www.westerveltecologicalservices.com/projects/>.

<sup>7</sup> See article in Outdoor California (May-June 2004 pg. 28) by Tina Bartlett at:

[http://www.dfg.ca.gov/ocal/archives/M\\_J\\_04\\_28-31.pdf](http://www.dfg.ca.gov/ocal/archives/M_J_04_28-31.pdf).

<sup>8</sup> See article in San Francisco Chronicle, 5/6/05, Erin Hallissy, "Brothers turn ranch into conservation bank" at: <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/05/06/BAGC8CL3NA1.DTL&type=printable>. Also see Real Estate Solutions, Inc., website materials at: <http://www.r-e-solutions.org/crcb.htm>.

<sup>9</sup> See "A Nationwide Survey of Conservation Banks," (NOAA Fisheries, Northwest Fisheries Science Center, Prepared by: Stratus Consulting Inc., Boulder, CO), (303) 381-8000 Pg. A-25 at: [http://www.st.nmfs.noaa.gov/st5/documents/Stratus%20Consulting\\_Conservation%20Banking\\_Final.pdf](http://www.st.nmfs.noaa.gov/st5/documents/Stratus%20Consulting_Conservation%20Banking_Final.pdf). Also see a broadcast by California Heartland "Conservation Cowboys" on the Marden Wilber Ranch at: [http://www.californiaheartland.org/this\\_season/episode\\_911/transcript.htm](http://www.californiaheartland.org/this_season/episode_911/transcript.htm).

<sup>10</sup> See "A Nationwide Survey of Conservation Banks," (NOAA Fisheries, Northwest Fisheries Science Center, Prepared by: Stratus Consulting Inc., Boulder, CO), (303) 381-8000 Pg A-67 at: [http://www.st.nmfs.noaa.gov/st5/documents/Stratus%20Consulting\\_Conservation%20Banking\\_Final.pdf](http://www.st.nmfs.noaa.gov/st5/documents/Stratus%20Consulting_Conservation%20Banking_Final.pdf). Also see Ecosystem Marketplace "Banking on Endangered Species Conservation" by Robert Bonnie, at:

[http://www.ecosystemmarketplace.com/pages/article.news.php?component\\_id=639&component\\_version\\_id=712&language\\_id=12](http://www.ecosystemmarketplace.com/pages/article.news.php?component_id=639&component_version_id=712&language_id=12) and New America Foundation "Making Money in Environmental Derivatives," 3/1/02, at: [http://www.newamerica.net/publications/articles/2002/making\\_money\\_in\\_environmental\\_derivatives](http://www.newamerica.net/publications/articles/2002/making_money_in_environmental_derivatives).

<sup>11</sup> Much of the material in this section comes from Wildlands' website which discusses their relationship with agriculture at: <http://www.wildlandsinc.com/agriculture.html>.

<sup>12</sup> At the moment, mitigation banks are the subject of some controversy in Skagit County. Several farm groups (including Skagitonians to Preserve Farmland, Skagit County Farm Bureau, and Friends of Skagit County) recently appealed County approval for a bank owned by a different company, the Clear Valley Environmental Farm, on the basis that it is not an allowed land use in an agricultural zone. See "Appeal Filed Against Wetland Mitigation Bank," Cookson Beecher (Capitol Press, 4/11/08) at:

<http://www.capitolpress.info/main.asp?SectionID=94&SubSectionID=801&ArticleID=40795&TM=54254.46>.

<sup>13</sup> See Sacramento Business Journal at:

<http://www.bizjournals.com/sacramento/stories/2008/09/22/story8.html?b=1222056000^1703114&t=printable>.