



## Good Neighbor Environmental Board (GNEB) Meeting

May 8 – 9, 2014

Hilton Garden Inn El Paso/University  
111 W. University Avenue  
El Paso, TX 79902

### FINAL MEETING SUMMARY

**Thursday, May 8, 2014**

#### **Welcome and Introductions**

*Ann-Marie Gantner, Acting GNEB Designated Federal Officer (DFO), U.S. Environmental Protection Agency (EPA); Mark Joyce, Associate Director, Office of Diversity, Advisory Committee Management and Outreach (ODACMO); Carlos Rincón, Director, EPA Region 6 Border Office; Timothy Treviño, Vice-Chair, GNEB; Diane Austin, Chair, GNEB; Denise Benjamin-Sirmons, Director, ODACMO*

Ms. Ann-Marie Gantner, Acting GNEB DFO, and Mr. Mark Joyce, Associate Director, ODACMO, welcomed the members of the GNEB and thanked them for their participation. The Board members then introduced themselves.

Dr. Carlos Rincón, Director, EPA Region 6 Border Office, also welcomed the attendees. Dr. Rincón stated that the North American Development Bank (NADB) and Border Environment Cooperation Commission (BECC), which together have made very significant impacts on the border region, are celebrating their 20th anniversary this year. He noted that the BECC-NADB Board of Directors is meeting in Mexico City concurrently with this meeting.

Mr. Timothy Treviño, Senior Director of Strategic Planning and Agency Communications, Alamo Area Council of Governments (Vice-Chair, GNEB), and Dr. Diane Austin, Associate Professor and Director of the School of Anthropology, University of Arizona (Chair, GNEB), added their welcome to the Board members and all of the attendees, and indicated that they were anticipating a productive meeting with a full agenda. Dr. Austin expressed her gratitude to EPA for providing the opportunity for the Board to hold this meeting in person, the first such opportunity for the Board in 2 years. Dr. Austin then reminded the Board of the procedural rules for in-person Board meetings.

Dr. Austin provided an overview of the meeting agenda, which included presentations that were designed to respond to the members' questions about issues that will be addressed in the GNEB's 16th Report to the President and Congress of the United States (the Report). The Board members had requested further clarification of what is meant by ecological restoration and ecoregions, as well as examples of ecological restoration projects in the border region.

Ms. Denise Benjamin-Sirmons, Director, ODACMO, greeted the Board members and other attendees. She thanked the Board members for the work involved in preparing for the meeting. Ms. Benjamin-Sirmons also expressed her appreciation to ODACMO staff, Ms. Gantner, Mr. Joyce, Ms. Stephanie McCoy (not in attendance) and Ms. Debbie Lake (not in attendance), as well as EPA Region 6 staff, including Dr. Rincón and Ms. Maria Vasquez, who coordinated the meeting logistics. It was through the strong advocacy of Ms. Gantner and Mr. Joyce that the Board was able to hold this meeting in person, which she predicted will foster working relationships among the Board members and assist in drafting the Report. As the new Director of ODACMO with the responsibility of leading the oversight of EPA's advisory committees under the Federal Advisory Committee Act (FACA), Ms. Benjamin-Sirmons welcomed the opportunity to meet the Board members in person and thank them for their excellent work, which is appreciated by EPA, the White House Council on Environmental Quality (CEQ), and the President. She recognized Dr. Austin for her effective leadership of the Board during the past several years and congratulated Mr. Treviño in his new role as Vice-Chair. In closing, Ms. Benjamin-Sirmons urged the Board members to inform her if they have any need for assistance in their work.

Dr. Rincón provided a written summary describing the mandate of the "Border 2020: U.S.-Mexico Border Environmental Program" to the Board members. He indicated that the framework of the La Paz Agreement has evolved toward a strong U.S.-Mexico partnership to address environmental and public health problems in the border region. EPA and EPA's counterpart in Mexico, as well as other U.S. federal agencies, have worked to develop capacity and infrastructure in the border region. Dr. Rincón offered his assistance to Workgroup 2 and Workgroup 4 because Border 2020 goals include improving water quality.

## **Ecoregions—Standards, Metrics and Measures**

*Kevin Bixby, Southwest Environmental Center: Overview of the Commission for Environmental Cooperation Framework; Keith Pezzoli, University of California, San Diego: Urban Ecological Restoration; Greg Eckert, National Parks Service: Big Bend National Park*

### ***Overview of the Commission for Environmental Cooperation Framework***

As a possible framework for the Board's Report, Mr. Kevin Bixby, Executive Director, Southwest Environmental Center, provided an overview of the concept of ecoregions. The World Wildlife Fund defines an ecoregion as "a large unit of land or water containing a geographically distinct assemblage of species, natural communities, and environmental conditions." Using the Commission for Environmental Cooperation's (CEC) classification system, which is widely accepted, there are six or seven ecoregions in the border region, depending on the way in which the region is defined: Mediterranean California; Sonoran Desert; Madrean Archipelago; Chihuahuan Desert, which is the largest; Edwards Plateau; Southern Texas Plains; and Western Gulf Coastal Plain. Mr. Bixby suggested questions related to determining restoration needs and strategies within an ecoregion that he and Dr. David Henkel, Professor Emeritus, University of New Mexico (Board member, not in attendance) had brainstormed: Who has information about reference and current ecological conditions? To what state might managers want to restore the region? Has anyone compared current and reference conditions? Has anyone prioritized the greatest restoration needs of the ecoregion? What is poorly understood about the region? Which needs are being addressed and which are not? How much of the land is federally versus nonfederally owned? Does the federal government have jurisdiction over the species that are at risk? At what scale should the region's needs be addressed? Suggested sources of information are state wildlife action plans; the U.S. Fish and Wildlife Service's (USFWS) threatened and endangered species list; and information from nongovernmental organizations (NGOs). Regarding the role of the federal government in encouraging

ecological restoration by nonfederal entities, the Board should consider pertinent regulations, incentives for participation and identification of stakeholders.

## **Discussion**

Dr. Teresa R. Pohlman, Director, Sustainability and Environmental Programs, Chief Readiness Support Officer, Department of Homeland Security, asked whether the CEC's definition of ecological restoration differed from that in the Board's Advice Letter. Mr. Bixby replied that the ecoregion framework was applicable regardless of the definition used for ecological restoration. Dr. Greg Eckert, Restoration Ecologist, National Park Service, Department of the Interior, added that EPA's approach to classifying ecoregions is similar to that of the CEC. Mr. Joyce stated that the CEC classification system was a result of data harmonization efforts by the United States, Mexico and Canada to produce a common framework.

Dr. Pohlman inquired about the different roles of the National Oceanographic and Atmospheric Administration (NOAA) and the U.S. Army Corps of Engineers (USACE) in wetlands restoration. Dr. Jeffrey Payne, Acting Director, Coastal Services Center, NOAA, Department of Commerce, responded that under the Coastal Zone Management Act, states have the right to oppose a USACE project that might have negative impacts on trust resources. In practice, NOAA and the USACE often work together closely on restoration projects.

In response to a question from Dr. Payne, Mr. Bixby clarified that "reference" conditions referred to baseline conditions. Establishing reference conditions is necessary for setting ecological restoration goals.

The Board members discussed other information sources on ecoregions. Dr. Payne suggested when considering climate change as a stressor, the Board consult *The National Fish, Wildlife and Plants Climate Adaptation Strategy*, on which NOAA and the USFWS collaborated. To address environmental justice concerns and ensure that all stakeholders are heard, the Board members recognized the importance of consulting tribal experts, for which Mr. Evaristo Cruz, Director, Ysleta del Sur Pueblo (Board member, not in attendance) will be able to provide assistance. Mr. Salvador Salinas, State Conservationist, Texas State Office, Natural Resources Conservation Service, Department of Agriculture, suggested using the description of ecological regions being developed by the Natural Resources Conservation Service as a source of information about baseline conditions.

The Board discussed using the term "climate" in the Report rather than "climate change."

## ***Urban Ecological Restoration***

Dr. Keith Pezzoli, Director of Field Research and Lecturer, Urban Studies and Planning Program, University of California, San Diego, stated that ecological restoration generally is thought to apply to protected regions, but the border region is urbanizing rapidly. Urban ecological restoration is driven not just by a loss of biodiversity, but also by increased vulnerability of human populations to disease, natural disasters and environmental contamination. Consequences of failing to conduct ecological restoration in rapidly urbanizing areas include increased erosion and flooding from storms. Ecological restoration in an urban context is not easily compatible, however, with restoration to historical conditions; Dr. Pezzoli proposed instead referring to "reconciliation" of natural systems with human populations in an urban context.

Dr. Pezzoli provided examples of urban ecological restoration in the border region. In Los Laureles Canyon in Tijuana, Mexico, houses were built on steep slopes, rain created erosion, and erosion impacted the Tijuana River estuary. As part of a restoration effort, the United States built an erosion control wall

upstream. Aided by state support, ecological restoration efforts also created green jobs such as the manufacture of pervious pavers. A second example of the benefits of ecological restoration is using vacant offsite land to manage stormwater runoff associated with development. The San Diego Association of Governments is planning development around transit-oriented corridors, but stormwater regulations will require using offsite locations to handle stormwater. Stormwater control provides opportunities for considering best practices in mitigation via green infrastructure. As a final example, Dr. Pezzoli stated that U.S-Mexico ports of entry face challenges associated with rapid urbanization, stormwater management and complying with National Environmental Policy Act (NEPA) requirements, providing opportunities to conduct urban ecological restoration and develop innovative solutions to integrate the built and natural environments.

## **Discussion**

The Board members discussed the applicability of federal environmental requirements at border crossings. Dr. Pohlman stated that sustainable building is a requirement at land ports of entry, and the Department of Homeland Security's compliance with the federal government's sustainability principles is evaluated in the context of meeting the sustainability and energy goals of the Office of Management and Budget. Dr. Pezzoli asked about future compliance with environmental standards at ports of entry, citing the San Diego-Tijuana crossing. Dr. Pohlman indicated that improvements have been made at this crossing, and clarified that despite common misconceptions regarding the Department of Homeland Security's compliance with federal environmental requirements, the waiver for complying with environmental regulations applies only to the Secure Border Initiative. Mr. Steven C. Kameny, Border Affairs Officer, Mexico Desk, Department of State (State Department), stated that all piercings of the border, as well as significant modifications to existing piercings, require a Presidential permit. All Presidential permits for border crossing projects, with extremely limited exceptions, are subject to the NEPA process.

Mr. Mike Vizzier, Chief, Hazardous Materials Division, Department of Environmental Health, County of San Diego, noted the link between environmental justice issues and urban ecological restoration, which the GNEB might consider citing in the Report.

Dr. Rincón proposed that sustainability and environmental quality improvement efforts at border ports of entry (e.g., solar power installations at ports of entry; the use of ports of entry fees to increase staffing at peak crossing hours) might be cited in the Report as representative of partnerships among the Department of Homeland Security, EPA, local officials and the private sector.

## ***Big Bend National Park***

Dr. Eckert described scaling up on-the-ground activities to landscape approaches and outcomes, as well as developing metrics, in the context of two ecological restoration projects. The Big Bend-Rio Bravo project developed from a weed control initiative at Big Bend National Park. The project has grown to include more than 30 partners in the United States and Mexico, including federal government agencies, NGOs and private partners, and academia. The 12 major goals of the project, which emphasizes control of exotics and building international collaboration, include watershed conservation broadly, and more specifically, main channel flow, tributary ecosystems, riparian vegetation, springs as habitats and grasslands restoration. An assessment for the project published by the CEC suggested a strategy for developing metrics for the project by identifying conservation targets. The assessment identified species as conservation targets, analyzed drivers for species conservation, and identified special-interest areas. Important issues related to those areas were identified, and conservation areas were prioritized. After identifying key areas, the project managers set goals for restoration by establishing reference conditions

and incorporating future conditions that are unlikely to change (e.g., global climate change, emerging contaminants, dams). In developing metrics, the project managers sought to understand the changes that had occurred and stressors that exist, and identify strategies for relieving stressors. Dr. Eckert distinguished between goals and objectives, outcomes and outputs, which can be quantified. He stated that research is needed during the course of a project to refine metrics.

The Lower Colorado River Multi-Species Conservation Program seeks to balance the use of the Colorado River water resources between the needs of human and native species and habitats. The Program drivers are well-defined: 26 regulated species. The conceptual model approach was used to develop metrics, starting by identifying critical elements (i.e., the regulated species); identifying controlling factors of the species' persistence; and overlaying environmental conditions. Research, local knowledge, professional knowledge, models and monitoring were used to establish the relationships in the conceptual model. The web of relationships was simplified using scientific understanding to determine ecological indicators (i.e., the metrics that need to be monitored). This approach will be used to create a model for each species and lifestage.

### **Discussion**

Noting that ecological restoration on the Lower Colorado River is being driven by species conservation, Mr. Bixby asked about the criteria used to determine where to focus restoration efforts. Dr. Ivonne Santiago, Clinical Professor, Department of Civil Engineering, The University of Texas at El Paso, inquired whether some restoration efforts might be beneficial to one species but detrimental to another. Dr. Pezzoli maintained that managing a single species rather than understanding the role of a species within an ecological landscape was an approach that should be avoided. The Board raised the possibility of recommending a federal law that would protect ecosystems as a complement to the Endangered Species Act.

Ms. Sally Spener, Foreign Affairs Officer, Office of the Commissioner, U.S. Section, International Boundary and Water Commission (IBWC), recognized the additional challenges posed by performing ecological restoration in areas with many private property owners such as the Lower Rio Grande.

### **Waterways**

*John Sproul, Program Coordinator/Manager, Rio Bosque Wetlands Park: Rio Bosque Wetlands Park; Jose Francisco Zamora-Arroyo, Sonoran Institute: Colorado River Region and Santa Cruz; Gilbert Anaya, U.S. Section, IBWC: Rio Grande Canalization Project*

#### ***Rio Bosque Wetlands Park***

Mr. John Sproul, Program Coordinator/Manager, Rio Bosque Wetlands Park, Center for Environmental Resource Management, The University of Texas at El Paso, summarized the project background, approach and accomplishments for the Rio Bosque Wetlands Park in El Paso, Texas. The project goal is long-term ecological restoration of mixed wetland, riparian and valley habitats. The project has broad community and institutional support. The Park originated as a mitigation project to compensate for habitat loss from rebuilding and extending the Rio Grande Canal. Site work by the IBWC began in 1997. The project included rebuilding the river channel, creating basins that could be flooded, installing water controls and removing salt cedar. As the landscape recovered, the Park was managed to foster native habitats. In the 17 years since the project was started, the most significant recoveries were seen in the upland areas. Recovery of wetlands and riparian habitats was very limited because the source of water, treated wastewater, only was available in the fall and winter. During the growing season, the treated

effluent was used for agriculture, resulting in long dry periods in most years. To obtain a perennial water source, project partners installed a well that was able to keep a section of the old river channel wet during the growing season. Recently, with the help of project partners, windmills were installed at the Park to supply water to key areas. In April 2013, a turnout from the Riverside Canal was installed to deliver water to the Park, and negotiations are under way to realize water delivery. In fall 2013, a second well was installed at the Park to keep another section of the channel wet throughout the year. Mr. Sproul cited the transfer of the Park from the City of El Paso to the El Paso Water Utilities-Public Service Board in spring 2014, which will provide new opportunities to develop water sources for the Park, as the most important development in the project. A pipeline is planned, and thanks to the efforts of the project partners, the Park will have a consistent, dependable supply of water by 2015.

### **Discussion**

There was general recognition by the Board members that the Park is a successful example of ecological restoration. Dr. Pezzoli inquired about the arguments used when negotiating for water for the Park. Mr. Sproul replied that the many potential benefits from restoring the ecosystem were emphasized, including opportunities for supporting education, recreation, research and tourism. In addition, the Park also increasingly is viewed as a storage area for water from the treatment plant, which is a public resource that is particularly important during drought conditions. The Board members discussed quantifying the benefits that have accrued from the project, including potential economic benefits such as from ecotourism.

Mr. Bixby noted that the Park is not connected directly to the Rio Grande, and there is a need to restore aquatic habitats and native fish species that have been lost as well. Mr. Sproul stated that given competing demands for water, it was important to capitalize on available water sources; the success of the project, however, provides an opportunity to consider the role of the Park in the larger river environment.

Dr. Payne asked whether the composition of the project partners evolved over the course of the project, and if so, whether the goals of the project changed over time as well. Mr. Sproul responded that there was consistent involvement among the partners, and public support played a major role in driving the project throughout; he acknowledged, however, that there were differences of opinion among partners at times.

Mr. Salinas pointed out that the Park is an artificially maintained system, and large-scale processes such as climate change raise the issue of whether restoring the system to its original state is realistic or even desirable. Mr. Sproul replied that the project goal is not to restore the Park to historic conditions but to an approximation of what once existed.

Dr. Pezzoli asked about the role of research universities in the project. Mr. Sproul responded that researchers at The University of Texas at El Paso have been strong advocates of securing water for the Park, recognizing its potential as a research site.

### ***Colorado River Region and Santa Cruz***

Dr. Jose Francisco Zamora-Arroyo, Director, Colorado River Delta Legacy Program, Sonoran Institute, described the recent pulse-flow event on the Colorado River. Comparing the Colorado River today to conditions in the 1940s provides evidence for the need for ecological restoration. Diversion of water from the Colorado River has caused extensive loss of habitat and species. Upstream and downstream of the Morelos Dam, which is an irrigation dam, there are large differences in the main channel: downstream, there is very little water. Approximately 23 miles south of the Dam, at the southerly international border, the river usually is dry.

Signed in November 2012, Minute 319 is a 5-year agreement between the United States and Mexico to manage water in the Colorado River in new ways on both sides of the border and address multiple issues, including environmental concerns. A binational group conducted the difficult and lengthy negotiations that resulted in Minute 319 and several other Minutes. Minute 319 establishes new ways for the United States and Mexico to manage water both in times of droughts and surpluses, including the use of reservoirs in the United States to store water for later use by Mexico, as well as conservation projects. One of the foundations for developing the environmental component of Minute 319 was a report published in 2005 with input from organizations on both sides of the border. The report produced a "Map of the Possible" for restoration based on existing conditions.

The Pulse and Base Flow Programs of Minute 319 include restoration and monitoring components, the implementation details of which were developed after the Minute was signed. Dr. Zamora showed the progress of the flow following the release. By Day 5 of the pulse flow, which was the peak, there was inundation below the dam, more than expected, and at Week 6, the flow is close to reaching the lower portion of the river. Dr. Zamora noted that Minute 319 emphasized benefits to riparian habitats, including several restoration sites. The approach to securing water was for Minute 319 to address pulse flow, shared equally between the United States and Mexico, and for conservation organizations to secure water for base flow. New water sources are being explored, including treated water from Mexico.

The Santa Cruz River is another example of the benefits of using treated water for restoring riparian habitats. A portion of the river receives treated effluent from a treatment plant that serves Arizona in the United States and Sonora in Mexico. The part of the river that receives treated effluent has shown marked recovery compared to the upstream part of the river.

## **Discussion**

Mr. Joyce asked whether Minute 319 will need to be renegotiated in 2017. Dr. Zamora responded that the environmental successes under the agreement will be documented to provide information during the negotiations. Ms. Spener added that there have been high-level discussions between the United States and Mexico regarding the interest in extending the agreement and the need to conduct negotiations in a timely manner. The information on what worked and did not work will be needed for the negotiations. Ms. Spener recognized Dr. Zamora's long-term efforts to restore the Colorado River as well as the activities of NGOs to raise funds and acquiring water rights.

Mr. Stephen Niemeyer, Border Affairs Manager, Intergovernmental Relations Division, Texas Commission on Environmental Quality, noted that in the Advice Letter, recognition of the successes of Minute 319 was tempered acknowledgement of the failure to address similar issues on the Rio Grande. He cited pending legislation in the U.S. Congress opposing re-implementation of Minute 319 because of the failure of Mexico to implement promised water deliveries. Mr. Kameny and Ms. Spener recognized concerns about water deliveries from Mexico. Ms. Spener stated that after the 2010 earthquake in the Mexicali Valley, Mexico was not able to make full use of its allotted water. Mexico was allowed to store water in the United States for future delivery when its irrigation system was repaired. Dr. Zamora added that there are other projects such as desalination projects under Minute 319 that are not environmental and from which the United States will benefit.

Ms. Edna A. Mendoza, Director, Office of Border Environmental Protection, Arizona Department of Environmental Quality, asked about the challenges involved in keeping stakeholders united during the process. Dr. Zamora replied that involving multiple organizations and fostering collaboration between governments has been key. He acknowledged that initially, negotiations among the parties were more difficult, but as talks proceeded the negotiators were able to discuss issues, talk about options and make

concessions. The discussion included addressing water needs for agriculture and cities as well as the environment.

Mr. Bixby inquired about the federal government's role in providing water for the pulse flow. Ms. Spener clarified that NGOs are responsible for maintaining base flows, whereas the United States and Mexico each provide half of the water for the pulse flows. The U.S. share of the pulse flow comes from investment in conservation projects in Mexico.

The Board members agreed that Minute 319 would be a good candidate for a case study to include in the Report. There are multiple aspects that could be highlighted, including the regulatory framework, economic factors, funding, the role of research, public-private partnerships and cultural implications.

### ***Rio Grande Canalization Project***

Mr. Gilbert Anaya, Supervisory Environmental Engineer, Engineering Department, U.S. Section, IBWC, presented an overview of river restoration activities related to the Rio Grande Canalization project. The Rio Grande Canalization Project was constructed in the 1930s to provide irrigation water to New Mexico and Texas, facilitate water deliveries to Mexico, and control floods. Environmental measures now are being integrated into the project. In 2009, a Record of Decision for the project was signed that implements several environmental restoration measures, including restoring vegetation along the river corridor, creating potential habitat for the protected southwestern willow flycatcher and establishing "no mow" zones. Implementation of restoration has started at five of the 30 sites identified as the best areas for restoration. With assistance from the USFWS, salt cedar was removed and poles were planted. Signage was used to limit access to restoration areas. Mr. Anaya showed photographs of the changes in Crow Canyon, a site that was dominated by salt cedar but now has some wetlands and more willow. The Broad Canyon Arroyo before restoration also was dominated by salt cedar in the floodplain. Restoration included removal of salt cedar by prescribed burns and excavation and planting tree poles. Some of the planted willows have taken hold. In Mesilla East, wells were installed to monitor ground water. Many sites will require supplemental water, and monitoring ground water will help select the best sites for restoration. The IBWC has started an environmental water transaction program to purchase water from irrigation districts and landowners for restoration. Under this program, agricultural water and environmental water both will be considered a crop and subject to the same rules in drought conditions. Future tasks include developing river management and channel maintenance plans.

### **Discussion**

Dr. Zamora asked whether there was any involvement with Mexico. Mr. Anaya replied that this project is strictly on the U.S. side of the border.

Mr. Niemeyer inquired whether it was known how much water had been saved thus far by removing salt cedar. Mr. Anaya replied that a water budget study, which included transpiration from the salt cedar habitat, had been conducted at the start of the restoration; the goal of the restoration is to have no net effect on the system.



## **Partnerships and Coordination With Federal Agencies**

*Sherry Barrett, USFWS: Mexican Wolf Reintroduction Program; Robert Jess, USFWS: U.S. Wildlife Refuges in Southeast Texas; Genevieve Johnson, Bureau of Reclamation: Landscape Conservation Cooperatives*

### ***Mexican Wolf Reintroduction Program***

Ms. Sherry Barrett, New Mexico Ecological Services Field Office, USFWS, Department of the Interior, introduced the Mexican Wolf Recovery Program. The Mexican wolf is a subspecies of gray wolf. An ecological generalist, it is found in the Southwest United States and in Mexico. It was extirpated from the Southwestern United States by 1970 and from Mexico by the mid-1980s. In 1976, it was classified as an endangered species. A binational captive breeding program was initiated with seven wolves, and in 1982, a recovery plan was finalized with a goal to re-establish a self-sustaining population of at least 100 Mexican wolves in the wild. The re-introduced wolves are managed by a team of federal, state and tribal agencies. The current wild population numbers approximately 80, all wild-born, and exists in four packs. Because of the small starting population, there is a concern about genetic diversity; wolves from captive breeding programs, therefore, continue to be released into the wild. Eighty percent of the wolves' diet is elk, although predation is not significant enough to affect the elk population. Depredations of livestock also occur. A Coexistence Council has been established, comprised of ranchers, environmental groups, tribes and county coalitions, to develop solutions to conflicts. Recently, the Coexistence Council finalized a program of payments for wolf presence, conflict avoidance and depredation compensation.

There is a proposal to delist the gray wolf in the northern 48 states and reclassify the Mexican wolf as an endangered subspecies. There also is a proposal to change the Mexican wolf experimental population area, the draft environmental impact statement for which will be completed in the summer of 2014, including a public hearing, with the goal to finalize revisions in 2015.

### **Discussion**

Mr. Bixby commented that the Coexistence Council, which engages livestock owners in designing an approach to coexist with the wolves, is an exciting and revolutionary approach to community engagement. There is no other program like it in the country. He asked whether funding had been found for the program yet. Ms. Barrett responded that she is seeking federal funding and private donations to support the program.

Dr. Eckert asked whether the fires in the Southwestern United States have affected the wolves and their prey. Ms. Barrett replied that there were burn-overs of dens, but the wolves survived. In the long term, the fires probably will benefit the wolves because they increase elk grazing area.

Dr. Pezzoli noted that when an ecosystem loses a large predator, impacts translate throughout the food chain. He asked whether the re-introduction of the Mexican wolf has had any impacts on the food chain in a way that might justify funding this program. Ms. Barrett answered that currently, the Mexican wolf population is too small to impact the elk population. Elsewhere with larger wolf populations, whether trophic cascades are changing as a result of wolf re-introduction remains controversial.

### ***U.S. Wildlife Refuges in Southeast Texas***

Mr. Robert Jess, South Texas Refuges Complex Headquarters, USFWS, Department of the Interior, stated that three refuges comprise the southeast Texas refuge complex. The Lower Rio Grande Valley Wildlife

Corridor contains approximately 60 wildlife refuge tracts with significant populations of the endangered ocelot. Installation of the border fence caused significant damage to resources and management capabilities in the refuge complex, cutting off migration routes for all species except birds. To offset environmental impacts from the border fence, Congress budgeted approximately \$50 million in funding for the USFWS.

The USFWS partnered with the Border Patrol in addressing issues that threatened the refuge complex, forming an unusual alliance given the dissimilar missions of the two organizations. In 2012, the USFWS and Border Patrol began to collaborate to address environmental damage in the refuge complex caused by the Border Patrol in pursuit of migrants who crossed the U.S.-Mexico border illegally. As a result, the Border Patrol established “community storefronts” in the refuges that were accessible to visitors. A staging area for Border Patrol equipment and resources was set up on USFWS lands. The benefits of the collaboration for the area included decreased environmental damage, deterrence of illegal activities such as smuggling of people and drugs across the border, empowerment of communities, protection of visitors and refuge employees, and adoption by the Border Patrol of lower carbon footprint equipment that has less impact on roads and wildlife. The collaboration also has facilitated enforcement activities.

Mr. Jess stated that conservation lands increasingly are needed to protect species such as the ocelot because of human population pressures. He cited in particular a parcel of land that is ocelot habitat and connects to conservation lands. Mr. Jess suggested that the Board help conservation efforts in the refuge complex by advocating for allocation of outstanding funds for border fence mitigation, which could be used to purchase critical habitat.

## **Discussion**

Dr. Pohlman acknowledged that there were many problems associated with Border Patrol activities when the border fence first was installed, but public opinion, as well as increased interest among new recruits in applying sustainability and environmental protection principles to law enforcement, has led to significant improvements. Mr. Jess added that the USFWS also has outreach programs about ocelot protection in which Border Patrol agents have participated.

Dr. Pohlman noted that the allocation of mitigation funding is a sensitive topic given limited resources; it might be more effective for the Board to make a general recommendation about the need for allocating resources.

Mr. Bixby asked whether the Border Patrol assists the USFWS in monitoring ocelots. Mr. Jess responded that the Border Patrol reports ocelot sightings by remote cameras and other high-technology resources.

Mr. Joyce inquired about accommodations to make the border fence compatible with wildlife, including installation of openings in the border fence to allow ocelot movement across the border. Dr. Pohlman indicated that the feasibility and best locations for ocelot openings are being studied, but no decision has been made. Mr. Jess observed that the border fence is not a single unit, and there are gaps between sections. He added that there is evidence that crossings by animals through openings in the border fence are random events. Dr. Pohlman stated that there are smaller openings in the border fence that were installed along migratory routes.

## ***Landscape Conservation Cooperatives***

Ms. Genevieve Johnson, Desert Landscape Conservation Cooperative Coordinator, Bureau of Reclamation, Department of the Interior, stated that Landscape Conservation Cooperatives (LCCs) were

established to develop and coordinate science in ecoregions. In the past, science was not integrated sufficiently across agencies to address management questions on an ecoregional scale. In 2009, the Department of the Interior established the LCCs and Climate Science Centers to examine the effects of climate change and other stressors on a landscape scale and focus on mitigation efforts. Key characteristics of LCCs are a landscape geographic scale, a taxonomic scope that includes all species in the landscape, a forward-looking approach to plan for anticipated changes, and an adaptive approach that informs an adaptive management framework. LCCs are nonregulatory in nature, intended to develop plans to respond to stressors and connect the work of partners without being duplicative. The LCCs develop landscape-scale targets that are significant to local efforts by identifying specific items on which all of the parties can agree, identifying barriers to completing tasks, creating capacity to address stressors and conservation impacts on the ground, selecting cases studies of collaborative solutions and extracting data and best practices from them. The structure of the LCCs includes a steering committee, which provides direction; staff; working groups; and management question teams that select critical management questions. Communication with the partnership community provides feedback and support to the LCCs.

The LCC that includes most of the border region, the Desert LCC, extends across the border into Mexico. The Desert LCC has a Local Governments Working Group, a Mexico Working Group that collaborates with Mexican partners, and a Science Working Group that focuses on strategic science coordination. To address critical management questions, specific outcomes were identified: an environmental flows database, a study of fire impacts in riparian areas, a conservation planning atlas, a binational land cover map, a database or science-based platform to deliver science projects, a Big Bend ecological synthesis, a map of threats to grasslands, and a sensitivity analysis for herp taxa. Desert LCC science includes 37 projects funded since 2011 by the Bureau of Reclamation. A sample project focused on the impact of climate change on fish biodiversity in the Desert LCC, which involved compiling and normalizing biodiversity data and estimating impacts from different climate change scenarios. Scientific information is communicated using a platform developed by the U.S. Geological Survey, and information also is communicated to the public via webinars and YouTube videos.

## **Discussion**

Dr. Cyrus B.H. Reed, Conservation Director, Lone Star Chapter, Sierra Club, asked which Mexican agencies were involved in the steering committee. Ms. Johnson responded that currently only one Mexican organization is a member of the steering committee, but other groups have representatives that belong to working groups, and a meeting is planned in Mexico to increase participation.

Mr. Dave Anderson, Founder/President, FORM Strategic Consulting, LLC, asked whether the critical management questions for each region differed. Ms. Johnson replied that critical questions depend on the most substantive conservation issues for a given region.

Dr. Payne recommended the LCCs as a data source, noting that the LCCs had provided NOAA with enhanced tidal information for investigating the effects of storms and tidal influences on surge events in Alaska. Ms. Johnson stated that NOAA has participated in all of the coastal LCCs.

## **Public Comments**

There were no written public comments received by the Acting DFO prior to this meeting, and no oral public comments were offered when Dr. Austin called for comments.

## Work on the Draft of the 16th Report

Dr. Austin indicated that the session would begin with a brief summary from the Workgroup Chairs. The Workgroup's draft chapters were distributed to the Board members with the meeting materials. Following updates from the Chairs, the GNEB members would discuss logistics, engage in a plenary discussion about the timeline, and work separately in individual Workgroups. Additional data needs that were suggested by the presentations, as well as sources for these data, will be discussed in the breakout portion of the session.

Dr. Austin noted that work on the Report was scheduled for the morning of the second day of this meeting as well. She commented that the ultimate structure of the Report might not reflect the structure of the Workgroups. The structure of the Report will be reassessed when the Workgroups reconvened. After working separately, the Workgroups also will provide updates on their progress toward finalizing a list of proposed recommendations.

Mr. Joyce indicated that Michael Boots, Acting Chair of the CEQ, had distributed the GNEB's December 2013 Advice Letter to the federal agencies to solicit responses to the Board's recommendations. The CEQ's response to the Advice Letter will provide guidance to the Board on which issues the federal agencies consider most important, and whether other issues exist that the Board should consider addressing. The deadline for the agencies to respond to Mr. Boots' letter was May 30. The CEQ planned to combine the individual responses and submit them to the agencies for review. The Board can expect to receive a response from the CEQ in late June or early July. Mr. Joyce indicated that he will provide a copy of the distribution list to the Board. To expedite data-gathering for the Report, he suggested that each of the federal members seek a copy of their agency's individual response to the CEQ to share with the Board.

Ms. Sylvia Grijalva, U.S.-Mexico Border Planning Coordinator, Office of Planning, Federal Highway Administration, Department of Transportation, indicated that the Department of Transportation was unclear regarding the appropriate response to the CEQ's letter because it primarily mitigates ecological impacts on a project-by-project basis and conducts little system-wide ecological restoration. Dr. Pohlman responded that mitigation activities conducted by the Department of Homeland Security are examples of ecological restoration efforts conducted by a federal agency with a mission that does not focus on natural resource preservation. Dr. Austin cited the need for the Board to use a broad interpretation of ecological restoration in the Report and apply it consistently to all of the agencies.

### ***Update From the Workgroup Chairs***

*Workgroup 1: Measures and Scaling Up (Dr. Eckert and Mr. Anderson, Chairs); Workgroup 2: Federal Agencies and Ecosystem Restoration (Dr. Pohlman and Mr. Cruz, Chairs); Workgroup 3: Ecoregions (Dr. Pezzoli, Chair); Workgroup 4: Watersheds (Dr. Reed and Mr. Niemeyer, Chairs)*

Dr. Eckert provided an update from Workgroup 1 (Measures and Scaling Up). The Workgroup members have organized the information that they gathered. The draft chapter begins with a discussion of metrics in general. The chapter continues with a section on the use of metrics by federal agencies. For metrics on environmental quality, the Workgroup left placeholders for some of EPA's activities, which include air and water quality standards development, and cited the Natural Resource Trustee Program, which allows agencies to collect damages from environmental discharges of hazardous substances. For natural resource-related metrics, the Workgroup plans to include a description of metrics used under the NEPA. Another class of metrics measures the amelioration of environmental stressors as part of ecological restoration. An emerging tool for measuring stressor abatement is ecological integrity, which NGOs have

developed as a framework for assessing ecological systems and that federal agencies are adopting. Dr. Eckert indicated that stressor abatement was a focus of many invasive species programs, but resources are needed for long-term monitoring of success, as well as operations and maintenance activities. Metrics measuring ecosystem services is an area that the Workgroup considers worth pursuing, including whether monetary values can be assigned to such services. Regarding scaling up, Dr. Eckert indicated that the Workgroup found that strategies for scaling up are not developed in many programs, which tend to take either a coarse- or fine-filter approach.

Dr. Pohlman updated the Board on the progress made by Workgroup 2 (Federal Agencies and Ecosystem Restoration), of which she is Co-Chair with Mr. Cruz. The Workgroup's draft chapter describes the ways in which individual federal agencies function in regard to their ecological restoration efforts in the border region; examines specific programs with federal involvement, describing processes, successes and challenges; and considers tribal, state and local concerns related to federal restoration efforts. In the section on individual federal agencies, the Workgroup included descriptions of activities conducted by the State Department, which oversees the Presidential permit process for all border crossings and binational interagency coordination; the NADB; the IBWC; and the Department of Homeland Security, including restoration efforts by the Federal Emergency Management Agency (FEMA) and the U.S. Coast Guard. The Workgroup needs to gather more information about the ecological restoration activities for some of these agencies, including NOAA, the Department of the Interior, the Department of Health and Human Services, and the U.S. Coast Guard. The section on specific programs under federal jurisdiction will include EPA's Border 2020, grazing range management and natural disaster restoration. In this section, the Workgroup will explore potential duplicative efforts among programs and opportunities to leverage resources. The last section will depict tribal, state and local concerns related to federal ecosystem restoration projects.

In discussing Workgroup 2's draft chapter, the suggestion was made to refer to state and local involvement rather than concerns. To assist in data gathering, Dr. Austin asked each federal representative to consult with Workgroup 2.

Dr. Pezzoli indicated that Workgroup 3 (Ecoregions) had compiled a summary addressing its charge from the Board to describe ecological restoration efforts in populated and protected areas, and identify case studies that illustrate effective or ineffective results. The Workgroup's draft chapter begins with a discussion of the concept of ecoregions in which the Workgroup proposes using the CEC's definition of an ecoregion. Following is a section that discusses the definition of ecological restoration. From the Advice Letter, the Workgroup presents the Society for Ecological Restoration's (SER) definition of ecological restoration, which implies returning an ecosystem to its predisturbed state. This section also discusses possible endpoints for restoration. The draft chapter continues with a section on alternative taxonomies for ecological restoration efforts. The Workgroup also developed a protocol for selecting case studies that is described in the draft chapter. The Workgroup addressed the problems related to ecological restoration created by the border fence, which they suggested framing as an opportunity for binational cooperation, particularly at the ports of entry. In the section addressing the challenges of ecological restoration, the Workgroup outlined the unique problems posed by urban ecological restoration. A section on public-private partnerships is included in the draft, providing examples of the use of incentives to enable ecological restoration.

Regarding the summary compiled by Workgroup 3, Dr. Eckert pointed out that the SER's definition of ecological restoration does not specify recovery to a predisturbed state but leaves the endpoint of the process open. Dr. Zamora supported including with the definition of ecological restoration a short description of the benefits associated with ecological restoration to clarify that they apply to humans as well as wildlife. Dr. Pezzoli agreed that human health and well-being are tied to the land and ecosystems, and suggested that the Workgroup use the taxonomy and continuum to illustrate this point.

Ms. Grijalva asked about distinctions between mitigation and ecological restoration. Dr. Eckert responded that in practice, mitigation and ecological restoration are very similar, although it often is more difficult to create a new habitat than restore an existing habitat. Regarding different approaches to ecological restoration, Mr. Vizzier used a metaphor likening ecological restoration to stopping “the stabbing” (i.e., removing stressors), staunching bleeding or performing plastic surgery.

Dr. Reed provided an update on the progress of Workgroup 4 (Watersheds). In its draft chapter, the Workgroup had surveyed the water resources in the border region, describing the institutional mechanisms that control water use, providing background on water treaties, and describing the dams that exist in the border region. The draft contains a section on restoration goals, which will be expanded. There follows a section on the challenges of ecological restoration of watersheds that result from failing to consider environmental needs when managing water for other purposes (e.g., dams, irrigation, urban water use). Ground water is treated briefly in the context of the challenge of creating a base flow, but there is no international basis for managing ground water issues. Other challenges include ecological and geomorphological changes. There is a section describing success stories in ecological restoration that includes the pilot wetlands that were constructed in Imperial and Brawley, IBWC Minute 319, IBWC efforts in the Rio Grande to restore habitat upstream of El Paso, the Rio Bosque Wetlands Park, the Transboundary Aquifer Assessment Program, a project on Devils River, the Lower Colorado River Multi-Species Conservation Program, and the Santa Cruz River. Dr. Reed noted that all of the success stories other than Minute 319 were on a small scale. The Workgroup also has developed proposed recommendations, including preventing mining of ground water and buying water rights for ecology. Dr. Reed indicated that he will provide the Board with a full updated list of the Workgroup’s recommendations.

The Board discussed issues related to preventing the need for ecological restoration of watersheds. Dr. Rincón suggested that the Board address the effects of the large quantities of water required for exploring and exploiting new sources of oil and gas, noting that Mexico is actively pursuing new energy sources. Dr. Reed responded that the Report would need to link the issue to impacts in the U.S. border region. He also noted that limiting development is an approach to averting the need for ecological restoration. Mr. Bixby emphasized the importance of prioritizing prevention given the expense of ecological restoration. Dr. Austin commented that there had been significant discussion in this meeting about whether preventative measures should be included in the Report. It might be appropriate to include a general statement about prevention.

Ms. Erin Ward, Director, Southwest Consortium for Environmental Research and Policy, New Mexico Water Resources Research Institute, observed that drought and flooding are problems that have high priority for the average Mexican citizen in the border region, and suggested that the Board ensure that it recommends federal actions that will be perceived by the citizens of Mexico as those of a “good neighbor.” Mr. Bixby suggested that the Board consider applying different endpoints under adverse conditions such as drought (e.g., restoring a fish population only in the portions of a river with perennial water). Mr. Neimeyer agreed with Ms. Ward that the potential for U.S. actions having detrimental transboundary environmental impacts should be considered by the Board.

### ***Logistics for Preparing the Report***

Dr. Zamora asked about the ways in which past Reports have been used. Dr. Austin replied that past GNEB Reports have been used to support advocacy efforts such as addressing the infrastructure needs of the *colonias*. Dr. Rincón stated that in the past, Board members have met with their state representatives to familiarize them with the Board’s recommendations prior to the release of the Board’s Report or Advice Letter. Mr. Niemeyer also cited the use of a past GNEB Report to support funding for the

construction of levees. The degree to which a Report is useful depends, however, on the effectiveness with which it is distributed. Dr. Payne commented that in reviewing past Advice Letters and Reports, he came to the conclusion that implementation of the Report's recommendations will depend on successful interagency coordination. There was general agreement that emphasizing human benefits will provide the most compelling case to federal agencies for ecological restoration. Mr. Joyce clarified that the Board's recommendations to the U.S. government must address needs and issues on the U.S. side of the border.

Dr. Austin provided the following advice to the Board members in preparing the Report: (1) remember that the audience for the Report is the President and the U.S. government; (2) write concisely, citing past Reports to avoid restating past information and recommendations; (3) write with focus, highlighting illustrative examples rather than attempting a comprehensive assessment; (4) provide references for cited material, saving electronic copies of documents cited when possible; and (5) organize the information effectively (e.g., provide a descriptive matrix summarizing case studies).

### ***Individual Workgroup Breakout***

Workgroups 1, 2, 3 and 4 met individually to continue refining recommendations, identify additional case studies, and discuss gaps and needs for their assigned sections of the Report.

### ***Plenary Discussion of the Report***

The Workgroup Chairs provided updates from the individual Workgroup breakout session. Mr. Anderson stated that Workgroup 1 had gathered significant amounts of information, but this information needs to be organized and more case studies need to be selected that connect to the Workgroup's recommendations. Workgroup 2 plans to develop a matrix summarizing the resources and funding for ecological restoration that are available from each agency, including grants with a sustainability component. Dr. Reed noted that enforcement and legal actions can result in funding for ecological restoration. Dr. Payne cited as a federal example NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP). He suggested that the Board recommend developing formal arrangements to share funding among agencies to increase efficiency and leverage resources. Dr. Austin proposed including funding source as a category in the descriptive matrix summarizing case studies as well. Dr. Pezzoli indicated that Workgroup 3 had reached a consensus that it would be most productive to disband. The other Workgroups could incorporate the information that Workgroup 3 had compiled, including the role of science in addressing the challenges of ecological restoration (Workgroup 1); information on urban ecological restoration (possibly Workgroup 1); case studies involving federal agencies (Workgroup 2) and rivers (Workgroup 4); the protocol for selecting case studies; and the hierarchical chart of a draft taxonomy for ecological restoration, on which the descriptive matrix summarizing case studies could be based. Dr. Reed indicated that Workgroup 4 had a productive meeting, and will focus on developing recommendations that are practicable and selecting case studies. Dr. Austin reminded the members that the selection criteria for case studies include being linked to one or more recommendations and having federal participation.

The Board members discussed some of the gaps in the information gathered to date by the Workgroups. To address terrestrial ecological restoration, possible case studies were suggested by Ms. Mendoza, Dr. Eckert and Dr. Pezzoli, including an initiative started by a private landowner to harvest rain water, restoration of Chihuahuan Desert grasslands, fire restoration in the Coronado National Forest, weed control programs, and urban ecological restoration efforts. Mr. Anderson and Dr. Santiago raised the issues of habitat fragmentation and air pollution as stressors of terrestrial ecosystems. For the introduction, Dr. Austin asked the Board members to send her suggestions to include in a list of benefits to human health from ecological restoration.

## Adjournment

The meeting was adjourned for the day at 6:09 p.m.

## Friday, May 9, 2014

### Discussion of Next Meetings and Other Business

Ms. Gantner and Mr. Joyce discussed the process of applying for membership to the Board. The terms of all of the current Board members expire in March 2015. Those who have served for 6 years are not eligible to re-apply. EPA will announce openings for Board members in the *Federal Register*.

Ms. Gantner will send a message via email to the current Board members who are eligible inviting them to re-apply. The application process involves submitting an updated resume and biographical sketch. Although applicants may self-nominate, members who do not represent government agencies also must submit a letter of endorsement from the group that they will represent. In particular, applicants from academia and business now will need endorsements from specific groups; they may not represent academia or the business sector in general. EPA will contact federal, state and local agencies asking them to nominate a representative to the Board; current governmental members must submit a letter from a senior-level manager asking that the applicant be allowed to serve as their agency's designee. EPA's Office of International and Tribal Affairs (OITA) will consult with the tribes regarding tribal representatives. If interested in continuing, current members should notify Ms. Gantner, who will be available to assist with applications. Applications to serve on the GNEB will be sent to the EPA Administrator's office for consideration, and the review process takes approximately 8 months.

Dr. Austin drew the Board members' attention to the timeline for completion of the Report, which was agreed upon by the Board at its January 31 teleconference meeting:

- **May:** Board members receive and review the draft text. The Board meets to finalize recommendations and identify gaps.
- **June and July:** Final data are gathered. Report writing is finished.
- **August:** The draft Report is sent to the Board for review.
- **September:** The Board meets via videoconference to approve the Report.
- **October/November:** The Report is finalized and submitted to the CEQ.

The Board members discussed possible revisions to the timeline. Dr. Austin stated that if the Board does not approve the Report in September, the schedule allows sufficient time to schedule a teleconference in October/November to approve the Report. Dr. Reed indicated that Workgroup 4 anticipates being able to determine the general categories that require action but will require additional research following this meeting to develop specific recommendations and determine which would be feasible. Dr. Austin recognized that the newly formed Workgroup on terrestrial ecological restoration might not be prepared yet to finish its proposed recommendations.

Dr. Austin proposed that during the breakout session following the Public Comment Period, the Workgroups develop general ideas for their recommendations. The Workgroups should refer to the



Board's December 2013 Advice Letter, which Ms. Gantner will provide to the Workgroups, to determine whether to include and expand on the recommendations therein. Dr. Austin proposed that the Board use the recommendations in past Reports for guidance regarding the appropriate level of specificity. Mr. Joyce clarified that for a recommendation to be actionable by a particular agency, it must be within the agency's authority. Dr. Austin noted that the representatives from different federal agencies participating in this meeting can serve as a resource for whether recommendations are actionable by their agencies, and state representatives can provide feedback regarding whether a recommendation might violate state rights.

Although Congress has the authority to appropriate funds, Mr. Neimeyer noted that in the past, the Board has used its recommendations to request appropriations and federal members have recused themselves. Dr. Payne observed that federal agencies engage in a multiyear planning process, and new projects can be incorporated into budgetary planning; otherwise, agencies must work within existing budgets, which allow little flexibility in the current fiscal climate, to fund new projects.

The scheduling of the September Board meeting was discussed. Dr. Austin indicated that the format will be a videoconference in which the draft Report with line numbers will be shared and reviewed line-by-line. The Board members indicated which weeks in September would be best given their travel schedules, conferences and the academic calendar. The Board reached a consensus that the week of September 14 was preferred. Ms. Gantner will schedule the meeting for the Board.

Two Board members raised other issues. Ms. Spener stated that Commissioner Edward Drusina, IBWC (Board member, not in attendance), had asked her to bring to the attention of the Board the upcoming proposal to merge the NADB and BECC, on which the Board might consider commenting formally. Mr. Kameny explained that the BECC must grant approval to projects to receive funding from the NADB. Ms. Grijalva indicated Mexico's interest in expanded funding opportunities for infrastructure projects such as border crossings. Dr. Rincón expressed concern that the merger might compromise the BECC's focus on environmental issues; the BECC was established and provided with its mandate under the North American Agreement on Environmental Cooperation (NAAEC). Mr. Kameny stated that the United States is not in favor of a proposal that would change the BECC's mandate to improve environmental conditions in the border region. Ms. Mendoza cited the need for the Board members to be educated about the issues related to the proposed NADB-BECC merger so that they might inform their constituencies. Mr. Neimeyer suggested that the Board form a subcommittee to provide input to the Board on the proposed NADB-BECC merger. Dr. Reed, Mr. Neimeyer, Ms. Spener, Ms. Mendoza and Mr. Treviño volunteered to form the subcommittee, which will be led by Mr. Treviño. Dr. Austin asked the subcommittee to review the issue and present its findings to the Board for consideration. Dr. Rincón noted that the GNEB's federal members who represent agencies that are members of the BECC-NADB's Board of Directors will need to recuse themselves from recommendations to the Board of Directors. Mr. Joyce reminded the Board members that the Board's advice must be addressed to the President and Congress.

Dr. Pezzoli proposed that the Board consider contributing to the process of developing the United Nations' Sustainable Development Goals for 2030, which will build on the United Nations' Millennium Development Goals and include ecological restoration. Dr. Austin responded that the GNEB provides advice to the President and Congress, and may not provide public comment as a Board to other entities, although the GNEB might recommend that the President address the United Nation's Sustainable Development Goals. After discussion among the Board members, it was recognized that providing input on the Sustainable Development Goals would be beyond the scope of the Board.

Dr. Austin thanked the participants for their work during the meeting and after dinner on the previous day. Mr. Anderson had drafted a proposed framework for the Report that Dr. Austin shared with the

Board. He suggested the following structure: ecological restoration best practices, federal agencies, riparian and wetlands restoration, terrestrial restoration, and metrics. A discussion of the use of metrics might be included in the introduction of the Report or at the end.

Following public comments, Dr. Austin indicated that the work on the draft Report would continue in breakout sessions. She suggested that members of the Workgroup on measures (Workgroup 1) meet. Members of the federal agencies Workgroup (Workgroup 2) should decide whether to meet together or participate with other Workgroups. Dr. Austin asked the watersheds Workgroup (Workgroup 4) and Board members interested in terrestrial ecological restoration to meet together and coordinate case studies.

## Public Comments

Mr. Philip Partridge, Thunderbird Digital, citizen of El Paso, Texas, and former member of the IBWC citizen advisory group, provided oral public comments to the Board. He expressed appreciation of the high quality of the presentations. He suggested that to increase public engagement, the Board publicize Board meetings broadly. The Board also might offer brief information sessions aimed at the public that would summarize meeting presentations and allow the public to interact with the Board members. The breadth of the information of the meetings would be of interest to groups that otherwise might not meet collectively. Many members of the public are not aware of the innovative ecological restoration activities and collaborations among federal agencies.

The Board members thanked Mr. Partridge for his comments and agreed with him that the activities presented at this meeting would be of interest to the public and should receive more public exposure. Dr. Austin and Mr. Treviño agreed that the Board's activities would be of interest to a large audience. Outreach suggestions to attract public engagement in the Board's meetings included extending invitations to the local press, local officials as presenters, members of environmental groups such as the Sierra Club, university students and members of the university community. Mr. Luis Olmedo, Executive Director, Comite Civico Del Valle, Inc., suggested using social media for outreach to students. Dr. Santiago proposed enlisting the university communications office to provide outreach to the university community. In addition, meetings stakeholder schedules should be considered when planning meetings. There are barriers to increased outreach, however, such as limited funding and personnel to devote to community organization and outreach. Reaching citizens in their communities is the best approach to engage the public. Ms. Spener noted that the IBWC conducts outreach to the public through regular citizen's forums in local communities in the border region, which would be a mechanism to distribute information about the GNEB to the public. Dr. Rincón proposed that relevant presentations from the Board's meetings be presented at IBWC citizen forums. Border 2020 meetings are another opportunity for disseminating information from the presentations. Mr. Treviño emphasized the importance of establishing relationships with the press to encourage coverage. Dr. Austin indicated that at past meetings, the Board had participated in tours related to its work that were linked with public outreach. Dr. Austin recognized the challenge, however, of combining public presentations and outreach with working meetings.

Mr. Joyce encouraged the Board members to inform their networks about upcoming meetings, particularly if the agenda includes topics of broad public interest. He stated that EPA provides notice to the public of upcoming GNEB meetings in the *Federal Register*, which is available online at the *Federal Register* website (<https://www.federalregister.gov/>) and through FedNet (<http://www.fednet.net/>). Because EPA like all federal agencies must recuse itself from endorsement of the GNEB's recommendations, EPA may not provide publicity that might be perceived as an endorsement of the

GNEB's recommendations. Prohibited EPA-sponsored publicity might include, for example, issuing a press notice about the release of the Board's Report.

## **Work on the Draft of the 16th Report**

### ***Individual Workgroup Breakout***

Workgroups 1, 2 and 4 met individually to plan and establish timelines for developing recommendations and completing their sections of the Report.

### ***Update From the Workgroup Chairs***

The Board members reconvened together, and the Workgroup Chairs provided updates on their timelines. Dr. Eckert stated that Workgroup 1 had started to draft recommendations, and Mr. Anderson had begun a draft outline. The Workgroup will reference the recommendations in the Board's Advice Letter. The Workgroup also plans to review the best practices recommended by the SER. The Workgroup anticipated that certain best practices will be more relevant to some agencies than others because ecological restoration is conducted on different scales by different agencies. Mr. Anderson added that the Workgroup was establishing categories for metrics, standards and tools. The Workgroup favored the approach of the LCCs, which might be replicated and expanded to include different agencies. The mitigation efforts associated with building infrastructure such as that associated with land ports of entry also was considered by the Workgroup as a focus to develop ideas about restoration. Dr. Zamora suggested framing the discussion of metrics to ensure that it does not distract from the other material in the Report by overemphasizing the scientific aspects of ecological restoration. Dr. Eckert responded that the Workgroup intends to indicate whether metrics are being used and whether the metrics are science-driven rather than recommend the use of particular metrics. Dr. Austin reminded the Workgroup members that the Board is not charged with conducting research; the Report should present general principles and use case studies to illustrate whether or not the principles were effective. Dr. Austin and Mr. Treviño asked about the Workgroup's timeline. Mr. Anderson responded that the Workgroup had not yet discussed its schedule. Dr. Austin indicated that the Workgroup should establish a timeline for teleconferences and preparation of materials to allow time for the reviewers to compile the draft Report.

Ms. Grijalva described the draft timeline developed by Workgroup 2. She indicated that by May 16, all of the members of Workgroup 2 will submit the materials for which they are responsible to Dr. Payne, who will be gathering data on federal grant programs, and Dr. Pohlman. Dr. Pohlman will contact Ms. Gantner to schedule a teleconference for May 22. The Workgroup members estimate that 3 weeks after the conference call, they will provide a draft chapter to the Board. The Workgroup's recommendations will expand on those presented in the Advice Letter. The Workgroup also will develop a matrix summarizing federal agency restoration activities. Ms. Grijalva noted that the Workgroup recognized the need for input from other federal agencies that are not represented at this meeting, as well as restoration efforts involving tribal and local participation. In response to questions from Board members, Ms. Grijalva stated that Dr. Payne is drafting a section on grants programs of federal agencies such as that of the Department of Agriculture to fund eradication of invasive species, which was cited by Dr. Reed. The Workgroup's chapter also will include information about restoration efforts in national forests by the U.S. Forest Service, which were mentioned by Mr. Bixby.

Dr. Reed and Ms. Spener provided an update on Workgroup 4. The Workgroup had discussed ecological restoration of riparian and wetlands systems, developing specific recommendations that will need to be researched to determine whether they are feasible. Ms. Spener reviewed the Workgroup's draft recommendations, including, for federally funded water conservation programs, setting aside a percentage of the water conserved for ecological restoration; developing a process to recognize donations of water rights as tax deductible charitable contributions; controlling invasive species; allowing rivers to meander; establishing a separate federal funding source for ecological restoration in the border region; fostering connectivity of aquatic habitats; improving the management of federal dams and reservoirs to coordinate water releases; and developing a native fish conservation and recovery plan for the Rio Grande.

The Board discussed addressing ecological restoration of terrestrial ecosystems. Dr. Eckert noted that issues that apply to riparian and wetlands ecosystems such as invasive species and connectivity (e.g., dams in rivers, fences and transportation corridors in uplands) also apply to terrestrial ecosystems. Dr. Austin observed that similar opportunities for public-private partnerships (e.g., purchasing water rights, purchasing grazing rights) exist in terrestrial and riparian ecosystems. Ms. Ward emphasized the importance of connectivity, which is impaired by factors such as the border fence that restricts migration of large mammals, in terrestrial ecological restoration. Dr. Eckert replied that barriers such as the border fence also create problems for water flow, changing riparian habitats, but proposed that the Board focus on near-term solutions rather than those that are likely to change only in the long term such as dams and the border fence.

Dr. Eckert suggested that the SER might be a good source for identifying case studies. Mr. Bixby cited the Mexican wolf re-introduction program as a potential case study, focusing on the Coexistence Council as an approach to conflicts in protecting endangered species. Another aspect of the Mexican wolf program is advocacy for the purchase of the permanent retirement of grazing rights on national forest lands to eliminate conflicts with livestock. Dr. Austin recognized themes that might be developed from the Mexican wolf as a case study: species-driven restoration, which is challenging because the wolf's habitat includes private land, and the principle of purchasing rights as a restoration tool. Mr. Bixby suggested that case studies of ecological restoration outside of the border region might be used as examples of best practices that could be applied in the border region. Dr. Austin indicated that Mr. Cruz will provide information about restoration work of the tribes in Texas, whose relationship with the federal government is different because there are no reservations in Texas. It might be desirable to have multiple case studies of ranching, grazing and agriculture because each might highlight different aspects of ecological restoration.

The Board members discussed the degree of broadness that the Board should use in defining ecological restoration. Ms. Grijalva indicated that Workgroup 2 had discussed whether to include planning as an ecological restoration activity. Dr. Eckert commented that his Workgroup intends to include a statement about the need for prevention and will address stressors such as air quality; they will not focus, however, on preventative activities.

Dr. Austin proposed an approach for developing case studies. Workgroup 1 will incorporate the case studies that remain from disbanding Workgroup 3. When selecting new case studies, the Workgroups should consider the key issues that apply, the reasons that the case study is important, and the recommendations that can be supported by the case study. All case studies should have federal involvement. What will be important for the Report are the accomplishments of the effort; the approaches taken; the challenges faced; and for the future, the gaps that exist and the ways in which federal efforts might be more effective. The intent is not to illustrate "good" or "bad" cases.

## ***Plenary Discussion of the Timeline for the Report***

Dr. Austin noted that the three Workgroups were at different stages in developing their recommendations. All of the Workgroups need to develop their proposed recommendations and organize them. The reviewers, Dr. Austin and Mr. Treviño, will ensure that the proposed recommendations are consistent in their degree of specificity, compile and organize them, and distribute them to the Board. The GNEB members will review all of the proposed recommendations, consult with the leadership of the constituencies that they represent (e.g., supervisors, federal agency managers, Boards of Directors), and recommend changes to the proposed recommendations if necessary. Ms. Mendoza observed that the Board members might need to consult with multiple constituencies, which would require additional time. Dr. Austin stated that based on the members' recommendations, the proposed recommendations might need to be revised and reviewed again by all of the Board members until a consensus is reached.

In addition to recommendations and text, the Workgroups will need to determine the diagrams, images, maps and photos that will be included in the Report. Dr. Austin proposed that at the same time the Workgroups are developing their recommendations, they compile a list of the graphical material that they plan to include. Mr. Joyce indicated that there is contractor support for designing flowcharts, diagrams, maps and other original graphical material. Maps in particular are time-consuming to design and need advance planning. Another issue is obtaining permission to use images and other graphics that are not open source. This will require careful documentation of the sources of all graphical material. Dr. Austin noted that all images should be of sufficiently high resolution to print well. Mr. Joyce stated that he and Ms. Gantner will provide the Board members with guidelines on graphics quality and copyright rules for reproducing images.

Dr. Austin suggested that while the proposed recommendations are being reviewed, the Workgroups continue to develop their draft chapters. Each case study likely will be applicable to multiple recommendations; changes in a Workgroup's proposed recommendations, therefore, are not likely to result in extensive revisions to its chapter. Dr. Austin and Mr. Treviño reminded the Board members to provide proper documentation of all textual citations and figures. Ms. Gantner will provide the Board members with a summary of the proper format for citations. Mr. Treviño stated that the Board only will be able to include properly referenced material in the Report. The reviewers will identify overlaps and gaps among the draft chapters and ensure that all of the chapters are harmonized with regard to their degree of specificity. The Workgroups will revise their chapters in response to the reviewers' comments and revisions to the proposed recommendations, if necessary. The reviewers then will compile the draft Report. Dr. Austin asked that in their initial review of the draft Report, the Board members focus on content rather than editorial changes. Members should respond with substantive comments within 2 weeks of receiving the draft Report. If there are only a few key issues, these can be resolved at the meeting. After discussion, the following timeline was agreed upon by the Board members:

- **June 2:** Workgroups will submit their complete list of proposed recommendations, and a list of graphics that they plan to include in the Report (i.e., maps, photos and diagrams), to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- **June 9:** Dr. Austin and Mr. Treviño will send the compiled set of proposed recommendations to the Board. Members then will share the proposed recommendations with their constituencies.
- **July 2:** Members will submit their comments on the proposed recommendations, including justifications for any changes, to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce. Workgroups also will send their draft chapters to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.

- **July 14:** Dr. Austin and Mr. Treviño will send revised recommendations to the Board, noting any substantive changes and justifications for the changes. Dr. Austin and Mr. Treviño also will send to the Workgroups initial comments on their draft chapters, particularly any concerns about overlap and gaps.
- **July 28:** Members will submit their comments on the revised recommendations to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce. Workgroups also will send their revised chapters, including graphics, to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- **Mid-August:** Dr. Austin and Mr. Treviño will send the draft Report to the Board. Members then will share the draft Report with their constituencies.
- **September (dates to be arranged):** Members will submit their comments on the draft Report to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce, and also will participate in a Board meeting to discuss and vote on approval of the draft Report.
- **October/November (date based on the outcome of the September meeting):** The approved Report will be finalized and transmitted.

The timing of receipt of the CEQ's response to the Advice Letter was raised by Dr. Santiago. Dr. Austin anticipated that the Board would receive a response by early July. Mr. Joyce stated that most likely, the body of the CEQ's letter will summarize briefly the responses of the individual agencies, which will be appended in full. If representatives from the federal agencies can obtain a copy of their agency's letters to the CEQ for the Board, the Board will be able to use this information to anticipate the CEQ's response.

The scheduling of the September meeting was discussed. Ms. Mendoza suggested that the week of Monday, September 14, would be optimal.

### ***Logistics for Preparing the Report***

Dr. Austin indicated that the Workgroup Chairs should contact Ms. Gantner via email to schedule teleconference meetings and for assistance in all other matters. Dr. Austin recognized Ms. Gantner for her efforts to plan this face-to-face meeting and for the assistance that she provides to the Board.

The Board members deliberated on the process of vetting the recommendations. Ms. Ward asked about ensuring that the Board's recommendations are sensitive to the concerns of the citizens of Mexico and the Mexican government. Dr. Austin responded that the Board offers its recommendations to the President of the United States and the U.S. Congress. Ms. Ward may solicit feedback regarding the Board's proposed recommendations and draft Report, however, from citizens of Mexico who are part of her network. Mr. Kameny stated that the State Department will review the recommendations and Report to identify any material that might be detrimental to relations between the U.S. and Mexican governments. Dr. Austin added that Board members who work with local agencies will provide a similar review from a local perspective, and Mr. Kameny welcomed information from Board members regarding possible local concerns.

The Board members discussed the resolution of issues that might be sensitive to particular constituencies. Mr. Vizzier noted that climate change remains controversial for some constituencies. Dr. Austin responded that such controversies necessitate the review of the Board's recommendations by all of the Board members. Dr. Austin and Mr. Joyce emphasized the importance of raising any substantive concerns with the Board by contacting Dr. Austin as soon as they arise rather than waiting for a Board meeting.

The reviewers will compile all of the comments on the recommendations and Report. Dr. Austin stated that the reviewers will categorize the comments according to those that are substantive and those that are not. Substantive issues will be resolved between the two entities concerned or, if no resolution can be achieved, by the entire Board. The comments and their resolutions will be documented using the track changes feature of Microsoft Word. The Board will have the opportunity to approve or reject the resolution of all of the comments when it votes to approve the Report. The Report will be copyedited after approval by the Board.

The Board members considered approaches to publicizing the Report's release and alternative formats to present the information gathered for the Report. Dr. Austin asked the Board members to identify alternative ways to distribute the Report given that resources for printing are limited. Dr. Pezzoli suggested creating a website in addition to the Report. He noted that the National Academy of Sciences publishes its reports online. Ms. Grijalva indicated that in her experience, conversion of documents to comply with Section 508 standards was very expensive. There were suggestions that information from the Report be presented on a YouTube channel, which might feature "sound bites" from the Report. Dr. Austin proposed posting an online PowerPoint presentation summarizing the Report. Mr. Joyce responded by asking the Board members to send their suggestions to him and Ms. Gantner. He and Ms. Gantner would investigate which formats would be in accordance with EPA's rules on accessibility compliance and appropriate use of government funds. EPA must ensure that its information technology is accessible to people with disabilities. He noted that the protocols for determining the types of material that EPA may provide on its website are evolving.

## Adjournment

Mr. Joyce and Dr. Austin expressed their appreciation to the Board members for their efforts and dedication, indicating that the Reports that the GNEB produces are widely used. Dr. Austin thanked Mr. Treviño for serving as Vice-Chair. Dr. Austin also thanked The Scientific Consulting Group, Inc., for taking the minutes for the meeting and indicated that she will provide the Board members with a copy. The meeting was adjourned at 1:39 p.m.

## Action Items

- ✧ Mr. Joyce will provide to the Board the distribution list for the CEQ's request for a response from federal agencies to the GNEB's 2013 Advice Letter.
- ✧ Mr. Joyce and Ms. Gantner will send a summary of the proper format for citations to the Board members.
- ✧ Mr. Joyce and Ms. Gantner will send guidelines on graphics quality and copyright rules for reproducing images to the Board members.
- ✧ For the introduction, the Board members should send to Dr. Austin and Mr. Treviño items to include in a list of benefits to human health from ecological restoration.
- ✧ By June 2, Workgroups should submit their complete list of proposed recommendations to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- ✧ By June 2, Workgroups should submit their complete list of the graphics that they plan to include in the Report to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.

- ✧ By June 9, Dr. Austin and Mr. Treviño will send the compiled set of proposed recommendations to the Board.
- ✧ After receiving the proposed recommendations, the Board members should share them with their constituencies.
- ✧ By July 2, the Board members should submit their comments on the proposed recommendations, including justifications for any changes, to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- ✧ By July 2, Workgroups should send their draft chapters to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- ✧ By July 14, Dr. Austin and Mr. Treviño will send revised recommendations to the Board, noting any substantive changes and justifications for the changes.
- ✧ By July 14, Dr. Austin and Mr. Treviño will send to the Workgroups initial comments on their draft chapters, particularly any concerns about overlap and gaps.
- ✧ By July 28, the Board members should submit their comments on the revised recommendations to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- ✧ By July 28, Workgroups should send their revised chapters, including graphics, to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- ✧ In mid-August, Dr. Austin and Mr. Treviño will send the draft Report to the Board.
- ✧ Upon receiving the draft Report, the Board members should share it with their constituencies.
- ✧ In September, the Board members should submit their comments on the draft Report to Dr. Austin, Mr. Treviño, Ms. Gantner and Mr. Joyce.
- ✧ Ms. Gantner will schedule a meeting for the Board in September.
- ✧ In September, the Board members will meet via videoconference to vote on approval of the draft Report.



## **Good Neighbor Environmental Board (GNEB) Meeting Participants**

### **Nonfederal State, Local and Tribal Members**

Diane Austin, Ph.D. (Chair)  
Associate Professor and Director  
School of Anthropology  
Associate Research Anthropologist  
Bureau of Applied Research in Anthropology  
University of Arizona  
Tucson, AZ

Timothy Treviño, M.C.P. (Vice-Chair)  
Senior Director  
Strategic Planning and Agency  
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Alamo Area Council of Governments  
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Manager  
EH&S Department  
Cardinal Health  
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## **Federal Members**

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## **Designated Federal Officer**

Ann-Marie Gantner  
Acting Designated Federal Officer  
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**EPA Regional Participants**

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*Region 6*  
Maria Vasquez  
Border Office  
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South Texas Refuges Complex Headquarters  
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Gaithersburg, MD



**Good Neighbor Environmental Board**

**Hilton Garden Inn El Paso/University  
111 W. University Ave.  
El Paso, TX 79902**

**AGENDA**

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**Thursday, May 8**

8:00 a.m.

**Registration**

8:30 a.m.

**Welcome and Introductions**

- **Ann-Marie Gantner**  
Acting Designated Federal Officer  
Office of Diversity, Advisory Committee Management and Outreach
- **Denise Benjamin-Sirmons**  
Director  
Office of Diversity, Advisory Committee Management and Outreach
- **Diane Austin**  
Chair  
Good Neighbor Environmental Board
- **Timothy Treviño**  
Vice-Chair  
Good Neighbor Environmental Board
- **Board introductions**

8:45 a.m.

**Ecoregions—Standards, Metrics and Measures**

Kevin Bixby, Southwest Environmental Center: Overview of CEC Framework  
Keith Pezzoli, University of California, San Diego: Urban Ecological Restoration  
Greg Eckert, National Parks Service: Big Bend National Park

9:45 a.m.

**Break**

9:55 a.m.

**Waterways**

John Sproul, Park Manager: Rio Bosque Wetlands Park  
Jose Francisco Zamora-Arroyo, Sonoran Institute: Colorado River Region and Santa Cruz  
Elizabeth Verdecchia, U.S. Section, IBWC: Rio Grande Canalization Project

- 10:55 a.m.            **Break**
- 11:05 a.m.            **Partnerships and Coordination With Federal Agencies**  
Genevieve Johnson, Bureau of Reclamation: Landscape Conservation Cooperatives  
(via telephone)  
Robert Jess, U.S. Fish and Wildlife Service: U.S. Wildlife Refuges in Southeast Texas  
Sherry Barrett, U.S. Fish and Wildlife Service: Mexican Wolf Re-Introduction  
Program (via telephone)
- 12:15 p.m.            **Public Comments**
- 12:30 p.m.            **Lunch**
- 1:30 p.m.            **Work on draft of 16th Report**
- 6:00 p.m.            **Adjournment**

**Meeting Day 2**

**Friday, May 9**

- 8:00 a.m.            **Discussion of Next Meetings and Other Business**
- 9:30 a.m.            **Public Comments**
- 9:45 a.m.            **Work on draft of 16th Report**
- 2:00 p.m.            **Adjournment**

These minutes are an accurate description of the matters discussed during this meeting.



Diane Austin  
Chair  
Good Neighbor Environmental Board

07/16/2014

Date

The Good Neighbor Environmental Board was created by the Enterprise for the Americas Initiative Act of 1992. The board is responsible for providing advice to the President and Congress on environmental and infrastructure issues and needs within the states contiguous to Mexico. The findings and recommendations of the Board do not represent the views of the Agency, and this document does not represent information approved or disseminated by the Environmental Protection Agency.

**Gantner, Ann-Marie**

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**From:** Austin, Diane E - (daustin) <daustin@email.arizona.edu>  
**Sent:** Wednesday, July 16, 2014 10:17 AM  
**To:** Gantner, Ann-Marie  
**Cc:** Timothy Trevino  
**Subject:** May 2014 meeting summary

Dear AnnMarie,

I have reviewed the final version of the May meeting summary and approve it.

Thanks,  
Diane