MESSAGE FROM THE CHAIR
Rebecca R. Turner

It is my pleasure to serve as the chairperson of the Forest Resources Committee during the 2014–2015 term. I want to thank the committee membership and especially the vice chairs for their service last year, and I look forward to working with you all again in the new term.

The vice chairs and I look forward to a new year of forest resources updates, programs, newsletters, and as always the Year in Review. You can check out the 2013 Year in Review online at the Section website: http://www.americanbar.org/publications/year_in_review_home/year_in_review_2013.html.

We would like to thank all our members who attended the 22nd Fall Conference of SEER in Miami, Florida. The conference included sessions designed for environmental lawyers with forest resource interests including: “The Restoration of America’s Everglades—Water Quality, Quantity and Timing”; “The Endangered Species Act and Migratory Bird Treaty Act: Finding Innovative Solutions to Mitigate Risk and Minimize Liability”; and “Understanding the Evolution of the Department of Interior’s Approach to Land Planning and Management.” For those of us with urban forest interests: “Considering Brownfields Redevelopment? Potential Impacts and Updates to Your Client’s Bona”; and “How Final Is Final? Changing Remediation Requirements and Brownfields Transactions.” If you missed the fun this year in Miami, hopefully you’ll be able to make it next year.

Congratulations to our newsletter vice chair and contributors for this inaugural newsletter for the 2014–2015 year. We look forward to an active new Section year with you.

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Visit the committee webpage: www.ambar.org/EnvironCommittees
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For full details, please visit www.ambar.org/EnvironCalendar

November 18, 2014
Environmental Accidents: Nuts and Bolts for Counsel in Times of Crisis
CLE Webinar

November 25, 2014
Impacts of Fracking on Property Valuation
CLE Webinar
Primary Sponsor: Section of State and Local Government Law

January 23-25, 2015
Winter Council Meeting
Dana Point, CA

March 26-28, 2015
44th Spring Conference: The ABA Superconference on Environmental Law
The Palace Hotel
San Francisco, CA

April 15-17, 2015
Section of Litigation’s Annual Conference
New Orleans, LA
Primary Sponsor: Section of Litigation

April 16-17, 2015
ABA Petroleum Marketing Attorneys’ Meeting
The Loews Madison Hotel
Washington, DC
Introduction

This article explores the experiences of urban forest stakeholders in California as they engage policy makers and create opportunities for urban forest projects within the state’s emerging climate change policies and programs. It briefly explores the challenging national and international context for these urban forest projects, and then discusses California’s extraordinary achievements advancing climate change policies and programs, including the development of urban forest project protocols. While these achievements rest upon a complex and innovative framework that is sure to encounter policy and legal challenges, California has provided one of the world’s greatest policy experiments in addressing climate change, and there is much to learn from its experience.

Policy and Market Context

In global discussions and activities related to climate change and carbon mitigation, urban forests have received relatively little attention, while traditional forests have received more attention for their current and potential future roles as terrestrial carbon sinks. As markets have emerged for carbon-offset projects over the past decade or more, many of the protocols for these markets have included forest projects, such as reforestation, improved forest management, and forest protection. Few markets, however, have included project protocols for urban forests.

Only two protocols have been established to help guide the development of urban forest carbon projects, and these have seen limited application. One is the Widely Spaced Trees category in the Chicago Climate Exchange’s 2009 Forestry Carbon Sequestration Protocol, for which only one project was submitted. The other is the Urban Forest Project Protocol of the Climate Action Reserve (CAR), adopted in 2008 and revised in 2010, which had one project receive initial approval.

A 2011 study entitled “Voluntary Carbon Markets for Urban Forestry: A Quick Guide for Community Forestry Practitioners,” Danks et al., described the organizations that have developed voluntary carbon market projects as “pioneers,” forging new trails by working out each component needed for a viable carbon project and playing multiple roles for which there might be assistance in a more mature carbon market. One major challenge for these pioneer groups has been assuring the quality of their carbon projects. As the broader voluntary markets have matured—and as compliance-based markets have begun to emerge—project investors, or purchasers of carbon credits, have sought greater assurance that their carbon credits are additional, real, and permanent. While many carbon projects have been able to address quality assurance through the application of well-accepted protocols, urban forestry projects have not had the benefit of such protocols until recently.

The study by Danks et al. also found that urban forestry practitioners and carbon market experts consider urban forest projects to be very promising because they not only sequester carbon, they also provide other valuable co-benefits such as energy savings, storm water mitigation, and air quality enhancement. These co-benefits might be expected to enhance project value overall. However, if they are seen as non-market or intangible values, they might only make the project more complex and, possibly, more costly. The authors reported that the same practitioners and experts that saw great promise also noted that urban forestry projects face special challenges to participating in carbon markets. Urban forestry projects are not considered one of the “low-hanging fruit” among carbon-offset options, e.g., they do not provide the greatest amount of carbon for the lowest cost, such as tropical forest protection or methane capture options. Furthermore, they need to be implemented in complex and dynamic urban environments. Therefore, the emerging carbon markets have not yet fully developed the infrastructure to guide and support urban forest projects. That infrastructure is currently being built...
through efforts to apply the urban forest protocol and to test other ideas through pilot projects.

California’s Urban Forest Opportunities and AB 32

California is at the forefront of efforts in the United States to develop policies and projects that address climate change. The state’s Global Warming Solutions Act of 2006, or AB 32, requires California to return to 1990 levels of greenhouse gas emissions by 2020. Over the past six years, the state has developed a framework of policies and market mechanisms to achieve this goal, including sector-specific offset protocols and a cap-and-trade program to enable the marketing of carbon credits.

Urban Forest Protocol

California’s first urban forest protocol was developed by CAR in 2008 and approved by the California Air Resources Board (CARB) in 2010 as part of the cap-and-trade program. Greg McPherson, a research forester with the U.S. Forest Service’s Pacific Southwest Research Station, prepared an article discussing the new Urban Forest Project Reporting Protocol and what it means to urban forestry groups. E. Gregory McPherson, *Urban Forestry and Carbon: What the Reporting Protocol Means to You*, ARBORIST NEWS at 31 (Dec. 2008). The article explained how urban forests reduce carbon dioxide and how they can make a difference in California through efforts to fill the 242 million empty tree-planting sites in California cities. See E. Gregory McPherson & James R. Simpson, *Potential Energy Savings in Buildings by an Urban Tree Planting Programme in California*, 2 URBAN FORESTRY & URBAN GREENING 65, 73 (2003). For example, if 50 million trees were planted at these sites, they would sequester 4.5 million tons of CO₂ annually. If those 50 million trees were planted strategically to shade residential buildings and reduce air-conditioning energy use, they could increase the estimated total reduction in CO₂ annually to 6.3 million tons, which is 3.6 percent of the statewide goal for CO₂ reduction. Though there was some initial enthusiasm for the first urban forest protocol from stakeholders, it dissipated quickly after shortcomings and unforeseen challenges surfaced, as discussed below.

Urban Forest Protocol Revisited

Urban forestry stakeholders discussed many of their concerns with the initial protocol at a 2012 workshop in Davis, California, attended by nearly 100 participants from diverse organizations around the state. Representatives from CAR and CARB were present to hear the concerns and respond to questions about this first urban forest protocol. A synopsis of the workshop described the key hurdles to implementation. See E. Gregory McPherson, Synopsis of Carbon Offsets & the Urban Forest Workshop (June 6, 2012). Workshop presentations and related resources are available on American Forest’s website at http://www.americanforests.org/our-programs/urbanforests/urban-forests-tools-resources/carbon-offsets-and-the-urban-forest/.

CAR’s initial urban forest project protocol was limited to tree-planting projects. This narrow focus created some difficult challenges, such as measuring and monitoring carbon offsets at the individual tree or site level, particularly given the dynamic nature of urban environments. Another barrier was the uncertainty and risk associated with urban forest projects, particularly related to the 100-year permanence requirement, which requires all forest projects maintain carbon benefits credited to a project for 100 years following the issuance of any offset credit. Also, potential project developers expressed concern over the strict requirements within the protocol, such as meeting the net tree gain performance standard which measures trees as the annual number of trees planted minus the annual number of trees removed by an entity, such as a municipality or educational campus, and understanding the implications of long-term monitoring and verification requirements. But most importantly, the total cost of planting projects exceeded offset revenues by a significant amount because of the high initial investment required for planning, planting, and verification, as well as ongoing costs for maintenance, monitoring, and quantification. The narrow scope of the protocol excluded opportunities to better manage the sequestered and stored carbon in existing trees and avoid carbon lost when existing trees are removed for
new development. Between the numerous requirements embedded in the protocol, high project costs, and lack of infrastructure to support new projects, the challenges were simply too great for most communities to take on.

Shortly thereafter, Greg McPherson suggested an alternative protocol approach that would address a number of the key issues by focusing on the urban tree canopy instead of individual tree sites. California’s Department of Forestry and Fire Protection ultimately interceded and provided funding for CAR to create a task force to revisit and revise the urban forest protocol.

The draft of the revised protocols, open for public comment, was released in March 2014. CAR notes on its website that “the objective of this revision is to develop a revised protocol that will make it more feasible for urban forest projects to be implemented while still meeting regulatory-quality standards for carbon offset development.” See http://www.climateactionreserve.org/how/protocols/urban-forest/rev. Among the multiple issues addressed by CAR are introducing a new protocol focused on management of the entire urban forest, streamlining the tree planting protocol, and increasing use of remote sensing technology for monitoring.

To date, the revised protocols have received mixed feedback from urban forestry stakeholders. In a letter to CAR dated April 24, 2014, the Sacramento Tree Foundation applauds “the inclusion of a Planting Baseline developed per Performance Standards for each type of entity, so that innovative early adopters are encouraged to expand their work and serve as role models for others in their sector.” However, California Urban Forests Council Executive Director Nancy Hughes notes in her comment letter from April 2014 that “[e]ven though the new draft protocols are improved and maintain their rigor and ensure permanence, appropriate documentation and verification, etc., the economic, legal and logistical hurdles are still too great to enroll significant participation.”

CAR is continuing stakeholder conversations prior to considering adopting the revised protocols.

**Cap-and-Trade Program**

Another opportunity that may help ensure urban forest projects are recognized as legitimate greenhouse gas (GHG) reduction investments is the allocation and expenditure of revenues generated by the auctioning of carbon allowances within California’s Cap-and-Trade Regulation, 17 Cal. Code Reg. § 95802(a)(4).

Under AB 32, all major sources of GHG emissions are capped and must be gradually reduced to 1990 levels by 2020. Major emitting entities have to obtain “allowances,” which are tradable authorizations, like permits, for each metric ton of GHG they emit. These allowances are purchased at state auction or from other parties (or in some instances are distributed for free by CARB). Money generated from these auctions is typically known as “cap-and-trade auction proceeds.”

In the seven auctions to date the state has generated over $734 million, but the program is expected to generate billions more through 2020. See Mac Taylor, The 2014–15 Budget: Cap-and-Trade Auction Revenue Expenditure Plan (Feb. 2014); Environmental Defense Fund, California Cap-and-Trade Updates, available at http://www.edf.org/california-cap-and-trade-updates. According to state law, this money must be spent on projects that reduce GHG emissions.

**Urban Forest Projects and Auction Proceeds**

On June 20, 2014, Governor Brown signed a 2014–15 state budget that included $872 million in cap-and-trade auction-proceed investments based largely on his administration’s proposals from January 2014. Within the plan is an appropriation of $17.8 million for the Urban and Community Forestry Program that is administered by the California Department of Forestry and Fire Protection. Urban forestry stakeholders believe this is the largest single-state annual allocation for urban forestry in U.S. history.

Now that urban forestry will be funded through cap-and-trade auction proceeds, it could open the door to
new opportunities to implement both small- and large-scale projects that reduce GHGs while showcasing additional benefits such as improved water quality and energy conservation. Though these projects may not be required to meet the same level of regulatory rigor as carbon-offset projects under the CAR protocols, they will still need to meet criteria for ensuring GHG reductions developed by CARB. Under state statute, a significant amount of the auction proceeds must be used on projects that benefit disadvantaged communities and create opportunities for social equity and environmental justice through green infrastructure. If first-year investments are successful, it is likely subsequent state budgets would continue to provide funding for urban forestry from auction proceeds. In a recent development, Governor Brown signed SB 862 into law in June 2014, which mandated that 40 percent of all cap-and-trade auction proceeds will be appropriated on an annual basis for a finite list of specific purposes, including urban forestry.

Ongoing Litigation with Implications for Urban Forests

AB 32’s commitment to an enforceable and economy-wide emissions cap was a first of its kind effort in the United States; as such, AB 32 programs have faced their share of legal challenges. Although several cases continue in the courts, decisions to date have been largely in favor of the state. Three of these cases have direct relevance to the future of urban forests.

Citizens Climate Lobby and Our Children’s Earth Foundation v. California Air Resources Board, No. CGC-12-5195544 (Cal. Super. Ct., Jan. 25, 2013). Two environmental groups challenged the offsets component of California’s cap-and-trade program, arguing that CARB had not complied with AB 32’s requirement that all offsets must be “additional”—i.e., that the emission reductions produced by any offset must be above and beyond what would have happened in the absence of the offsets credit. Two different environmental groups and a coalition of business interests filed separately on behalf of the state to defend the program and the existing process of approving offsets. In January 2013, the superior court in San Francisco ruled that CARB had complied with AB 32 and could move forward with implementing its offsets program. Our Children’s Earth appealed the superior court ruling and while the case has been briefed, it is still pending in the California Court of Appeal, Fifth District. A negative decision by the court of appeal may potentially invalidate the urban forest protocol currently incorporated into the cap-and-trade program.

California Chamber of Commerce v. California Air Resources Board consolidated with Morning Star Packing Co. v. California Air Resources Board, No. 34-2012-80001313 (Cal. Super. Ct., Nov. 12, 2013). In these similar challenges, the California Chamber of Commerce and the Pacific Legal Foundation, on behalf of Morning Star Packing Co. and other small business plaintiffs, both challenged CARB’s authority to hold cap-and-trade auctions, and alleged that the auctions constitute an illegal tax under the California Constitution. The trial court ruled in favor of the state, holding that AB 32 did provide CARB the authority to conduct auction allowances. The court also stated that the auction revenue constituted a permissible fee under state law because the revenue will be used to reduce GHG emissions and further the purposes of AB 32. The decision was recently appealed to the California Court of Appeal, Third District, and will be briefed in the coming months. Future court decisions concerning cap-and-trade auction revenue (whether it constitutes a tax or a fee) have implications both for whether the state retains the ability to collect revenue via auction (and thus fund investments like urban forestry) and whether any restrictions exist for the uses of auction proceeds.

Transportation Solutions Defense and Education Fund v. California Air Resources Board, No. 14CECG01788 (Cal. Super. Ct., filed June 23, 2014). The most recent case comes from a transportation-focused nonprofit that has challenged both (1) the inclusion of a high-speed rail project in CARB’s plan to implement GHG reductions (known as the AB 32 Scoping Plan) and (2) partially funding the high-speed rail project with cap-and-trade auction proceeds. The plaintiff has based its case on authority under AB 32 and the California Environmental Quality Act and argues that high-speed rail will not effectively reduce GHG emissions. The case is still in the preliminary stages. But because, under AB 32, auction proceeds
must be used to reduce GHG emissions, the parameters of what this means are not yet clear and there could be further challenges testing specific uses of cap-and-trade auction proceeds. Cases like this one could establish a precedent concerning the record that a state agency must develop in order to fund projects like urban forestry.

Conclusion

Climate change presents incredibly complex social, economic, and environmental challenges. Policy makers and stakeholders in California have made important strides in developing policies and programs to address climate change over the past decade. While the experience has been challenging every step of the way, the state has succeeded in passing landmark legislation in AB 32, creating a cap-and-trade program, and establishing funding sources—through auction revenues—to implement climate change actions.

Urban forest stakeholders have worked with scientists, practitioners, and policy makers to develop a unique protocol for tree-planting projects and revise the protocol to address flaws. One of the most intriguing elements of the California experience has been the open process through which diverse stakeholders have engaged and agreed upon solution-oriented approaches to climate change challenges. As the challenges become more real and practical, such as developing and implementing urban forest projects with proceeds from auction revenues, the potential for both disagreement and legal conflict may increase. However, the open and collaborative learning processes employed by the state through entities such as CAR and CARB have resulted in real progress and may reduce future conflict. Moving forward, it is a lesson in urban forestry and, more broadly, GHG reduction projects as a whole.

Gerry Gray is a forest policy expert who currently serves as a policy consultant with the Alliance For Community Trees in Washington, DC. He formerly worked with American Forests, a national nonprofit conservation organization, for 25 years, most recently serving as senior vice president (2011–2013) and as interim executive director (2010).

Greg McPherson is a research forester with the U.S. Forest Service, Pacific Southwest Research Station in Davis, Calif. He has measured and modeled effects of city trees on energy, water, and carbon for 30 years.

Chuck Mills has spent almost 20 years in the field of public lands, currently working as the grants manager for California ReLeaf. He previously served as the associate director for the California Council of Land Trusts and the program manager for Trust for Public Land.

Erica Morehouse is an attorney with the Environmental Defense Fund, focusing on transportation and the policy and legal aspects of implementing California’s landmark Global Warming Solutions Act of 2006 (AB 32).
The increasing cost of fire suppression in the United States has become a budgetary concern for the administration, Congress, and hundreds of interest groups, impacting the mission goals of the USDA Forest Service (USFS) and Department of the Interior (DOI) associated with federal, tribal, state, local, and private land management. Longer fire seasons, increased development in the wildland-urban interface, and millions of acres of forests with fuel loads exceeding the historic range of variability are among many factors contributing to increasing suppression costs. Despite the continuous rise in suppression costs, the USFS and DOI are often underfunded, forcing the transfer of funds from non-suppression accounts to make up for the shortfall. This cycle of “robbing Peter to pay Paul” has proven inefficient and unsustainable. A majority of interested parties look to the Wildfire Disaster Funding Act, a proposed House and Senate bill, as a solution to this funding challenge.

The incidence of large wildfires in western forests has increased four times the average from 1970 to 1986 as the length of the wildfire season has increased 64 percent, or 78 days, by the same average measure. A.L. Westerling et al., Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity, 313 SCIENCE 940 (2006), available at http://www.sciencemag.org/content/313/5789/940.full?sid=0df89adb-1aa8-4f95-9c48-99538f770cbe. Concurrently, the cost of wildfire suppression has increased at an average annual rate of 22.34 percent since fiscal year (FY) 1985. National Interagency Fire Center, Fire Suppression Cost Data, available at http://www.nifc.gov/fireInfo/fireInfo_documents/SuppCosts.pdf. Simultaneously, the budgets of the agencies responsible for wildfire response, the USFS and DOI, remain relatively flat. The USFS is especially impacted. In 1991, wildfire management activities, the majority of which were suppression, accounted for 13 percent of the USFS budget. Today, wildfire management activities are reaching close to half of that agency’s budget.

Wildfire suppression is funded annually through the Interior, Environment, and Related Agencies (Interior) appropriations bill and is based on a ten-year average calculation. Although this average continues to increase, it has rarely met suppression funding needs through the end of the fiscal year. When suppression funding is expended prior to the end of the fiscal year, the USFS and DOI have the authority to transfer resources from non-suppression programs. Since FY2000, suppression funding has run short and necessitated fire transfers, emergency supplemental, or both.

This practice of “fire transfers,” also called “borrowing,” negatively affects the full range of land management activities, including the ones that would decrease long-term wildfire risk and costs. The transfers lead to canceled and delayed projects, which in turn impact overall agency budgets and programs. In many cases, even the threat of transfer has impacts—when the agency is directed to stop spending, activities cease as well. In most years, these transactions were repaid through an emergency supplemental appropriation. Often, repayments do not translate into projects “picking up where they left off” and instead are redirected to other projects.

However, there have been no emergency supplemental appropriations in the last two years. Instead, the repayments have come off the top of the next fiscal year’s Interior appropriations bills, leaving less for the remaining agencies and programs funded by the Interior appropriations bill. In the last two years, $1 billion was taken from the FY2013 and FY2014 Interior appropriations bills to repay FY2012 and FY2013 transfers to the USFS and DOI ($448M in FY2012 and $630M in FY2013). What was once a strain limited to DOI and the USFS, now impacts all agencies and programs funded through the Interior appropriations bill. These conditions were not expected to improve for the FY2014 fire season, which was forecasted to be underfunded by an estimated $470 million. A few weeks prior to the end of the season, the USFS directed the agency that transfers were imminent in the amount of $400 million.
This directive, which was later reversed, required that the agency hold back on funding and, consequently, activities in anticipation of the transfers. With a few weeks left before the end of the fiscal year, the agency had to scramble to identify projects with the held funds. Again, this is not an effective or sustainable way to manage an agency. In the end, the FY2014 fire season turned out to be mild compared to prior years and required no transfers. And yet early reports indicate that the USFS had a $200 million shortfall in fire suppression funding.

To summarize current budget conditions, the USFS and DOI suffer two impacts: at the front end and at the back end of the fiscal year. At the beginning of the year, the ten-year average allocation for suppression leaves less for other agency programs. Then programs are hit a second time when the USFS and DOI flex their transfer authorities to make up for the suppression shortfall. This decades-long problem has been primed for a fix.

In 2009, the enactment of the Federal Land Assistance Management and Enhancement (FLAME) Act was intended to solve the problem of increasing suppression costs and transfers by creating reserve accounts for the USFS and DOI. 43 U.S.C. § 1748a. These accounts were to be funded in excess of the ten-year average, which would significantly reduce the need to transfer. In the first two years (FY2010 and FY2011), the FLAME accounts experienced very mild fire seasons resulting in the carrying over of the accounts’ end-of-year balances into following fiscal years.

However, suppression began to be funded differently when the looming fiscal cliff became a factor as FY2012 budgets were developed. Consequently, not only were FY2011 carry-over levels in FLAME rescinded, but FLAME levels were also calculated differently. Since FY2012, the ten-year average has been split between annual suppression and FLAME reserve accounts and subject to sequestration cuts. Since then, suppression, including FLAME, was not funded at levels greater than the ten-year average, again leaving the USFS and DOI with insufficient suppression funding and a cascading effect transferring and repaying from the following fiscal year’s appropriations.

The FLAME Act did not require the FLAME reserve accounts be funded at levels higher than the ten-year average, but was intended to be funded as such:

It is the intent of Congress that, for fiscal year 2011 and each fiscal year thereafter, the amounts requested by the President for a FLAME Fund should be not less than the amount estimated by the Secretary concerned as the amount necessary for that fiscal year for wildfire suppression activities of the Secretary that meet the criteria specified in subsection (e)(2)(B)(i). 43 U.S.C. § 1748a(d)(2)(B).

It was clear that another solution was needed. In the summer of 2013, when the administration notified Congress of the need to transfer $636 million from non-suppression accounts, two Democratic and two Republican members of the U.S. Senate sent a letter to the White House requesting a plan for reforming wildfire budgeting. Letter from Senators Wyden, Murkowski, Udall, and Risch to Director Burwell, OMB, Secretary Vilsack, USDA, and Secretary Jewell, DOI (June 28, 2013), available at http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=a797bf00-f421-414d-8fca-bdcfe1481728. The letter stated:

When the budgeted amount is insufficient, the agency continues to suppress fires by reallocating funds from other non-fire programs. . . . This approach to paying for firefighting is nonsensical and further increases wildland fire costs.

During this time, the Fire Suppression Funding Solutions Caucus, a coalition of diverse partners representing environmental, tribal, sportsmen, commissioners, state agencies, townships, timber groups, and many more interests, became reenergized as a result of a second year of high-level transfers for suppression. This coalition first came together in 2009 in an effort to solve the problem of fire transfers in a way that would not impact other agency programs. The coalition supported the FLAME Act and, since its enactment, made annual requests to the administration and Congress to allocate appropriate funding levels to the USFS and DOI annual suppression and FLAME reserve accounts. When the FLAME accounts were no longer funded at levels higher than the ten-year
suppression average, the coalition began to consider
the concept of funding suppression similar to other
natural disasters, like hurricanes, floods, and tornados.
And in the fall of 2013, the coalition began requesting
that Congress provide a funding solution that would
place the increasingly larger, more intense, and costly
wildfires on par with other natural disasters.

The Wildfire Disaster Funding Act (WDFA) was
introduced in the Senate at the end of 2013 (S. 1875)
and in the House at the beginning of 2014 (H.R.
3992). WDFA aims to improve the fiscal planning for
expected disasters by funding a portion of wildfire
suppression through a budget cap adjustment to the
Balanced Budget and Emergency Deficit Control Act
of 1985, as amended by the Budget Control Act of
2011. 2 U.S.C. § 901(b)(2). The Interior
appropriations bill would be responsible for funding 70
percent of the ten-year average while additional
suppression levels would be appropriated from a
disaster cap adjustment for wildfire, not to exceed
$2.689 billion a year. This approach would relieve the
USFS and DOI from the impacts that result from
transfers when suppression funding is exhausted.

In the spring of 2014, the administration’s budget for
FY2015 included a proposal similar to WDFA that
would access the disaster cap for wildfire suppression.
The administration proposal went into additional detail
compared to the legislation, including how to contend
with the FLAME reserve accounts and criteria for
accessing the wildfire disaster cap adjustment.
Furthermore, the FY15 budget proposal was crafted in
expectation of enactment of its new funding scheme
and provided funding recommendations for
suppression from both Interior appropriations and the
wildfire cap adjustment. The levels requested from the
cap adjustment are based on 30 percent of the ten-
year average and anything above the ten-year average
(which is currently funded through fire transfers) based
on confidence intervals predicted by out-year
suppression expenditure forecast. USDA Forest
Service FY2015 Budget Justification, at 9-9,
available at http://www.fs.fed.us/aboutus/budget/

Concerns have been raised about WDFA, including its
impacts on the federal budget. The Congressional
Budget Office found that WDFA would not authorize
any additional funding for suppression through the
normal appropriations process and would therefore
have no effect on the federal budget. Congressional
Budget Office. Letter to the Honorable Ron Wyden
Regarding S. 1875, the Wildfire Disaster Funding
Act of 2013, and H.R. 3992, the Wildfire Disaster
Funding Act of 2014 (May 2014), available at http://
/www.cbo.gov/publication/45337. However, fiscally
conservative members of both the House and Senate,
particularly those associated with the budget
committees, are concerned that this bill would violate
the budget agreements reached in 2011. Leaders of the
legislation in turn respond that because funding
disasters are part of the budget agreements and
because some wildfires are disasters, funding wildfire
disasters does not violate any agreements.

In the meantime, a ground swelling of support for
WDFA within Congress and among interest groups
continues. Both House and Senate bills are bipartisan
and continue to gain cosponsor support. The coalition
has grown to over 230 organizations supporting the
legislation. Other groups are also working alongside
the coalition in support of WDFA, among others the
Western Governors Association and Western Urban
Water Coalition.

FY2014 suppression activities are expected to be
underfunded by close to half a billion dollars as the fire
season expects to pick up over the summer months.
Supporters of a solution have a sense of urgency in
passing WDFA in anticipation of beginning a stable
budgeting process in the new FY2015 budget.

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Fund Coalition.
The monarch butterfly is a charismatic microfauna with distinctive black bars on an orange background. The orange coloring has been connected with the historical King William of Orange, conqueror of Ireland for the Protestant British, which led to the nickname “King Billie” for the butterfly in some parts of the United States. This butterfly population once numbered more than one billion, but over the last several decades its population has been declining en masse to an estimated 33 million. While monarchs are not an “endangered” species, the annual migration of monarchs is a natural phenomenon and ecotourism attraction. Monarch Watch, a nongovernmental organization (NGO) devoted to restoring monarchs, estimates current populations to have dropped from one billion several decades ago to as few as 33 million today. For the monarchs to maintain their annual migration from Canada to Mexico, they will need U.S. feeding stations (which consist primarily of milkweed) planted in the yards and schoolyards of both cities and suburbia, as well as roadways and conservation easements. This article will briefly outline the current status of the monarch butterfly’s restoration, including the extensive planting of trees in Mexico and a new public service project to plant milkweed and flowers, which has been endorsed by three Section of Environment, Energy, and Resources (SEER) Committees to date—Agricultural Management, Forest Resources, and Smart-Growth/Green Buildings.

This article will provide background information regarding the plight of the butterfly, as well as profile the legal barriers that can arise to planting milkweed—the sole food source of monarch larvae. Although milkweed is treated as a weed in much of the United States, it is vital to the health and survival of the monarch. Legal barriers to its cultivation need to be dismantled (as Ontario, Canada, is planning to do) to enable major cities and farm organizations to promote milkweed planting to build back the North American monarch population.

### Current Status of the Monarch Population

Monarch Watch sees many factors in the United States and in Mexico as possible causes for the monarch decline. Chip Taylor, Monarch Watch’s director, suggests the following potential causes for the butterfly’s decline:

- **Logging has devastated Mexican wintering grounds.** While logging is not necessarily “illegal” under Mexican law (see Section 1, under “legal barriers” below on Mexican farmer rights), the fact remains that Mexican habitat went from a high of 20.97 hectares (51.8 acres) in 1997 to a low of 1.19 hectares (2.94 acres) in 2012–2013.
- **The monarch-breeding habitat, located in the central part of the Midwest, has declined due to an increase in the planting of biotech corn, soybeans, and other herbicide-resistant crops.** These biotech crops have improved weed control and resulted in less disturbance of soil, allowing for increased no-till, which is good for soil and water but not milkweed growth.
- **Counties that manage roadside weeds, particularly in the western United States to reduce fire risk, are also more inclined to mow regularly.**
- **Climate change has caused too much variation in temperature conditions.** Air temperature and moisture both influence the monarch’s life cycle, and climate change poses a challenge to their survival.


As this article was going to press, the Center for Biological Diversity and other groups petitioned United States Fish and Wildlife Service to list the monarch butterfly as a “threatened species,” which is one step short of being “endangered” under the Endangered Species Act. Richard Conniff, Environmentalists Petition to Put the Monarch Butterfly on the Endangered Species List as Its Population Plummets, TakePart (Aug. 2014), http://...
Monarchs are devoted to their migration, and research has recently linked magnetic particles they carry in their cells to finding their shrinking Mexican destination. This groundbreaking study found that migrant monarch butterflies (*Danaus plexippus*) use an internal magnetic compass to guide their fall migration. In particular, the butterfly’s antennae are important for the inclination compass with apparent light-sensitive magnetic sensors. When directional daylight is unavailable, migratory monarchs use a magnetic inclination compass as an important orientation mechanism and may also augment time-compensated sun compass orientation for appropriate directionality throughout the migration. Patrick A. Guerra et al., *A Magnetic Compass Aids Monarch Butterfly Migration*, Nature Communications (June 24, 2014), available at http://www.nature.com/ncomms/2014/140624/ncomms5164/full/ncomms5164.html.

Unfortunately, this migration is now at risk due to a steep reduction in the number of monarch butterflies making this epic multi-generational migration. The latest reports from Mexico indicate that there are fewer trees in key wintering sites in Mexico. This is due to logging and an increase of “edge effect” in the limited forest habitat resulting from forest fragmentation, leading to increased monarch losses through predation and lack of protection from bad weather.

**Restoration of America’s Milkweed and Mexico’s Trees**

There are an increasing number of efforts moving ahead to restore milkweed habitat in the United States, and several NGOs are working together to plant more trees in the devastated and fragmented habitat in Michoacan, Mexico.

**1. USA—St. Louis and SEER Move to Plant Milkweed**

The above factors, leading to the severe decline in the monarch population, have led at least one mayor to call for the widespread planting of milkweed. Mayor Francis Slay of St. Louis, Missouri, in the heart of the Farm Belt, has declared a “Milkweed for Monarchs” campaign, converting urban areas into butterfly gardens, with a focus on planting milkweed and nectar-producing flowering plants that the monarch mothers love to feed on before laying their eggs. City of St. Louis, Missouri, *Milkweeds for Monarchs Initiative Update* (June 4, 2014), available at https://stlouis-mo.gov/government/departments/mayor/news/milkweeds-for-monarchs-initiative.cfm.

**2. SEER Initiatives**

Through the SEER Committee’s One Million Trees project the Section has sponsored plantings at each of its major events, beginning with the Section Fall Meeting in 2009. See American Bar Association, Section of Environment, Energy, and Resources, One Million Trees Project, available at http://www.americanbar.org/groups/environment_energy_resources/public_service/one_million_trees_project.html.

The SEER commitment to plant trees through its One Million Trees project has resulted in over 50,000 trees planted so far. A new dawn will soon arrive, as tree planting will continue in various forms, including planting events at SEER meetings and the ABA annual meeting, as well as an adjunct to the project to include the planting of butterfly-bee-bird or pollinator-rain gardens. Such a garden would include plenty of flowering plants to attract the bees and butterflies, along with milkweed for monarchs and other host plants (e.g., dill or fennel are favored by swallowtails) and the birds will follow in search of tasty insect food. The recent mulching-cleanup at Salt Lake during the spring 2014 SEER conference illustrates the potential for a transition to pollinator gardens that incorporate trees where appropriate.

The SEER Committees of Agricultural Management, Smart Growth/Green Buildings, and Forest Resources recognize the mounting evidence of the loss of U.S. butterfly habitat, particularly monarchs, as a pressing issue. These committees developed a new public service project to promote the planting of milkweed for monarchs, along with flowers for mother butterflies. Because flowering plants bring bees, butterflies, and other biodiversity, a diverse garden would ideally have herbs and trees favored by other butterflies (e.g., various swallowtails love dill, fennel, and oak). This
public service project emphasizes the need for such diversity of plantings. Depending on local needs, trees and shrubs and food crops can also coexist with the butterfly garden, as well as a bird garden (for whom the butterfly larvae are a food source).

3. Efforts at Tree Planting in Mexico
Monarchs attract ecotourism to Michoacan, Mexico. The annual monarch butterfly migration is one of nature’s great spectacles and a top attraction for visitors to Mexico’s central highlands. Monarch butterflies’ journey approximately 2500 miles, all the way from eastern Canada to the Mexican oyamel fir tree forests in the Monarch Butterfly Biosphere Reserve. Their arrival coincides with the Dia de los Muertos, the Day of the Dead, a Mexican holiday celebrating deceased relatives who are believed to return home as butterflies. See Explore Mexico, The Monarch Butterfly Migration (2014), available at http://www.visitmexico.com/en/VisitMexico30/Buscador?q=monarch. The months the monarch spends in Mexico can be likened to a big coed slumber party—no mating occurs. Similar congregations are seen in the Western monarch migrations that usually end in California. Millions of monarch butterflies hang from trees in a semi-hibernating state, coming out for occasional drinks of nectar from flowers.

Unfortunately, the oyamel fir tree forests outside of the Monarch Butterfly Biosphere Reserve have been decimated by farmers needing wood for fuel and construction. Fortunately, there are individuals working to replant these vital habitats. The La Cruz Habitat Protection Project helps by reforesting the monarch butterfly’s wintering habitats in central Michoacan, Mexico. Since 1997, this group has distributed nearly seven million native tree seedlings. See Forests for Monarchs, www.forestsformonarchs.org. American Forests, a partner of the SEER One Million Trees project, is also planting trees in support of monarch conservation. Michelle Wertz, Monarch Butterflies and American Forests, American Forests, http://www.americanforests.org/monarch-butterflies-american-forests/.

Legal Barriers to Habitat Restoration in North America

The legal system hampers the restoration of monarch habitat in several ways, from limitations on noxious weeds that present a barrier to growing milkweed in some places to Mexican law limiting the prevention of logging outside the Monarch Butterfly Biosphere Reserve.

1. Mexican Farmers’ Collective Rights
The effort to plant trees and prevent their “harvest” by Mexican farmers living nearby is legally complicated due to the limits on the state’s power to create conservation reserves in Mexico on land owned in collectives (the “Ejido” system). Ejidos are communally farmed parcels with title held by the state; about half of Mexican agricultural land is farmed this way by the poorest farmers in Mexico. See Land Tenure and the Ejido Program in Mexico, http://www.applet-magic.com/ejido.htm. Trees on collectives’ land are used for fuel and construction, even if the tree happens to hold a few thousand wintering monarchs. For NGOs to increase the number of trees for monarch migration, they need to work with farmers within the Ejido system to ensure that they will have a source of fast-growing trees to support their livelihood, while leaving the monarchs’ chosen trees alone.

2. Canadian Provinces Grapple with Milkweed Bans
As noted above, milkweed is the sole source of nutrition for monarch larvae. Milkweed is also, however, considered a noxious weed in some locations. Several Canadian provinces list milkweed among banned noxious weeds, but Ontario is currently taking steps to remove it in order to protect monarch populations.

Ontario’s Ministry of Agriculture and Food (OMAF) proposed removal of milkweed stems from its finding that milkweed presents a negligible risk to farming practices, mainly because farmers can manage the threat it may pose to grazing livestock. For example, herbicide and herbicide-resistant crops can help to manage milkweed’s negative impacts to agriculture. A grower could plant milkweed for monarchs under various USDA conservation programs, knowing that seed dispersal is not a serious threat if one can use
glyphosate to kill the milkweed but not the crops. While herbicide may have contributed to monarchs’ decline, this tool will help milkweed find a place to grow and could help Ontario revise its noxious weed law. Monarch Watch, Status, Distribution, and Potential Impact from Noxious Weed Legislation, http://www.monarchwatch.org/read/articles/canweed5.htm.


The Noxious Weed List contains a variety of information about the various state labeling requirements and specific prohibitions of noxious weed seeds. It also lists both the scientific names and common names of the specific plant, according to the law and regulations of the particular state in which the seed is noxious. Ultimately, the Noxious Weed List is for seed dealers who must avoid transporting noxious weed seeds but it demonstrates some of the challenges in restoring depleted monarch habitat.

a. Hawaii’s evolving monarch and its milkweed ban

Hawaii has some varieties of milkweed listed as noxious but, importantly, not the food source for the Hawaiian monarch (Danaus plexippus), whose larvae eat the crownflower (Calotropis gigantea), a species of the milkweed family (asclepiadaceae). The Hawaiian monarch butterfly contains a subspecies called “white morphs.” In 1988, white morphs peaked at 8 percent of the Hawaiian monarch population before the birds figured out their larvae were tasty too. Rob Nelson, Hawaiian Monarchs, a Story of Selection, http://www.explorebiodiversity.com/Hawaii/BiodiversityForgotten/Wildlife/Inverts/Insects/Monarchs.htm. Fortunately, as long as crownflower is not a banned noxious weed in Hawaii, the Hawaiian monarch larvae will find the nutrition necessary for their continued existence.

b. Kansas (“Milkweed, climbing”)

USDA lists Kansas as a state that bans “climbing” milkweed. This requires that other milkweed species be planted in butterfly gardens. Kansas is also the location of the leading monarch conservation group in the United States, Monarch Watch. This NGO sells seed kits for “monarch waystations” where monarchs can feed during their annual migration between Canada and Mexico. See Monarch Watch, Waystation Registry, www.monarchwatch.org/waystations/registry/. Currently there are over 7300 of these waystations registered.

4. Local Control by Cities and Counties

Finally, another level of weed regulation and hurdle in terms of maintaining the monarch population can arise at the local level, where cities and counties can also declare milkweed a “noxious” or a “nuisance” weed.


Some cities in the province of Manitoba, Canada, have eradication programs on a “complaint” basis for common milkweed. Monarch Watch, Status, Distribution, and Potential Impact from Noxious Weed Legislation, http://www.monarchwatch.org/read/articles/canweed5.htm. In other words, a butterfly garden with milkweed can be targeted for destruction by a neighbor who complains of allergy, or eyesore, or other grounds for nuisance.

In the United States, the monarch-supporting Wisconsin Department of Natural Resources actively
encourages people to plant milkweed as a butterfly garden. But city regulations can still prove difficult to navigate. One unlucky Wisconsin homeowner in Neenah, with a thriving patch of milkweed, found out that there is a citywide ban on milkweed, which is considered a noxious weed under a city ordinance. Her milkweed grew for seven years before someone complained. The city ordered her to kill the milkweed and assessed a weekly fine of $177, which remains on appeal. With monarch caterpillars feeding on the leaves of her milkweed, however, the homeowner refused the city’s order and filed an appeal. The milkweed and presumably the monarch caterpillar continue to flourish. Duke Behnke, *Save the Monarchs: Neenah Will Rethink Law Against Milkweed*, postcrescent.com (Sept. 5, 2013), http://www.postcrescent.com/article/20130904/APC0101/309040403. The author also had personal communication with Duke Behnke regarding current status of the case in June of 2014.

The city of Neenah, in defense of this law, noted that state law allows municipalities to declare certain weeds as noxious. There are reports of people being allergic to milkweed pollen, and horses and cattle can be poisoned by eating milkweed. *See Common Allergy Triggers in Tennessee*, Weather.com (2014), available at http://www.weather.com/outlook/health/allergies/common/allergens/TN-allergen-198. As of the publication of this article, the fracas over these Neenah butterflies and their chosen milkweed remains unresolved—or at least, unplowed.

**Conclusion**

It will take a concerted effort to restore enough milkweed to maintain the monarch migration, with growers, governments, and average homeowners across North America making time, space, and milkweed for monarch conservation. But with education, effort, and dedication, it is my hope that the monarch can find its way back to a vibrant population level.

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This case study focuses on the U.S. Forest Service (USFS), a division of the Department of Agriculture, responsible for managing national forests in the United States. In 2002, a new and pernicious invasive species began spreading through the Midwestern United States, destroying tens of millions of ash trees and decimating urban forests—the emerald ash borer. *See* U.S. Dep’t of Agriculture—Animal Plant Health Inspection Serv., Emerald Ash Borer Program Manual Pest Management 9.1 (2013) (Emerald Ash Borer Program Manual). This case study follows the creation, in 2009, of a $2 million program to address the impacts of urban forest destruction caused by the emerald ash borer. The purpose of this review is to highlight the methods of advocacy available to Congress in the federal appropriations process to create new programs without specific authorizing direction. The case study explores both formal and informal methods of power and influence available to policy makers.

The USFS is responsible for managing 193 million acres of public lands across the United States. *See* U.S. Dep’t of Agriculture, Forest Service FY2015 Budget Justification 3-2 (2014) (FY2015 Forest Service Budget Justification). The USFS primarily manages federal forests but also directs a relatively small amount of funding to assist nonfederal forests. This includes $23.6 million for the Urban and Community Forestry program and a $45 million program for Cooperative Forest Health Management. *Id.* at 4-1.

While the USFS is housed within the U.S. Department of Agriculture (USDA), the Interior Appropriations bill funds the USFS. The vast majority of USDA, however, is funded by the Agriculture Appropriations bill and most USDA officials testify and report to the Agriculture Appropriations subcommittee. Only a very few members of the House of Representatives sit on both subcommittees; thus the other members of the
Agriculture subcommittee must be more innovative to influence decisions beyond their committee’s jurisdiction.

A. The Problem: Invasive Species and the Emerald Ash Borer

The emerald ash borer has already destroyed millions of trees, and by 2019 it is estimated that the beetle’s damage will result in a $10.7 billion economic impact on urban and suburban areas. See Emerald Ash Borer Program Manual at 2.4. As a result of increased international trade and poor border inspection, this invasive insect has quickly killed millions of ash trees. In some cities, the current urban forest cover is down to approximately 50 percent of the former population of ash trees. Deborah McCullough, *Will We Kiss Our Ash Goodbye?*, AMERICAN FORESTS (Winter 2013). With global trade bringing invasive species to new ecosystems, and with climate change altering the habitat of multiple tree species, the challenges faced by urban forests are likely to continue. Tree deaths are overwhelming and cities are left trying to remove and replace millions of dead ash trees that also pose significant safety hazards. Restoring the urban forest cover takes time and money, and the replacement trees will not mature for a generation. The safety issues are compounded because mature urban tree canopies help communities deal with storm water runoff, cool the urban heat island, increase real estate values, and reduce air pollution. James Schwab, *Planning the Urban Forest: Ecology, Economy, and Community Development*, AM. PLANNING ASS’N ADVISORY SERVICE REP., No. 555 (Jan. 2009).

B. Existing Government Authorities

In 2009, the invasive species containment system had robust funding for controlling the spread of pests, but there was comparatively little funding to help communities where trees had already been destroyed. H.R. Rep. No. 111-8, div. A 76 (2009). Because control of an agricultural pest is considered emergency spending, USDA has access to funds from the Commodity Credit Corporation (CCC). The CCC is a government corporation that provides funding to confront unforeseen agricultural disasters and triage against emerging agricultural pests like the emerald ash borer. But even though millions of trees were already dying, emergency funds could only be used to prevent the pest from spreading to uninfested areas. FY2011 Budget Hearing Before the H. Appropriations Comm., Subcomm. on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, 111th Cong., pt. 3 (2010).

C. Developing and Implementing a Budget Advocacy Strategy

Traditionally, the budgetary process must be a multiyear consideration. While USDA writes its budget proposal for two years out, Congress and the federal government debate the next year’s budget as the current year’s budget is implemented. To further complicate the process, in the case study, some funds from previous budgets had not been spent and might be available for reallocation. In order to access those funds, a long-term strategy was essential.

As mentioned above, members on the Agriculture Appropriations subcommittee do not have direct jurisdiction over the USFS because that agency is covered by the Interior Appropriations subcommittee. Given this, there was no opportunity to insert funding for addressing the emerald ash borer crisis until the subcommittee forwarded the funding bill to the full Appropriations Committee. However, senior USDA officials must testify before the Agriculture subcommittee in support of the agency’s funding request. Therefore, the congressional perch on the Agriculture subcommittee could be used to ask questions and bring attention to the destructive consequences stemming from the emerald ash borer. The goal for members and staff interested in addressing the emerald ash borer crisis was to get answers on the record to develop the case for further funding and begin the administrative process of understanding the full scale of the problem. After the oral hearing, dozens of detailed questions would expand this line of questioning.
D. Year One, Fiscal Year 2008—Education

In year one of the case study, the goal was to develop a written record of the problem and draw attention to the disaster facing communities across the Midwest. The Agriculture Appropriations bill directed USDA to report to Congress about the emerald ash borer spending priorities. H.R. Rep. No. 110-8, 110-258 at 45 (2007). In addition, the agency agreed to provide cost estimates to remove and replant the ash trees destroyed by emerald ash borer. This report was crucial, as it established the problem and demonstrated how the funding sought would be spent. USDA and the USFS remained neutral on a proposal to reforest urban communities, but they nonetheless began to help us contextualize the cost of devastation the ash borer was causing.

E. Year Two, Fiscal Year 2009—Increased Funding Sought

Prior to the start of the hearings for the fiscal year 2009, a series of discussions with USFS officials sought to ensure that the Agricultural Appropriations subcommittee report and bill met the legislative intent of creating a tree removal and replanting program. Now in year two of the campaign, there was a body of official correspondence with the executive branch. With dozens of questions submitted on the topic during the appropriations hearings, follow-up questions were included for developing the official record. Concerns and issues were shared with advocates and appropriations staffers to press our case for funding the borer infestation. While the legislative goal was still to include funding for the tree removal and replanting proposal in future administration budgets, if the USFS could be convinced to support the proposal the hope was to tap into unused emergency funds, which might be more plentiful.

When the Interior Appropriations bill was considered by the full committee, an amendment was proposed to direct $8 million to the newly conceived emerald ash borer urban forest program to reforest parts of the urban canopy. This funding would be separate from ongoing efforts to stop the spread of the infestation and would help cities replant. And with its amendment as a bargaining chip, the full committee inserted an additional $2 million through the manager’s amendment. H.R. Rep. No. 111-8, div. E at 1145 (2009). A manager’s amendment is offered by a bill’s author to amend legislation during its consideration, and in this case the author was the chairman of the Interior Appropriations subcommittee. The manager’s amendment directed $2 million in funding toward addressing the emerald ash borer infestation, not the $8 million sought, but also required a report on implementation of the congressionally directed funds. This reporting requirement provided an opportunity for continued advocacy in tracking the obligation of funds for addressing the emerald ash borer crisis.

F. Year Three, Fiscal Year 2010—Implementation

With funding of $2 million now allocated to the program, the challenge became one of implementation, which took another year. Because the emerald ash borer budget line item was a new one, it was time-consuming to write new agreements with the various state and city partners, implementing local removal and replanting efforts in actually spending these funds. In light of the delays related to implementation, emergency funding to fight the infestation was continuously pursued. One of the problems in acquiring emergency funds was the fact that it was ash trees, and not crops, that were destroyed. If the ash trees in question had been on farms and were destroyed agricultural crops instead, USDA could reimburse these farmers using emergency funds. But in part since the communities were urban, the USFS and USDA were unable to release those funds. Recognizing the limited scope of the $2 million line item to fight this infestation, the FY2010 bill required the USFS to explain the feasibility of using existing and emergency funds to assist communities whose urban forest canopy had been devastated. Id. The $2 million was a drop in the bucket to what was needed to restore lost trees.

Given USDA’s authorizing language, declaring this an emergency was a difficult task but nonetheless, with the $2 million having been allocated, a case was building. President Obama was in the beginning of his first term, which was a game changer because the new
administration was concerned about job creation, a benefit from this program. And this program helped hard-hit communities create shovel-ready jobs and invest in economically distressed communities.

G. Year Four, Fiscal Year 2011—Distribution of Funds

It was not until year four that the allocated money was actually distributed and the agency expanded its support. In addition, the USFS now began allocating funding from other budget line items to the forest recovery effort. A dialogue was created about job creation that matched the administration goal of Great Lakes restoration, with the agency allocating $4 million from the Great Lakes Restoration Initiative to replant trees killed by the emerald ash borer. During year four, political officials were invited to the Midwest to highlight the tree replanting and take credit for the “job creation” of this activity. As had happened over the past three years, the budget hearings, follow-up questions for the record, and other official correspondence pressed the case.

The Appropriations bill directed the USFS to utilize the emergency funds; however, internal approval from the Office of Management and Budget was necessary for this to happen, but that seemed unlikely. The previous report to Congress made the case for shifting these emergency funds but it required a political lift from the White House. In November of 2010, Democrats lost control of the House of Representatives and this $2 million line item was eliminated from the draft FY2011 bill.

While the budget line item was eliminated, the USFS found other ways to fund tree replanting. In other budgets, beyond the main USDA one, the work of replanting urban forests was continuing, such as through the Great Lakes Restoration Initiative. The effort to direct tens of millions of dollars to replanting the urban forest canopy was unsuccessful, but in a tough budget climate a lone representative and one staffer had created a semi-permanent budget line. In the end, the success was not setting aside $2 million annually, but using these funds to change the culture of the bureaucracy and to raise expectations that USDA must help communities grappling with the $10.7 billion in economic damage from the emerald ash borer.

H. Lessons Learned

Budgets Are Not Strictly Linear—The implementation, drafting, and conception of budgets require specialization and detailed knowledge of the process to advocate within the constrained timeline of budget writing and the drawn-out process of implementation.

Timing Is Everything—Even though the funding was small, it allowed familiarization with the process and fostered readiness when the political winds shifted. If this groundwork hadn’t been completed before 2009, the changes in political control would not have been useful.

Changing the Culture of a Bureaucracy—With a $10.7 billion problem, we had to raise the profile of the emerald ash borer devastation faced by these communities. While initially the bureaucracy was slow to respond, in a world controlled by budgetary precedent the bureaucracy eventually became an important ally.

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California's UTC covered 15% of the urban area and contained 173.2 million trees, i.e., one per city resident. UTC per capita was lowest among U.S. states (90.8 m). These baseline data can be used as a basis for change detection and in the California.

http://dx.doi.org/10.1016/j.ufug.2017.09.013. Received 25 July 2017; Received in revised form 19 September 2017; Accepted 25 September 2017. Programs and grants to California communities. A second objective of this research is to illustrate how information on urban forest structure, function, and value can inform planning and management. Managing California's urban forests to be healthy and resilient requires a clear understanding of current conditions and threats. In conjunction with the projected impacts of climate change, forests face impacts from land development, suppression of natural periodic forest fires, and air pollution. Although it is difficult to separate the effects of these different factors, the combined impact is already leading to changes in our forests. As these changes are likely to continue in the decades ahead, some of the valuable goods and services provided by forests may be compromised. To learn more about examples of projected regional changes in forests, see the Northeast, Southeast, Southwest, and Alaska regional impacts pages California Urban Forests Council (CAUFC) envisions thriving and prosperous California communities transformed by healthy trees and green spaces. We advance smart investment in green infrastructure through education and outreach, community-based activities, and collaborative action. EDUCATION. We host workshops, an annual conference and awards. Topics have included: Leading in your Community; The Built Environment & Public Health; Tree Risk & Urban Forestry; Saving our Children from Nature Deficit Disorder; Urban Wood, and more. COMMUNITY OUTREACH. Promoting awareness of the benefits derived from California has taken legislative steps in the hope of mitigating the risks of potential effects of climate change in California by incentives and plans for clean cars, renewable energy, and pollution controls on industry. Development of the Scoping Plan is a central requirement of AB 32, which is a bill that calls on California to reduce its greenhouse gas emissions to 1990 levels by 2020. The required Scoping Plan is intended to outline the approach California will take to reduce its greenhouse gas