

**Grant No. Award NA15NOS4200093 National Oceanic and Atmospheric
Administration (NOAA) Tijuana River National Estuarine Research Reserve
System (TRNERR)
National Estuarine Research Reserve System
Progress Report
Affected Agency:
California State Parks
Report Period: July 1, 2015 – December 31, 2016**

Task: Oversight and Implementation of Reserve Operations

Task ID: 315-1

Applicant ID: 315-1

Timeframe: July 2015 – December 2016

Task Outcomes

1. Effective and Coordinated Implementation of Reserve Internal Programs and Maintenance of Reserve Facilities

Effective and Coordinated Implementation of Reserve Internal Programs and Maintenance of Reserve Facilities

Core Meetings.

Coordination of the internal programs is kept up in-part through a consistent set of regular core meetings. Below is a summary of the meeting sets that play a significant role in effective and coordinated implementation of Reserve internal programs.

TRNERR Program Managers/Core Staff.

The TRNERR Program Managers- Education (Anne Marie Tipton), Research (Jeff Crooks), Coastal Training (Kristen Goodrich), Stewardship (Cara Stafford) Management (Chris Peregrin) strive to meet monthly to address pressing management issues and program coordination. The Manager works with staff to set the agenda and keeps meeting minutes.

This period's Program Manager's Meetings were held on: 6 October, and 18 December. During this period the Program Managers established a new protocol of setting Program Manager meeting agendas, involving Google Drive. It is hoped that this method will allow us to be more effective at sharing desired discussion topics and setting priorities for limited meeting time.

TRNERR Advisory Council.

The Tijuana River NERR Advisory Council brings together the operating, landowning, regulatory, municipal, and law enforcement agencies, a research institution, and public interest groups in a structure that creates opportunities to advance the mission of the Reserve concurrent with the fulfillment of the missions of the respective agencies and organizations. While the Advisory Council cannot set binding policies for the landowning and Operating Agencies, it provides guidance for the Reserve as a whole and facilitates

coordination and cooperation between agencies and a forum for public comment and involvement. It is through this alliance that the complex network of interests at the Reserve can develop lasting, stable agreements on how to best protect the Reserve's resources. Currently there are eleven active members on this committee. The TRNERR Manager works with the TRNERR Office Technician for setting the Advisory Council meeting agenda's, ensuring the minutes are recorded and shared with members and the public, and coordinating council member engagement.

This period's Advisory Council meetings were held on: 3 September and 3 December. September 3 meeting was focused on the development of the Nelson Sloan Operations Plan and Cost Analysis, with presentation on the subject by Bob Scott, Engineer with Haley and Aldrich. December 3 Advisory Council focused on the Kuroshio shot hole borer beetle/*Fusarium* dieback infestation in the Tijuana River Valley, and the County of San Diego feasibility plan for the development of Recreational opportunities in the Tijuana River Valley.

CA State Parks, San Diego Coast District Managers Group.

TRNERR lies within the CA State Parks San Diego Coast District. The District Superintendent holds a regular set of managers meetings for staff that manage primary sectors and operational areas within the District- including: Tijuana Estuary Sector, Del Sur Sector, Torrey Pines Sector, Public Safety, District Services, and Administration. The Reserve Manager attends these meetings to represent the Tijuana Estuary and promote continued effective integration and contributions from CSP as the State partner in operations of the TRNERR.

Clay Phillips (former TRNERR Manager) had served as the Superintendent for this district however, Clay Phillips recently retired from State Service and his position was filled with an interim Superintendent, Garratt Aitchison until a permanent replacement is found. Garratt began his DPR career in 1994 with a SPPO Ranger assignment at Silver Strand/Border Field/Tijuana Estuary serving the San Diego Coast District in this capacity for approximately four years. He then decided to travel the state a bit, accepting Ranger assignments in North Coast Redwoods, the Sierra District, and the San Jacinto Mountains. He returned to San Diego in 2004 for a few years as the North Sector Supervising Ranger, but a couple more moves would follow, leading to his current assignment as District Superintendent for Ocotillo Wells SVRA. Although Garratt will continue to manage Ocotillo Wells, he is committed to ensuring that the San Diego Coast District needs are met during this interim assignment. We are excited to have Garratt back with us at the Tijuana Estuary and look forward to his continued contributions.

During this period the CSP San Diego Coast District Managers group met on: 24 August, 28 September, and 1 December.

Southwest Wetlands Interpretive Association Board of Directors.

SWIA is a critical managing partner at TRNERR. The Reserve Manager attends the SWIA Board meetings regularly, however does not hold a voting seat.

SWIA Board of Directors meetings for this period: July 28, 12 February, 14 April, 26 May. Due to work load and scheduling conflicts, Chris Peregrin did not attend the majority of SWIA Board meetings during this period.

NERRS Managers:

The NERRS Managers hold periodic meetings with NOAA staff from Office for Coastal Management to coordinate the national program.

Chris Peregrin attended the NERRS annual meeting in Alabama October 27-30, 2015.

NOAA West Coast Regional Sector.

NOAA's West Coast Regional Sector is composed of Coastal Zone Managers, and the NERR Managers, from California, Oregon, Washington, and Alaska. This collaboration focuses on the implementation of programs and projects through improved organization and collaboration around NOAA's regional sectors; this regional focus is a renewed effort within the National Ocean Service under the newly organized Office for Coastal Management. The NOAA West Coast Regional Sector is fulfilling and expanding the role of the collaborative effort previously known as "*The California Coast and Ocean Managers Group*". A collaborative comprised of senior level representation from state and federal agencies with regulatory and management authority for California's coastal and ocean resources, including: National Marine Sanctuary, NOAA Coastal Services Center, National Estuarine Research Reserves, California Coastal Management Program (Coastal Commission, Bay Conservation and Development Commission, Coastal Conservancy), State Lands Commission, California Resources Agency: California Ocean Resources Management Program.

Meetings of the West Coast regional Sector were held on 5 August. A West Coast Regional meeting was held in Portland Oregon in October 2015 however, due to scheduling conflicts, Chris Peregrin could not attend and the Tijuana Estuary was represented by Research Coordinator Jeff Crooks.

National Estuarine Research Reserve Association Board of Directors.

The National Estuarine Research Reserve Association (NERRA), a national nonprofit organization, was established in 1987 to promote and advance the NERRS. NERRA is dedicated to the protection, understanding, and science-based management of our nation's estuaries and coasts. The NERRS relies on the support of NERRA to strengthen and expand its successful programs, and to enable this network to better address growing challenges to our nation's estuaries and coasts. NERRA works with Congress, NOAA, and public and private partners to increase support for research, monitoring, education, and stewardship within the NERRS. NERRA also provides public education and outreach to improve awareness and understanding of the importance of estuaries and coasts. The Reserve Manager serves on the Board of Directors for NERRA.

Chris Peregrin attended the NERRA Board of Directors meeting in Alabama, October 26, 2015. Chris Peregrin was appointed to the NERRA Board of Directors Executive Committee, as Member at Large for a two year commitment. Chris Peregrin contributed to NERRA Executive Committee conference calls on 12 November, and 11 December and has accepted focused responsibility for fundraising efforts associated with the annual NERRA Auction, as well as further involvement in the NERRA Government Affairs subcommittee.

California-Mexico Border Relations Council.

California Assembly Bill 3021 (Núñez, 2006) created the California-Mexico Border Relations Council. The Council has the potential to identify new Border priorities and fundable projects in the areas of infrastructure, trade, environment, health and security while supporting current and ongoing activities such as the Border Governors Conference, trade missions, border workgroups, and coordinating specific future projects with Mexico. Council members include the Secretary for Environmental Protection (Chair), the Secretary of Natural Resources, the Secretary of Health and Human Services, the Secretary of Transportation, the Secretary of Food and Agriculture, and the Director of the Office of Emergency Services.

Legislation developed in the CA State Budget for FY15 directed Cal EPA, which chairs the California-Mexico Border Relations Council (CMBRC), to address cross-border pollution issues under SB83 trailer bill language and AB 965. SB83 trailer bill language (FY15) tasks CMBRC with the coordination of a solid waste working group to address priority projects related to solid waste clean-up on the international border. Additionally AB 965 sets up an account that will be managed by CalEPA and may be funded through various mechanisms to address cross-border contamination.

During this period Chris Peregrin contributed to several working sessions of the newly established Regional Solid Waste Working Group. As part of this effort he partnered with San Diego Regional Water Quality Control Board, and other partners, to submit a proposal to expend roughly \$300,000 (contributed through CalRecycle waste tire fund) on an evaluation of the Goat Canyon trash booms, and an assessment for similar style, or alternate design, trash collection infrastructure on Smuggler's Gulch and the main channel of the Tijuana River. The proposal was rejected in favor of two competing proposals- one to pick up waste tires in Tijuana, and recycle them (\$150,000), and the other involving an initiative on the New River (\$150,000). Chris Peregrin also attended the CBMRC Border Coordinators meetings for the period.

TRNERR Trails Committee.

The TRNERR Trails Committee is one of the four sub-committees identified in the TRNERR Management Plan that advise the TRNERR Advisory Council. Chris Peregrin serves as the committee chair, in this capacity he facilitates quarterly trails committee meetings as well as additional working sessions with appropriate sub-groups, such as land managers and/or area-specific users.

Chris Peregrin facilitated TRNERR Trails Committee meetings on: 29 September, and 15 December.

Chris Peregrin attended the CTP-sponsored training “Managing Visitor Use Impacts” held in San Diego November 3 and 4. The training was provided by NOAA OCM. Chris Peregrin provided a presentation focused on the TRNERR Trails Committee effort as a local example demonstrating strategies, opportunities, and challenges with managing visitor uses.

During this period, Chris Peregrin and Cara Stafford (Stewardship) initiated regular working meetings to apply the methods of the Managing Visitor Uses training to the challenges faced in the Tijuana River Valley. To date we have focused on the application of the methodology to impacts from Immigration and Border Patrol activity and specifically the expanding road system and degradation and loss of habitat in the Reserve Efforts in this context have also included a tour with CA Coastal Conservancy project manager Sam Jennechis, to evaluate the issue of road proliferation, to assess potential for funding detailed issue assessment and planning through Coastal Conservancy grants. We anticipate developing this content through the next fiscal year, with input from partners including CBP agents and trail users.

Chris Peregrin continued work with Reserve staff ad CA State Parks Trails Team to assess and plan for ADA-compliance for the system of trails that surrounds the TRNERR Visitors Center. Funded through CA State Parks, this project is anticipated to be implemented Summer 2016. CEQA and NEPA review have been initiated.

2. Effective Fiscal Management of Reserve Budget

Effective Fiscal Management of Reserve Budget

NOAA Operations Award.

The annual NOAA Operations award is the foundation of the TRNERR program; it is split between CA State Parks and SWIA for management of the core Reserve programs of Research, Education, Coastal Training, Stewardship, and Oversight and Implementation. Annual fluctuations in NOAA allocations must be continually balanced with State Park matching funds and external grants to keep the core programs strong and effective given the demanding environment of the Tijuana River Valley and the Southern California-Northern Baja California bio-region.

Chris Peregrin worked with Reserve Program Managers and Tracey Ekker (Administrative) to track initial expenditures for NOAA Operations Award for FY15.

California State Parks Operations Budget.

The annual CA State Parks operational budget serves as a portion of the State match compliment for TRNERR operations. Beyond the match requirement, CSP allocates additional funding and resources to support the program. Annual fluctuations in the CSP operations budget must be continually balanced with the NOAA operations award and

external grants to keep the core programs strong and effective given the demanding environment of the Tijuana River Valley and the Southern California-Northern Baja California bio-region.

Chris Peregrin worked with Tracey Ekker (Administrative) to track CSP grant match and further contributions toward management of TRNERR.

External Grants.

External grants are critical for the success of the TRNERR programs and initiatives and provide unique opportunities to engage in important cross-sectoral initiatives. External grants provide the opportunity to adjust to a continually changing environment and enable TRNERR to meet the research, education, training and stewardship needs of this challenging location. External grant opportunities must be continually explored, strategically sought-after, and if obtained, carefully managed in order to keep the program relevant and progressing to address the region's most-pressing needs.

Chris Peregrin worked with Cara Stafford (Stewardship) to submit a grant application to CA Department of Fish and Wildlife to support planning and environmental Review for the Nelson Sloan Quarry project (see below).

Chris Peregrin worked with Cara Stafford (Stewardship), Ana Eguiarte (Bi-national Liaison) and Kristen Goodrich (Coastal Training Program) to submit a grant application to NOAA Marine Debris Program Community-based Clean-up Grant initiative. This request is for roughly \$160,000 and builds upon the grant received from this program in 2014.

Border Settlement Funds.

In 2008, the US Department of Homeland Security seized roughly 53 acres of Border Field State Park within the TRNERR in order to develop additional border infrastructure. Legal negotiations between the Federal and State attorneys have resulted in a roughly \$6million settlement to CA State Parks. Chris Peregrin has worked closely with Clay Phillips throughout the legal process.

Recently, legislative action has resulted in efforts to direct this funding specifically to Border Field State Park. The State Legislature included language in the CA State Budget for FY15 to direct nearly \$700k to Border Field State Park for preliminary studies toward repairs to the road. The Legislature also included intent language to direct the remainder of the funding toward subsequent phases of the project. Chris Peregrin began working with State Park staff at the Southern Service Center to initiate project planning and management.

During this period, initial planning began for preliminary studies toward repair to Monument Road- see below.

Goat Canyon Maintenance Funding

The Goat Canyon Sediment Basins were constructed in 2005 without a committed allocation for long-term maintenance funding. When the Department planned for the construction of the Sediment Basins, it was anticipated that the sediment captured would have a significant market value as construction fill, which would off-set the maintenance costs. Subsequently, economic factors have significantly reduced the demand for construction fill. More significantly, the quality of the material as a construction product has been far lower than anticipated. Over \$8 million has been spent directly on basin management by the Department through one-time grants, and other special interest groups since the construction of the Sediment Basins in 2005. Annual maintenance funding has been very challenging to obtain, and as a result the workload varies annually and a backlog of sediment and solid waste is retained on the Goat Canyon Sediment Basin processing pad within the Reserve.

In Fiscal Year 2013-14, the Department received funding from the State Parks and Recreation Fund (SPRF) of \$1,001,000 per year for three years through a Budget Change Proposal. Currently a similar proposal is included in the Governor's Budget for FY16- later this year, this proposal will be reviewed by the Legislature for inclusion in the FY16 and FY17 budgets. Chris Peregrin has been working with CA State Parks budgets staff and Executive Team to develop this proposal and continue maintenance funding for the sediment basins.

Chris Peregrin Coordinated a grant application to CA Department of Fish and Wildlife Watershed Restoration grant program funded through CA Proposition 1 dollars. The request was for nearly \$1million to complete final studies, environmental review and regulatory permits for the Nelson Sloan Quarry Project- a project that seeks to open an abandoned quarry to receive sediments excavated from the Goat Canyon Sediment Basin and other sediment sources within the Tijuana River Valley. The application was submitted in September 2015. See more on Nelson Sloan Quarry below.

3. Coordinated Protection and Restoration of the Tijuana River Valley

Coordinated Protection and Restoration of the Tijuana River Valley with local, state, regional, federal, and Mexican partners.

Nelson Sloan Quarry.

The Nelson Sloan Quarry is an abandoned quarry within the Tijuana River Valley that has been identified by the Tijuana River Valley Recovery Team as an ideal location for disposal of sediments dredged from the Goat Canyon Sediment Basins and other sediment excavation areas though-out the river Valley. Chris Peregrin has taken an active role in facilitating meetings and communication to further this project.

Significant accomplishments on the Nelson Sloan Quarry effort during this period included the continued collaborative effort to develop an Operation Plan and Cost Assessment for use of the Nelson Sloan Quarry as a sediment receiving site. The plan has been contracted between the County of San Diego and an engineering consultant firm (AECOM); it will allow us to better understand costs, operational elements, and

potential liabilities associated with management of the Nelson Sloan Quarry. During this period Chris Peregrin contributed to review of various drafts of this plan. Additionally, Chris Peregrin submitted a grant application to CDFW to fund final plans and CEQA for this effort (see above).

International Boundary and Water Commission Citizens Forum.

The IBWC Citizens forum is composed of a group of community members interested in IBWC programs and projects- the forum meets quarterly to discuss issues related to cross-border flows. Chris Peregrin attends the forum meetings as a TRNERR representative and assists with meeting logistics, generally held at TRNERR.

During this period, Chris participated in meetings on: 17 December.

Tijuana River Valley Recovery Team.

The Tijuana River Valley Recovery Team (TRVRT) is a collection of agencies with operational or land management authority in the Tijuana River Valley. The primary purpose of the TRVRT is to address the Valleys' sediment and trash issues but the team also focuses on improving access and resource management more broadly across the Valley. All future restoration and conservation efforts will likely include a significant level of coordination through this group. The TRNERR Manager sits on the Steering Committee for the TRVRT.

Chris Peregrin contributed to the regular TRVRT Steering committee efforts during this period.

Goat Canyon Maintenance

August 2014. In 1997, the Coastal Conservancy, the Southwest Wetlands Interpretive Association (SWIA), and the California Department of Parks and Recreation (DPR) responded to the increased sedimentation and habitat loss issues by beginning the planning process for the Goat Canyon Enhancement Project. The enhancement Plan was developed between 1998 and 2002 to protect the coastal wetland habitat of the Tijuana River Estuary from further degradation and included strategies to reduce sediment flows to the Estuary. Between 2003 and 2005, two sediment basins were constructed in series within the upper floodplain of Goat Canyon to annually retain over 40,000 cubic yards (y3) of sediment. As a result, sedimentation to downstream marsh habitats has been reduced. However, due to the location of the basins downstream from the urbanized and degraded watershed in Mexico, regular sediment removal and maintenance is required. Between 2003 and 2008 habitat restoration efforts were initiated downstream of the Goat Canyon Sediment Basins. The Sediment Basins require annual maintenance costing the State roughly \$1million/year to accomplish.

Chris Peregrin worked with Cara Stafford (Stewardship) to oversee the 2015 clean-out operation; this project was awarded at nearly \$900,000 for excavation and haul-off of 20,000 cubic yards of deposition material. During this period the Contractor mistakenly exported several thousands of yards of sediment to a local ranch. This export action was observed by Chris Peregrin and a review of the contract and export action was

initiated. This review involved assessment from State Parks legal council, Contracts staff, and City of San Diego Code Enforcement. As of December 31, the project is over 75% complete and is anticipated to be completed within the FY15 period.

CURRV Adaptation Plan Meeting.

The Climate Understanding and Resilience in the River Valley project is lead by the TRENRR Coastal Training Program and is funded through NOAA's Climate Office; the project is focused on the development of a climate change vulnerability assessment and adaptation plan for the Tijuana River Valley. Chris Peregrin sits on the steering committee for this effort.

Chris Peregrin contributed to the Climate Understanding and Resilience in the River Valley CURRV Adaptation Planning meeting on August 27, 2015.

City of Imperial Beach Coastal Flooding and Sea Level Rise Study.

The City of Imperial Beach Coastal Flooding and Sea Level Rise study is led by the City of Imperial Beach, with contributions from the TRENRR Coastal Training Program, and funded through the CA Coastal Conservancy and the San Diego Foundation; the project is focused on the development of a sea level rise vulnerability assessment and adaptation plan for the City of Imperial Beach. Chris Peregrin sits on the steering committee for this effort.

Chris Peregrin attended the Coastal Flooding Workshop joint meeting with the City of Imperial Beach City Council meeting on November 17, 2015. A main focus of this meeting was to inform the local community of the Sea Level Rise planning effort, and gain preliminary public input. The meeting was held at the Tijuana Estuary and was well attended.

Successful Adaptation Indicators and Metrics Workshop

Chris Peregrin contributed to the Successful Adaptation Indicators and Metrics Workshop, hosted by the TRNERR Coastal Training Program in August 2015

Tijuana Estuary Tidal Restoration Program.

The Tijuana Estuary Tidal Restoration Program (TETRP) is focused on long-term protection and restoration of the Tijuana Estuary. Initiated in the 1980's, this program has provided important guidance and vision for all major projects and programs focused on conservation and restoration of the Tijuana Estuary. The current focus of this program is to take the feasibility study for the 250-acre salt marsh restoration project through to implementation, an effort that will involve development of final engineers designs, complete environmental review and regulatory permits, and contract documents.

Chris Peregrin continues to collaborate with with Reserve Research Coordinator (Jeff Crooks), SWIA staff (Mayda Winter) and Consultants, and CA Coastal Conservancy staff to further the application to CA Wildlife Conservation Board for funding the next phase of TETRP. If approved, this allocation will provide roughly \$700k to SWIA to

complete final project design, Contract documents, and environmental review for this 250acre salt marsh project.

NOAA Marine Debris Community-based Clean-up Grant.

TRNERR was awarded \$150,000 in Spring 2014 from NOAA's Marine Debris Program Community-based Clean-up grant initiative. This grant funds a range of clean-up and education and outreach efforts focused on resolving land-based sources of marine debris, such as the trash flows in the Tijuana River Valley. Efforts include, haul-off of debris sorted from the sediment basin, upgrade of, and clean-out behind, the trash booms in the sediment basin, clean-up in natural habitat areas, outreach to schools in Tijuana, and support of Tijuana River Action Month. This work is accomplished through collaboration between Chris Peregrin (Manager), Cara Stafford (Stewardship), Anne Marie Tipton (Education) and Ana Eguiarte (CTP and Bi-national Liaison), and external partners such as San Diego Urban Corps, and WildCoast.

Chris Peregrin helped coordinate activities associated with the NOAA Marine Debris grant throughout this reporting period. Significant tasks accomplished during this period included Tijuana River Action Month, and an upgrade of the trash booms.

4. Reserve Demonstrates Achievement of Program Objectives

Reserve demonstrates achievement of program objectives and communicates achievement to NOAA and its partners.

Chris Peregrin worked with Reserve staff to complete necessary Progress Reports. See also database updates, Education Program and Coastal Training Program.

5. Reserve Demonstrates Progress Toward Key Targets Supporting Reserve Program Implementation

Per the OCM312 measure guidance, the TRNERR identified Performance Measures with associated 5-year targets during the FY12 award period. The Reserve Manager will work with Core Program Managers and OCM throughout this award period to ensure these measures are appropriately achieved and reported.

Reserve Program Managers continue progress toward key targets- detailed elements will be included in the 12 month Progress Report.

6. Development and Maintenance of TRNERR Partnerships

Development and Maintenance of TRNERR Partnerships

Customs and Border Protection.

Chris Peregrin, Cara Stafford (Stewardship) and County representatives worked with CBP supervisors to review off-trail patrol activity on the Fenton Quarry restoration site.

The Fenton Quarry restoration site is in the Goat Canyon region within the Reserve, and is an old aggregate mine that was restored with the sediments excavated from the Model Marsh restoration in late 1990's early 2000's. Recently, CBP ATV activity on this restoration site has increased resulting in vehicle scars and a relatively well-established roadway. The site was blocked to vehicular access with post and rail.

Tijuana River Action Network

TRAN is a collaborative of NGOs on the international Border that seeks to coordinate actions directed at improving the environmental health in the Tijuana River Watershed. The primary purpose of the TRAN is the coordination and implementation of the Tijuana River Action Month- the month-long series of clean-up events scheduled in the Tijuana River each Fall.

Chris Peregrin supported TRAN meetings throughout this period in preparation for Tijuana River Action Month 2015. A noteworthy effort included in this year's initiative was coordination of partners to identify priority actions and expenditures for a new source of funding contributed by CalRecycle. Priorities included the purchase of supplies to support clean-up, and identification of locations to focus Contractor-based clean-up in the Tijuana River Valley.

Tours, Field Trips, Conferences, Presentations, Trainings, and Workshops.

Tours, field trips, conferences, presentations and workshops are important activities that support Reserve operations and collaboration. The Reserve Manager contributed to the events below.

Speaker of Assembly Toni Atkins Communications Team

Chris Peregrin worked with WildCoast representatives and the communications staff for Speaker Toni Atkins to provide outreach content related to the CA State Budget elements focused on cleaning up the Tijuana River. The effort included hosting a tour of the Tijuana River Valley for reporters on July 3, 2015. The effort resulted in various media products describing pollution and access issues in the Tijuana River and legislative advances to resolve this.

Legislative Water Quality Summit, SDRWQCB

Chris Peregrin attended a legislative water quality summit hosted by the San Diego Regional Water Quality Control Board on July 20, 2015. Speakers at the summit included Congressman Scott Peters and a significant focus of the event included pollution issues in the Tijuana River Valley.

UC San Diego Blum Cross Border Initiative

Chris Peregrin worked with Kristen Goodrich (Coastal Training Program) to host a field trip in the Tijuana River Valley on July 24, 2015, for the UC San Diego Blum Summer Field Internship. Nearly 10 students attended the event which included a guided walk through the valley to Friendship Park, and also involved a presentation from Customs and Border Protection agents.

Becky Smyth, West Coast Director, NOAA Office for Coastal Management.

Chris Peregrin worked with TRNER Program Managers and SWIA staff to coordinate a 1-day visit to TRNERR from Becky Smyth from NOAA's Office for Coastal Management, visiting from Oakland, CA, August 13, 2015.

Michael Migliori, Program Specialist, NOAA Office for Coastal Management.

Chris Peregrin worked with TRNERR Program Managers and SWIA staff to coordinate a two-day visit from Michael Migliori from NOAA's Office for Coastal Management, visiting from Silver Spring, Maryland, October 16 and 17, 2015.

Mayors Visit- Cities of Imperial Beach and Rosarito

Chris Peregrin helped facilitate a visit to the Tijuana Estuary for the Mayors of Imperial Beach and Rosarito, September 1, 2015.

Chris Peregrin attended the Wetland Advisory Group for the Southern California Wetland Recovery Project September 15, 2015. Focus of this meeting was to gain input from regional wetland managers on the Regional Strategy Update.

Chris Peregrin Hosted the representatives from the CA Legislative Analysis's Office September 24, 2015. A primary focus of this visit was to understand the financial commitments associated with the Goat Canyon Sediment Basin maintenance allocation. See Goat Canyon Maintenance (above).

Chris Peregrin worked with Cara Stafford to host a visit of the Environmental Scientists from CA State Parks- Southern California region. The visit included a review of several restoration projects within the Reserve.

International Boundary and Water Commission, Treaty Minute 320.

Chris Peregrin was invited to take part in, and speak, at the signing ceremony for Treaty Minute 320, of the 1944 US and Mexico Water Treaty. This long-awaited treaty minute addresses sediment and trash pollution in the Tijuana River, and highlights the need for further bi-national collaboration and programs and projects to resolve this pollution issue. The ceremony was held in Tijuana's Cultural Center on October 5, 2015.

Chris Peregrin was invited to serve on the Bi-national Core Group, established under Minute 320; this group will serve as the steering committee for future proposals and progress under this Treaty Minute. The kick-off meeting was held at the Tijuana Estuary November 18, 2015.

Cal EPA, El Nino Preparation Workshop

Chris Peregrin worked with Tracey Ekker to host a CalEPA-facilitated workshop at the Tijuana Estuary focused on El Nino Preparation. The meeting was well-attended and resulted in a list of priority needs anticipated for the region as El Nino impacts arise.

Congresswoman Loretta Sanchez visit.

Chris Peregrin worked with Wildcoast representatives to host Congresswoman Loretta Sanchez (46th District) for a visit to the Reserve on November 12, 2015. Representative Sanchez is anticipated to run for an upcoming US Senate seat for California, and currently serves on the Committee for Homeland Security. A focus of the tour was the Goat Canyon Sediment Basins and also concern for impacts associated with El Niño.

Sam Allsop, CA State Parks Maintenance Program Chief visit,
Chris Peregrin hosted Sam Allsop for a tour of the Reserve on November 23, 2015. Sam is serving as the Chief of CA State Parks maintenance program.

Chris Peregrin attended Parks Leadership Training in Monterey CA December 7-9, 2015

7. Oversight of Reserve Facilities Development and Maintenance, and Management

Oversight of Reserve Facilities Development and Maintenance, and Management of Appropriate Public Access Opportunities

Maintenance of Reserve Facilities

Border Gateway to Nature.

The “Border Gateway to Nature” project involves re-design and improvements at the entrance of Border Field State Park- the primary public access point to the southern portion of the Reserve. The project seeks to not only beautify the entrance and increase visitor serving facilities and public access at this location, but also intends to educate the public about the primary pollution issues in the Tijuana River. The project has received significant funding from the San Diego Foundation, and design and implementation has involved a variety of partners including 4Walls International, A Reason To Survive, AMEC, NOAA’s Marine Debris Program, Reliable Tire, Tijuana River Action Network, Veolia, and CA State Parks Southern Service Center. At the foundation of the project is the work of 4Walls International- a non-profit organization based in the San Diego-Tijuana Region that specializes in re-purposing waste into building materials. Through this project, solid waste such as plastic, foam, tires etc., is pulled from the Tijuana River and used as the raw material for park infrastructure such as benches, parking lot bollards, informational kiosks, and signage. Much of the work is accomplished by volunteers through community clean-up and building efforts.

During this period, Chris Peregrin coordinated the design efforts of 4Walls International, AMEC, and CA State Parks for the largest element of this project to-date: a mini-amphitheater/gather space to accommodate roughly 30 people. The element is anticipated to be complete within the FY15 reporting period.

Through funding from the Border Gateway to Nature Project, a cultural assessment of an historic ranch site in the vicinity of the project was contracted to a local Historian. Chris Peregrin coordinated with CA State Parks Archaeologist to contract this work, and

facilitated site visits and review of local specialists. The site assessment is anticipated to be complete within the FY15 period.

Monument Road.

Within the Reserve, Monument Road extends roughly 1.5 miles, connecting the entrance to Border Field State Park with the Reserve's day-use facility atop Monument Mesa in the southwest corner of the United States. The facility offers stunning views of the Reserve, Mexico, downtown San Diego and the surrounding mountain ranges; it is also the location of Friendship Park- an area long-cherished by the local community as a gathering place for people in the US and Mexico to come together and meet at the International Border Fence. Aside from the Department of Homeland Security access road (typically not available to the public) Monument Road is the only vehicle-based access to this location, however, due to sedimentation and flooding, the road is heavily damaged and remains flooded for up to 7 months of the year- significantly impacting public access to the Reserve, and effective Reserve operations. A sustainable fix to Monument Road has long been a priority of the Reserve. The recent settlement of a long-term lawsuit between the United States, Department of Homeland Security, and the State of California over take of State land for the purpose of border infrastructure, has resulted in \$5.9 million to CA State Parks; Parks staff, Legislators, and the public are focused on the possibility of this funding being used to address the issues with Monument Road.

A sewage spill in Summer 2015 in the Tijuana neighborhood of Playas de Tijuana resulted in the release of thousands of gallons of raw sewage which crossed the border through Los Sauces/Yogurt Canyon and flooded the Park Entrance Road. Chris Peregrin worked with International Boundary and Water Commission to respond to clean-up efforts. The IBWC, in partnership with CESPT (City of Tijuana Waste Water Utility), pumped the contaminated water off the road and disposed of it in the International Wastewater Treatment Plant.

During this period, Chris Peregrin worked with Anne Marie Tipton (Education) and CA State Parks Supervisors for Law Enforcement and Maintenance to develop a protocol for implementing signage to notify the public when Monument road floods.

The kick-off meeting for the Monument Road repair project was held at the Tijuana Estuary on November 17, 2015.

Monument Mesa.

Monument Mesa is the site of the Reserve's day-use facility in the southwest corner of the United States. The facility offers stunning views of the Reserve, Mexico, downtown San Diego and the surrounding mountain ranges; it is also the location of Friendship Park- an area long-cherished by the local community as a gathering place for people in the US and Mexico to come together and meet at the International Border Fence.

During this period, Monument Mesa received significant attention from interested public and elected officials, as this site is the terminus of Monument Road and the primary

point of interest for public seeking to access our day-use facility and Friendship Park. Public interest groups and elected officials worked to connect the \$5.9million in settlement funds to Border Field State Park to ensure consistent access to this important place. Chris Peregrin worked closely with State Parks managers in Sacramento, and San Diego Coast District managers to respond to this request from the public and elected officials.

The County of San Diego is currently developing a recreational feasibility study for the Tijuana River Valley. Among other opportunities, the study includes a feasibility assessment for camping in the river valley. An area of focus in this study for potential camping includes the southern portion of the Reserve, in spite of the request from the State Park San Diego Coast District Superintendent, Clay Phillips, and Reserve Manager, Chris Peregrin to exclude the Reserve in this specific assessment. Chris Peregrin and Superintendent Aitchison met with County of San Diego representatives on November 13, 2015 in order to better the County's interest- we anticipate this discussion to continue and do not expect to support the development of a campground within the Reserve.

Visitor Center and Reserve Head Quarters.

The Visitor Center and Reserve Headquarters is a roughly 9-acre campus situated within the Tijuana Slough National Wildlife Refuge in the north-west corner of the Reserve. The area is leased to the State of California from USFWS for the purpose of housing the TRNERR staff and programmatic operations. The campus includes a visitor center with outdoor amphitheater and public restrooms, wet-lab, dry-lab, education lab, 80-person training and meeting room, garage and workshop, storage facility, native plant nursery, day-use trails, and office space for the roughly 30 employees of CA State Parks, SWIA and USFWS.

Tracey Ekker (Administrative) and Enrique Mendibles (Parks Maintenance) coordinated necessary purchases, contracts, labor, and partners, in collaboration with Reserve Manager, to facilitate the following Reserve maintenance improvements and related items:

- Upgrade of the Visitor Center men's restroom urinals to porcelain with low-flow flushometers for water savings;
- Repair of the Visitor Center main entrance walkway lighting, including energy-saving LED fixtures;
- Visitor Center roof leak temporary repairs;
- Installation of meter, valves, protective bollards and box for Goat Canyon Sediment Basin maintenance water line;
- Finalize service contract for endangered bird monitoring requirement for Goat Canyon Sediment Basin maintenance activities (with Cara Stafford).
- Coordination of and response to State Fire Marshall facility review;
- Orientation for new State Park Maintenance Supervisor Vince Voight- Vince will be stations out of Silver Strand State Beach and will have responsibility for maintenance oversight of Tijuana Estuary;

- Water line connection for USFWS saltmarsh transition zone restoration project.

Special Events and Facility Use

The Reserve has several facilities and areas that are in demand by the local community and other groups for various special events. These include the TRNERR Training Center, the TRNERR Classroom, The Visitor Center Amphitheater, Monument Mesa, and Friendship Park. Use of these facilities by external groups generates unique work-load and coordination considerations as well as maintenance budgetary needs.

During this period, Chris Peregrin worked with Tracey Ekker and Anne Marie Tipton to revise the special events request protocols and fee schedule for the primary facilities and areas of interest.

8. Reserve Participates in Section 312 Evaluation

Chris Peregrin worked with TRNERR Program Managers and NOAA OCM representatives to begin discussions toward the NOAA 312 review, scheduled for July 2016.

Task: Coastal Training Program

Task ID: 315-2

Applicant ID: 315-3

Timeframe: July 2015 – June 2016

Task Outcomes

1. Develop criteria for evaluating successful adaptation at TRNERR

The National Estuarine Research Reserve System (NERRS) Science Collaborative selected a subset of Reserves (Cohort 1), including TRNERR, to be a part of the Successful Adaptation Indicators and Metrics (SAIM) project. As part of this effort, the Reserves convene, inform, and facilitate stakeholder-driven discussions around meaningful indicators and metrics that are useful in tracking progress on climate change adaptation at the reserve level – and, as appropriate, at the local, regional and state levels at which Reserve partners work.

A scoping meeting and a number of planning meetings were conducted with the SAIM team to develop a workshop that would help inform the development of indicators and metrics to be integrated into TRNERR's climate adaptation strategies, which are currently being identified as part of the Climate Understanding and Resilience in the River Valley (CURRV) project. The workshop was held in August 2015, convening decision-makers and stakeholders from TRNERR and the Tijuana River Valley, providing participants the opportunity to:

- Begin to collaboratively think about a vision for successfully adapting to climate change in the TRV, while exploring what successful adaptation looks like on-the-ground;
- Learn about techniques for and examples of measuring “successful adaptation” through development of indicators/metrics; and
- Consider what indicators/metrics can be used to measure climate resilience.

An approach was taken at the workshop to focus on developing indicators and metrics that were achievable (i.e. developed and implemented by Reserve programs). These draft indicators and metrics will continue to be developed and applied as the CURRV project moves into the adaptation planning phase (in the next reporting period).

2. Support CA King Tides Initiative in San Diego and Tijuana

TRNERR’s CTP has been incrementally growing the King Tides Initiative (KTI) in the border region. For example, two Mexican environmental NGOs, based in Tijuana and Ensenada respectively, have joined the Initiative by promoting the 2015/2016 King Tide Season among their stakeholder groups. Moreover, in the ‘15/16 season, CTP has built partnerships to promote extensions of the KTI, including USC SeaGrant’s “Urban Tides” initiative and the Scripps Institution of Oceanography and the Southern California Coastal Ocean Observing System’s “Storm Photo” project that focuses on El Niño-driven flooding events in Southern California and Northern Baja California. This real-time data on inundation, flooding, erosion and other El Niño-driven coastal changes will: (1) help to validate sea level rise and flooding models being considered among coastal decision makers in local adaptation planning efforts; and (2) increase understanding and ability to communicate about impacts to coastal ecosystems and communities. In the next reporting period, a photo exhibition will be organized in Tijuana to raise awareness of how coastal homes, infrastructure, and ecosystems may be affected by future sea level rise and flooding events. For more information please refer to <http://trnerr.org/king-tides/>.

3. Strengthen regional climate adaptation networks

As a member of the San Diego Regional Climate Collaborative (SDRCC) Steering Committee, TRNERR’s CTP program has been providing technical assistance and training to local and regional decision-makers. Specifically, CTP has been a leader in the Sea Level Rise Working Group, which leverages local resources and coordinates local communities in considering sea level rise within Local Coastal Plans (LCPs). In November 2015, CTP supported the SDRCC in hosting a training on using the USGS Coastal Storm Modeling System (CoSMoS) to inform integration of sea level rise into community plans and policies.

Additionally, as a member of the Climate Science Alliance (Alliance) Advisory Team, CTP is working to ensure that natural resources are adequately considered in regional adaptation planning. In this reporting period, CTP has been actively engaged in a strategic planning process to help guide the network in establishing science-focused partnerships that support regional climate-smart conservation. In November, CTP partnered with Alliance to host the National Conservation Training Center's Climate-Smart Conservation training for local decision-makers. Through the network, CTP has provided technical assistance to the City of San Diego in integrating climate adaptation strategies into the Natural Resource Management Plans for one of their City Parks (e.g. Tecolote Canyon).

To further strengthen the SDRCC and Alliance networks, CTP provided technical assistance in conceptualizing and composing an application for the NOAA Regional Coastal Resilience Grant. The grant was awarded to the San Diego region, providing further support for regional collaboration around climate adaptation.

4. Improve communication about the co-benefits of nature-based approaches to climate change, specifically living shorelines

CTP has been actively working to help advance regional understanding of living shorelines as a method for adapting to climate change and exploring avenues for coordinating ongoing living shorelines projects throughout the region. In this reporting period, CTP has supported the compilation of ongoing living shorelines projects taking place throughout the South Coast region to evaluate and provide guidance on where there may be a need for either training and/or technical assistance. Additionally, CTP has provided technical assistance to secure funding for a living shorelines project(s) through the NOAA Coastal Resilience grant program and the State Coastal Conservancy. These funds will support regional workshops to further discuss the role living shorelines may play in helping Southern California successfully adapt to climate change. Additionally, CTP has been participating in a West Coast regional group that intends to author a book chapter among other regions in the U.S. to provide case studies and best practices.

5. Provide strategic CTP technical assistance and workshop/training scheduling planning, facilitation, and logistical host support aligned with CTP strategy

In this reporting period, one of CTP's primary coastal decision maker audiences, the Southern California Wetlands Recovery Project inquired about OCM's *Project Design and Evaluation* training and the potential for bringing it to southern California. Through coordination with OCM and TreePeople (local hosts in Los Angeles), CTP was able to distribute the announcement and secure seats for local partners (training to be delivered in the next reporting period). Future delivery of OCM Digital Coast training in the San Diego region will be assessed based on topic and need.

Task: Education Program

Task ID: 315-3

Applicant ID: 315-2

Timeframe: July 2015 – June 2016

Task Outcomes

1. Development and Implementation of Education Programs

1. K12 and Informal

We had 7 elementary and 10 middle and high school programs the second half of the year. It was fun to have several field trips during king tides.

Seven elementary teachers attended the Tijuana Estuary Explorers training on Dec, 2nd. Many of them booked field trips for January.

Junior Rangers have been averaging 6 students a week.

2. Interpretation

The education staff is still writing the Interpretation Master Plan (IMP) that includes sections on interpretive themes, goals and objectives, and facilities recommendations. A Scope of [Museum] Collections Statement (SOCS) has never been developed for the Reserve and is a requirement for an IMP. Otherwise, most of the elements of the plan are completed. A draft of the SOCS has been reviewed by staff from the State Parks Cultural Resources Division and subsequently edited. The education coordinator plans on completing it after attending Museum Collections Management Training in January.

3. Community Education

Topics at the Speaker Series included the TIME project, Backyard Birds, Regional Resilience: Sea Level Rise Efforts in Southern California, and An Ecological Look into the Past (historical ecology at TRNERR).

4. Special Events

Docents and staff tabled at the San Diego Museum Council's Museum Mashup at the Jacobs Center in southeast San Diego in October. About 100 people went by the booth.

Tijuana Estuary's Fourth and final open house Discovery Lab for 2015 drew 287 visitors, the largest of all Discovery Labs since they began in 2014. Entitled *Real Live*

Reptiles, California State Parks and United States Fish and Wildlife Service education, interpretation, and outreach staff designed an evening of hands-on investigative activities and crafts, as well as invited the U.S. Geological Survey, Western Ecological Research Center to bring live and preserved specimens.

In keeping with what's native to the reserve, the activity tables focused specifically on snake and lizard adaptations as well as providing the basis for understanding what makes a reptile a reptile. Families experienced what it's like for snakes to feel sound vibrations as a means of hearing and how flexible jaws help them to eat prey larger than they are. They investigated through modeling why caudal autotomy, the ability to drop and regrow your tail, is essential to a lizard's survival as well as why some of them do pushups or shoot blood out of their eyes. Staff took it a step further and provided an opportunity for kids to interpret real reptile research data in a mapping exercise.

5. Conferences and Meetings

The North American Association for Environmental Education conference was here in San Diego October 15-18th. Anne Marie Tipton, Lorena Warner-Lara, and Ana Egiarte (CTP) led a field trip to Tecate and the southern part of the Reserve to almost 30 people from as far away as Japan. People were raving about it during the whole conference. Tipton, Warner-Lara, and Marya Ahmad attended the conference and were impressed with the diversity and inclusion element throughout.

2. Production of outreach materials

Key audiences will have access to research, curriculum, volunteer opportunities, and other activities at the Reserve through the Reserve's monthly newsletter and maintaining the website. The electronic newsletter is produced by the education specialists and the Community Outreach Coordinator and contains information about events, species spotlights, volunteer highlights, and a quarterly article from the Reserve Manager. Copies of the newsletter are printed for the Visitor Center. Education specialists coordinate and assist staff in the as needed updates (can be weekly) to the website from the different sectors, as well as editing the education page. The newsletter distribution list will grow by 100 people. The current list has 1990 people. The EC and education specialist also assist with social media updates.

Task: Stewardship Program, Cara Stafford, Program Manager

Task ID: 315-4

Applicant ID: 315-4

Reporting Period Timeframe: July 2015 through June 2016

1. Habitats downstream of the Goat Canyon Sediment Basin protected from catastrophic sedimentation and trash inundation.

The Chigosi Company excavated approximately 21,000 cubic yards of debris from the upper Goat Canyon sediment basin, and sorted and hauled off 18,000 cubic yards of sediment.

State Parks staff repaired and upgraded the trash boom in the upper sediment basin. The middle 12 boom sections were upgraded to a "double boom" design with netting and heavy duty rails that provides greater stability. Old booms were replaced, screens straightened, and plastic fencing attached to provide for greater debris capture. The entire system was lengthened at the advice of the State Parks engineer, to handle larger amounts of trash. This is the only debris capture device currently employed in the Tijuana River Valley.

Under the NOAA Marine Debris Program grant to TRNERR, Urban Corps of San Diego completed a 5 day clean-up contract in November, removing 1,820 pounds of trash and hundreds of tires from riparian and mulefat scrub habitats in Goat Canyon. Urban Corps spent an additional 10 days picking up trash and tires in Goat Canyon, as part of a project funded by SDG&E.

2. Sensitive plant and animal species habitat protected.

The Stewardship Program maintained fencing and signage along dunes and coastal bluffs.

3. Partnership maintained with DHS to reduce resource/security conflicts.

The Stewardship Program continued its partnership with Department of Homeland Security Customs and Border Protection (DHS-CBP) to maintain slope protection and proper storm-water conveyance patterns on the Border Patrol roads in the uplands within the Reserve.

Stewardship Staff partnered with DHS to identify potential grant opportunities to address issues associated with patrol agents driving through sensitive habitat.

4. Critical monitoring needs identified and accomplished to maintain habitat health and monitor impacts to sensitive species and restoration projects

The Stewardship Program facilitated continued monitoring of CA least tern and Western snowy plover in the dune habitat of the Reserve. This work is largely accomplished through contract with a private consultant and through our partnership with the US Fish and Wildlife Service staff at Tijuana Slough National Wildlife Refuge.

A newly identified pest, the Kuroshio shot hole borer, has been identified as the vector for Fusarium dieback disease and the cause for high mortality in riparian tree species in the Tijuana River Valley. Related pests are affecting ornamental tree species and avocado trees throughout Southern California. Stewardship program staff helped facilitate communication between local researchers and land managers, and gave a presentation about the shot hole borer issue at the December 3, 2015 TRNERR Advisory Council.

5. On-going restoration and enhancement projects continue trajectory toward healthy vegetation communities and integrate into functional ecosystem components with continued outreach opportunities.

Stewardship program staff and volunteers moved irrigation lines from past habitat restoration projects to newly planted areas. Volunteers removed trash and dead invasive weeds from future restoration areas. Weeds growing around planted natives were hand-pulled in select areas.

6. Identify public access issues within the Reserve.

Stewardship staff supported the Reserve Manager in coordination with public and Reserve partners to identify high priority access issues and, where feasible, work to maintain and enhance public access at key locations throughout the Reserve. Stewardship staff helped facilitate access to the Reserve for state and non-profit organization partners for a large educational event, volunteer events, and rare plant surveys.

Stewardship staff worked on California Coastal Commission permitting for the Border Gateway to Nature project, which aims to install additional interpretive infrastructure at the entrance to Border Field State Park.

Task: Invasive Program – Cara Stafford, Resource Management and Stewardship Coordinator

TASK ID 315-5

Applicant ID: 315-5

Reporting Period Timeframe: July 2015 through June 2016

1. High quality habitat for CA Least Tern and Western Snowy Plover

No actions during this reporting period. Treatment of ice plant is typically completed in January/February.

2. High quality habitat for riparian birds

The Stewardship Program treated priority invasive species with herbicide throughout the Goat Canyon drainage: salt cedar (*Tamarix ramosissima*), castor bean (*Ricinus communis*), giant reed (*Arundo donax*), and tree tobacco (*Nicotiana glauca*). Post-emergent, broad spectrum, glyphosate-based herbicides were used. When possible, annual weeds such as glove daisy (*Glebionis coronaria*) were hand-pulled around native plantings in restoration areas.

Task: Teachers on the Estuary

Task ID: 315-6

Applicant ID: 315-6

Timeframe: July 2015 through June 2016

Work toward completion of the training identified in this task will begin in the following reporting period.

Task: NOAA Marine Debris Program

TASK ID 315-7

Applicant ID: 315-7

Reporting Period Timeframe: July 2015 through June 2016

1. Create and Interpretive Exhibit to Educate Visitors About Marine Debris

Chris Peregrin (Manager), Anne Marine Tipton (Education), and Cara Stafford (Stewardship) worked to coordinate the concepts for the marine debris exhibit with the final design development for the Border Gateway to Nature project (see Oversight and Implementation and Stewardship Program Reports). Coordination involved team meetings to discuss schedules. As well as site visits to assess effective locations for interpretive panels. It is anticipated that an interpretive panel will be located within the new gathering space element of the Border Gateway to Nature Project, and an additional panel will be placed along the existing trail that passes by the Goat Canyon Sediment Basins.