MEETING NOTICE AND AGENDA

COMMITTEE ON BINATIONAL REGIONAL OPPORTUNITIES
The Committee on Binational Regional Opportunities (COBRO) may take action on any item appearing on this agenda.

Tuesday, February 7, 2012
3:00 to 4:30 p.m.
SANDAG, 7th Floor Conference Room
401 B Street, Suite 800
San Diego, CA 92101-4231

Staff Contact: Hector Vanegas
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Hector.Vanegas@sandag.org

AGENDA HIGHLIGHTS
- COOPERATION ACROSS EUROPEAN UNION’S EXTERNAL BORDERS: RELEVANCE TO THE SAN DIEGO-TIJUANA REGION?
- OTAY MESA – MESA DE OTAY BINATIONAL CORRIDOR STRATEGIC PLAN: DRAFT 2007-2011 PROGRESS REPORT
- TECATE, TIJUANA, AND PLAYAS DE ROSARITO METROPOLITAN STRATEGIC PLAN
- PROPOSED THEME AND DATE OF THE 2012 SANDAG ANNUAL BINATIONAL EVENT

MISSION STATEMENT
The Committee on Binational Regional Opportunities (COBRO) will advise the Borders Committee of the San Diego Association of Governments (SANDAG) concerning both short- and long-term binational related activities, Issues, and actions; provide input regarding binational border-related planning and development; and identify ways to assist and coordinate with existing efforts in the binational area.

The COBRO will serve as a working group to the SANDAG Borders Committee to facilitate a better understanding of the binational border-related issues and needs of the California-Baja California region.
Welcome to SANDAG! Members of the public may speak to the COBRO on any item at the time that the Committee is considering the item. Please complete a Speaker’s Slip which is located in the rear of the room and then present the slip to Committee staff. Also, members of the public are invited to address the Committee on any issue under the agenda item entitled Public Comments/Communications. Speakers are limited to three minutes. The COBRO may take action on any item appearing on the agenda.

This agenda and related staff reports can be accessed at www.sandag.org under meetings on SANDAG’s Web site. Public comments regarding the agenda can be forwarded to SANDAG via the e-mail comment form also available on the Web site. E-mail comments should be received no later than noon, two days prior to the COBRO meeting.

In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to participate in SANDAG meetings. If such assistance is required, please contact SANDAG at (619) 699-1900 in advance of the meeting. To request this document or related reports in an alternative format, please call (619) 699-1990, (619) 699-1904 (TTY), or fax (619) 699-1905.

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<table>
<thead>
<tr>
<th>ITEM #</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>WELCOME AND INTRODUCTIONS</td>
</tr>
<tr>
<td>2.</td>
<td>SUMMARY OF MEETINGS</td>
</tr>
<tr>
<td>a.</td>
<td>APPROVE</td>
</tr>
<tr>
<td>b.</td>
<td>Summary of the September 6, 2011, meeting.</td>
</tr>
<tr>
<td>b.</td>
<td>Summary of the November 1, 2011, meeting.</td>
</tr>
<tr>
<td>3.</td>
<td>PUBLIC COMMENTS/COMMUNICATIONS AND MEMBER COMMENTS</td>
</tr>
<tr>
<td></td>
<td>INFORMATION</td>
</tr>
<tr>
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<td>Members of the public shall have the opportunity to address the COBRO on any issue within the jurisdiction of SANDAG that is not on this agenda. Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the COBRO coordinator prior to speaking. Public speakers should notify the COBRO coordinator if they have a handout for distribution to COBRO members. Public speakers are limited to three minutes or less per person. COBRO members also may provide information and announcements under this agenda item.</td>
</tr>
<tr>
<td>4.</td>
<td>CONSENT (4)</td>
</tr>
<tr>
<td>4.</td>
<td>UPCOMING EVENTS</td>
</tr>
<tr>
<td></td>
<td>INFORMATION</td>
</tr>
<tr>
<td></td>
<td>REPORT ITEMS (5 through 8)</td>
</tr>
<tr>
<td>5.</td>
<td>COOPERATION ACROSS EUROPEAN UNION'S EXTERNAL BORDERS: RELEVANCE TO THE SAN DIEGO-TIJUANA REGION?</td>
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<td></td>
<td>INFORMATION</td>
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<td>(Dr. Freerk Boedeltje, Visiting Research Professor, Institute for Regional Studies of the Californias, San Diego State University)</td>
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<td>Dr. Boedeltje will give an overview of crossborder cooperation with external border regions of the European Union and a briefing on his research comparing this to the San Diego-Tijuana experience.</td>
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<td>REVIEW/COMMENT</td>
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<td>(Ron Saenz)</td>
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<td>The Otay Mesa - Mesa de Otay Binational Corridor Strategic Plan was approved in 2007 by both SANDAG and the City of Tijuana. This report will provide an update on selected strategies accomplished during the 2007 – 2011 period.</td>
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<td>ITEM #</td>
<td>RECOMMENDATION</td>
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<td>7.</td>
<td>TECAP, Tijuana, and Playas de Rosarito Metropolitan Strategic Plan (Rodolfo Argote, Tijuana’s Metropolitan Planning Institute)</td>
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The process to create a new Metropolitan Zone to encompass the municipalities of Tecate, Tijuana, and Playas de Rosarito started in 2009 and was formalized in November of 2011. Eight key objectives have been identified in the first version of the Metropolitan Strategic Plan and will be presented to solicit input from the Committee.

| 8.     | PROPOSED THEME AND DATE OF THE 2012 SANDAG ANNUAL BINATIONAL EVENT (Chair Paul Ganster) |

The Committee will be asked to discuss and recommend to the Borders Committee that the 2012 binational event be held on Tuesday, June 5, 2012.

| 9.     | NEXT MEETING DATE AND LOCATION |

The next regular meeting of the COBRO is scheduled for Tuesday, April 10, 2012, from 3:00 to 4:30 p.m., at SANDAG.

+ next to an item indicates an attachment
SUMMARY OF THE SEPTEMBER 6, 2011, MEETING

1. WELCOME AND INTRODUCTIONS

The September 6, 2011, Committee on Binational Regional Opportunities (COBRO) meeting was called to order by Chair Paul Ganster, Institute for Regional Studies of the Californias, San Diego State University (SDSU) at 3:10 p.m.

Members present were: Chair Paul Ganster, Institute for Regional Studies of the Californias at SDSU; Consul Alberto Díaz, Co-Chair, Consulate General of Mexico in San Diego; Efraín Ibarra, Vice Chair, South San Diego County Economic Development Council; Past Chair Elsa Saxod, Saxod Enterprises/S.D. County Water Authority; Sergio Pallares, Caltrans District 11; Miguel Tapia, City of Chula Vista; Gary Brown, City of Imperial Beach; Gerardo Chávez, City of Tecate; Francisco de la Madrid, City of Tijuana; Dennis LaSalle, Consejo de Desarrollo Económico de Tijuana (CDT); Gabriela Muñoz, El Colegio de la Frontera Norte (COLEF); Nathan Owens, San Diego Dialogue; James Clark, San Diego Regional Chamber of Commerce; Christina Luhn, San Diego Regional Economic Development Corporation; Clay Phillips, Tijuana River National Estuarine Research Reserve; Jorge Bautista, Universidad Iberoamericana Tijuana; Jaclyn Cooper, U.S. Customs and Border Protection (CBP); David Fege and Doug Liden, U.S. Environmental Protection Agency Border Liaison Office (U.S. EPA).

SANDAG staff present were: Elisa Arias, Hector Vanegas, and Ron Saenz. Freslinda Vera was introduced as the next Borders Program Intern.

+2. SUMMARY OF THE MAY 3, 2011, MEETING

Action: Upon a motion by Past Chair Elsa Saxod and a second by Christina Luhn, San Diego Regional Economic Development Corporation, the COBRO unanimously approved the meeting summary.

3. PUBLIC COMMENTS/COMMUNICATIONS AND MEMBER COMMENTS

Gabriela Muñoz, COLEF, extended an invitation to COBRO to attend the presentation on the Intergovernmental Panel on Climate Change (IPCC) report on renewable energy on September 9 and 10, 2011, at COLEF in Tijuana.
Dave Fege, U.S. EPA, announced that on September 19, 2011, the U.S. and Mexico are going to release, in the Federal register and on the EPA Borders Web site (EPA.gov/border2012), the draft framework document for the next border program, named Border 2020. There will be a 60-day comment period and on October 18, 2011, from 6-8 p.m., at the Best Western Marina Gateway Hotel in National City, there will be presentations by both U.S. and Mexico environmental protection agencies on this project.

**Action:** This item was presented for information. No action was taken on this item.

## CONSENT ITEMS (4 AND 5)

+4. **UPCOMING EVENTS (INFORMATION)**

Chair Ganster invited attendees to review upcoming events and meeting times that were included in the agenda packet.

**Action:** This item was presented for information. No action was taken on this item.

+5. **PROPOSED COBRO CALENDAR OF MEETINGS FOR FISCAL YEAR 2012 (Hector Vanegas)**

Hector Vanegas, SANDAG, announced that the calendar of meetings for Fiscal Year 2012 was included in the agenda packet. The following are the scheduled COBRO meeting dates: November 1, 2011, February 7, April 10, and June 5, 2012. This last one is usually reserved for the binational event.

**Action:** This item was presented for discussion. No action was taken on this item.

## REPORT ITEMS (6 through 9)

+6. **OUTCOMES FROM THE SANDAG 2011 BINATIONAL SEMINAR “ENHANCING TRANSIT AND NON-MOTORIZED MOBILITY ON THE BORDER” AND TASK FORCE RECOMMENDATIONS (Chair Paul Ganster)**

Hector Vanegas explained that the Binational Seminar “Enhancing Transit and Non-Motorized Mobility on the Border” took place on June 28, 2011. It was held at Caltrans District 11, in coordination with the Consulate General of Mexico, the City of Tijuana, IMPLAN, and MTS. There were approximately 100 seminar attendees. The first part of the event was moderated by Council Member David Alvarez, City of San Diego. It included presentations by SANDAG, MTS, the City of Tijuana, and the Border Transportation Council. There was also a panel of experts on the topic and public participation. He added SANDAG staff was really satisfied with the results and received a lot of positive feedback. Hector also announced that the COBRO 2011 Binational Seminar Task Force met in August to discuss outcomes, and formulated the recommendations included in the packet.
Chair Paul Ganster added that the Task Force meeting was attended by COBRO members Nathan Owens, San Diego Dialogue; Elvira Felix, Mexican Consulate; Efrain Ibarra, South San Diego County Economic Development Council, and Jaclyn Cooper, US Customs and Border Protection.

Hector Vanegas stated that the Task Force suggests that COBRO accept three recommendations (attached to agenda Item No. 5 of the agenda packet).

Sergio Pallares, Caltrans, asked for more clarification on the proposed performance measures of transit and non-motorized modes of travel in the international border.

Ron Saenz, SANDAG, stated that the measures in performance that were mentioned is something that needs to be developed as there are some existing activities or flows of transportation at the border that haven’t been properly taken into account. As a result there are certain impacts that have been disregarded that would be important to start considering.

A discussion also was held over the reason and possible ways the indicators could be developed further. Hector Vanegas stated that the main reason for this recommendation is that the special circumstances the border presented sometimes did not correspond to the standard regional indicators currently used. Therefore, by doing this the results and data they could gather would be more accurate and appropriate to SANDAG’s data needs. This could complement what SANDAG is required to do in the 2050 RTP.

Action: Upon a motion by Past Chair Elsa Saxod and a second by Gary Brown, City of Imperial Beach, the COBRO unanimously approved the recommendations.

7. U.S. – MEXICO BORDER CROSSINGS AT SAN YSIDRO: SOCIAL AND ENVIRONMENTAL EFFECTS FOR PEDESTRIAN CROSSERS AND SAN DIEGO COMMUNITIES (David Flores, Casa Familiar; Jill Dumbauld, SDSU; and Lisa Hoffman, San Diego Prevention Research Center)

David Flores, Casa Familiar, stated that the project was funded by two different institutions, the California Endowment, which helped with the organization of workshops and border issues; and the San Diego Foundation which provided a research grant to SDSU for the two and a half year study. He added that since 2004 they’ve been working on identifying strategies for the community to deal with longer border delays that arose after September 11, 2001. When the Environmental Impact Statement (EIS) for the San Ysidro Port of Entry (POE) Reconfiguration project was released, Casa Familiar raised concerns regarding economic, health, and environmental impacts. He stated that the U.S. General Services Administration’s (GSA) response was that the federal government was not going to mitigate any of those impacts. He continued by stating that the environmental impacts were something completely disregarded in the past, but they are currently working to address with binational strategies. The economic impacts also are being studied, since due to the POE’s reconfiguration all the adjacent existing commercial space will be removed. He concluded by stating that they are still working on determining what the next phase of development for the community of San Ysidro will be, which is pending the completion of the San Ysidro POE Reconfiguration Project.
Lisa Hoffman, San Diego Prevention Research Center, explained they are funded by the Centers for Disease Control and Prevention (CDC) to do research in underserved communities. They’ve been working in San Ysidro for about seven years, with the main focus on obesity prevention but also do community based respiratory research. Ms. Hoffman explained that the study sample consisted of approximately 148 interviews of pedestrians crossing the San Ysidro POE. The interviews were given to people crossing from south to north, between May and August 2011. The interviews included questions about personal data and the experience of crossing. The results were divided in two groups: 1) people who reside primarily in Mexico; and 2) those who reside primarily in the U.S. Some of the major concerns were exposure to car emissions, security on the U.S. side, fear of robbery and being scammed, treatment by the Customs agents, and long queue lines which cause stress. A summary of results could be found in the PowerPoint presentation.

Jill Dumbauld, SDSU, worked on the environmental portion of the research, and explained the results. The research involved three separate environmental air quality studies. The first one was about the experience of the pedestrians crossing northbound through the San Ysidro POE and their exposure to air pollution as a result of the traffic; the second study focused on the overall air quality in the community of San Ysidro in relation to the POE; and finally they monitored the POE’s influence on the overall greenhouse gas (GHG) emissions in the San Diego region.

Ms. Dumbauld explained that for the first study, they looked for the level of polluted air exposure in pedestrians that crossed regularly. They monitored 60 pedestrian commuters, which went to school or work in the U.S., but lived in Mexico. Each was given monitors to record the levels of emission exposures over a 24-hour period. They also were given diaries to report their activities and locations during different times of the day. In addition, their urine was analyzed for exposure to air pollutants. They conducted a separate study following the same procedure with another group of people who worked or went to school in San Ysidro. She added that the study showed that the pedestrians who crossed the border were exposed to high amounts of carbon monoxide and ultrafine particulate matter. The levels to which they were exposed have been found in other studies to have a negative impact on health, including cardiovascular and respiratory side effects. High carbon monoxide levels have been linked to negative birth outcomes, birth defects, and problematic pregnancies. She also explained that the monitor at the San Ysidro POE registered the level of pollution and chemicals three to four times higher than those seen in San Ysidro, and up to ten times higher as those seen in the nearby City of Imperial Beach.

Ms. Dumbauld stated that in the second study there were four air pollution monitors staged, three in San Ysidro and one in Imperial Beach. The results showed to be higher at the locations near the POE and the lowest at locations furthest such as in Imperial Beach. Conclusions from this study indicate there is a correlation between the delays for crossing and pollution levels; the longer the wait, the higher the concentration.

Ms. Dumbauld concluded with an overview of the third part of the study, which compared the GHG emissions generated at local POEs in relation to the overall San Diego region GHG levels.
David Flores explained that they support the reopening of the bicycle lane at the San Ysidro POE. He indicated that this would also complement efforts being made in Tijuana, where they are working to provide infrastructure for cyclists.

In response to a question from Gary Brown, City of Imperial Beach, regarding the possibility of GSA ignoring their study for the San Ysidro POE expansion, Lisa Hoffman stated that GSA has been participating in the process of communicating with the community and they at least have incorporated some of the suggestions. Lisa Hoffman has also discussed with GSA if the timeline was too advanced for incorporating some of the new proposals. She stated that GSA’s response was that since they are still working on phase 1, they may still take them into account.

Vice Chair Efrain Ibarra, South San Diego County Economic Development Council, suggested that on their forthcoming studies they consider other congested vehicle concentrations as well, such as the traffic on El Chaparral or areas on the Mexican side.

**Action:** This item was presented for information. No action was taken on this item.

8. **LOS LAURELES 'BIO SHELTER' (Steven Wright, 4 Walls International)**

Steven Wright, 4 Walls International, explained that 4 Walls is based on four principles, shelter, sustainability, natural resources, and community. The first wall, shelter, refers to the houses they make, which responds to the basic biological needs of humans. The houses are also hurricane and earthquake resistant, a quality that makes them ideal for disaster relief. They also use a minimum amount of new building material and are independent of public infrastructure. The second wall is represented by another characteristic, which is the optimal use of vital resources such as water while creating a sustainable home that reduces survival stress.

Steven Wright continued the presentation by explaining the third wall is for Natural Resources. This supports houses being ecofriendly, which allows for the recovery of natural systems. Ultimately, the most important wall is the fourth wall, Community. This represents work with local leaders and organizations that determine the community needs and wants.

Steven Wright stated that one important aspect is that we must see each other (Tijuana-San Diego) as one region, since our natural resources are linked and whatever happens to one side or the other, affects them both.
Steven Wright explained that on the Cañón de los Laureles (Tijuana), people have to pay 60 percent more for water because they have to buy it bottled, those bottles represent waste that cross the border into the U.S. during rain events. He stated that most of the problems result from the immense amount of inefficient houses that are built with no access to public infrastructure.

Steven Wright explained that because tires are such a problematic environmental and health issue, utilizing them to construct these houses gives a plausible solution for the problem and improves the overall wellbeing of the area. He explained, that by 2012 they expect to have double the amount of inhabitants in the canyon, to which they could potentially provide a low cost, current applicable solution.

In response to Dennis LaSalle’s inquiry about the amount of tires used on the houses built at “Las Hormiguitas”, Steven Wright explained that for the 450 sq. ft. structures they used 400 tires, and for a 968 sq. ft. house, that included two bedrooms, a kitchen, living room and a complete bathroom, 900 tires were required.

Steven Wright stated that they used dry toilets with dry composting, in response to Sergio Pallares’ question regarding which mechanism they used for their sewage system.

Gabriela Muñoz stated there was a possibility of sending a wrong message by encouraging inhabiting canyons and other risky areas on the city; she also asked Steven Wright if he was aware of the SEDESOL (Secretaría de Desarrollo Social) law, aiming for the common infrastructure and cheapest material, to provide housing to low income people. Steven Wright responded that he was unaware of such law, but Colorado State and Universidad Iberoamericana were searching for legal foundations and structural requirements, since they are interested in being certified as a legal construction entity.

Nathan Owens, San Diego Dialogue, stated that he worked with a company in Mexico City that was trying to design a solution for the same problem with environmental sustainable housing. They built them in Southern Mexico, but their challenge was to be qualified by a federal governmental agency, that provides housing to communities in need. He suggested to Steven, that since this agency helps subsidize the cost of those homes, perhaps it could represent an option for funding.

Steven Wright explained in response to Jorge Bautista Olvera’s question regarding the cost of the houses, that the material price was $4,500.

Jorge Bautista Olvera, Universidad Iberoamericana, added that he had already heard of the project and presented it in Morelos, Mexico, where they were very interested in the project since they have the same problem with tire waste.

Clay Phillips, Tijuana River National Estuarine Research Reserve, stated he didn’t see much regarding erosion control which represents a big problem; he added the tire problematic will always be second to sedimentation and erosion; to which Steven Wright responded they currently cut into the hills to build and channel the water, but they are still working on improving erosion control.
Hector Vanegas, introduced and welcomed Freslinda Vera to COBRO. Freslinda replaces Stacy Corona to become the new SANDAG Borders Program intern. He explained that Freslinda is a graduate in Architecture from the Universidad Iberoamericana in Tijuana and she currently is studying her Master in Architecture and previously worked at IMPLAN.

**Action:** This item was presented for information. No action was taken on this item.

**9. 2010 SAN DIEGO – BAJA CALIFORNIA BORDER CROSSING AND TRADE STATISTICS (Hector Vanegas)**

Hector Vanegas explained that the blue sheet distributed during the meeting replaces Item No. 9 which was included in the agenda. The electronic version also has been updated on SANDAG’s Web site.

**Action:** This item was presented for information. No action was taken on this item.

**10. NEXT MEETING DATE AND LOCATION**

The next meeting of the COBRO is scheduled for Tuesday, November 1, 2011, from 3:00-4:30 p.m. (Please note the actual time will be 2:30-4:00 p.m.)

Chair Ganster adjourned the meeting at 4:40 p.m.
SUMMARY OF THE NOVEMBER 1, 2011, MEETING

1. WELCOME AND INTRODUCTIONS

The November 1, 2011, Committee on Binational Regional Opportunities (COBRO) meeting was called to order by Chair Paul Ganster, Institute for Regional Studies of the Californias, San Diego State University (SDSU) at 2:45 p.m.

Members present were: Chair Paul Ganster, Institute for Regional Studies of the Californias at SDSU; Consul Alberto Díaz and Román Fernández, Consulate General of Mexico in San Diego; Consul General Steve Kashkett and Susan Reinert, U.S. Consulate General of the United States in Tijuana; Mario Orso, SR 11 and Otay Mesa East Project; Dennis La Salle, Hector Padilla and David Moreno, Consejo de Desarrollo Económico de Tijuana (CDT); Rodolfo Argote, Instituto Metropolitano de Planeación de Tijuana (IMPLAN); Jason M-B Wells and Thomas Currie, San Ysidro Chamber of Commerce; Gerardo Chávez, City of Tecate; Diego Ceballos, Daniela Villamor and Carolina Chávez, City of Tijuana; Tito Alegria, COLEF; Cynthia Paz, Universidad Iberoamericana Tijuana.

Advisory members present: Manuel Villalpando, Asociación de la Industria Maquiladora.

SANDAG staff present was: Elisa Arias, Hector Vanegas, Ron Sænz, Christina Casgar, Stacy Corona and Freslinda Vera.

+2. SUMMARY OF THE SEPTEMBER 6, 2011, MEETING

Action: The minutes were reviewed and will be approved by COBRO at the next meeting.

3. PUBLIC COMMENTS/COMMUNICATIONS AND MEMBER COMMENTS

Consul General Steve Kashkett, U.S. Consulate General of the United States in Tijuana made welcoming remarks and summarized the concerns and caution being taken over the completion of the San Ysidro Port of Entry (POE) Expansion Project. He also stated the importance of having an interest from public and private representatives, on the discussion of binational subjects in which the U.S. Consulate is pleased to participate.
Alberto Díaz, Consul of México in San Diego, greeted the attendees and highlighted the importance of having these kind of meetings in Tijuana, with representatives from both countries. He stated that a common goal being reached is being able to establish an intelligent border, that would enable better communication that allows everyone to be up to date of the current situation and up to the minute events.

**REPORT ITEMS (4 through 6)**

+4. UPCOMING EVENTS (INFORMATION)

Chair Ganster invited attendees to review upcoming events and meeting times that were included in the agenda packet.

Carolina Chávez, City of Tijuana, invited the attendees to the 2011 California - México Binational Mayors Conference, on Friday, November 18; which will be co-hosted by Francisco J. Sánchez, Under Secretary of International Trade, Department of Commerce; and City of Los Angeles Mayor Antonio Villaraigosa.

The event will take place at the Los Angeles Chamber of Commerce (350 S. Bixel St. Los Angeles, CA 90017); from 8:30 a.m. to 3:30 p.m. Interested attendees may register online at http://binational.org/.

Rodolfo Argote, IMPLAN, also extended an invitation for the following events: Quinto Congreso Nacional de Suelo Urbano (CNSU); XIII Seminario-Taller de la Red Mexicana de Ciudades hacia la Sustentabilidad (RMCS) and the Segundo Encuentro Nacional de FOROPOLIS. These events will be held simultaneously on December 8 and 9, at the Grand Hotel Tijuana. These events are being organized by IMPLAN Tijuana, COLEF, the City of Tijuana, El Colegio Mexiquense A.C., Universidad Iberoamericana-León and the Universidad Autónoma Metropolitana-Unidad Xochimilco. For more information, please visit http://www.cmq.edu.mx/, or you may contact Rodolfo Argote, IMPLAN, or Tito Alegria, COLEF.

**Action:** This item was presented for information. No action was taken on this item

+5. PLAN ESTRATEGICO METROPOLITANO DE TIJUANA, TECATE, Y PLAYAS DE ROSARITO (STRATEGIC METROPOLITAN PLAN) (Rodolfo Argote, Instituto Metropolitano de Planeación de Tijuana, IMPLAN)

Rodolfo Argote, IMPLAN, began his presentation with some background information. He indicated that they’ve been working on the Strategic Metropolitan Plan since March of this year, side by side with the cities of Tecate and Playas de Rosarito and its development is being modeled after SEDESOL’s (Secretaría de Desarrollo Social) outline for Metropolitan Region Plans. He also explained that Metropolitan Regions are of great importance to Mexico, since they basically support the country’s economy.
Rodolfo Argote added that for the Tijuana, Tecate, and Playas de Rosarito Metropolitan Region, they were working to achieve a plan and governance that represents the region equitably. Although Tijuana represents 90 percent of the region’s population and wealth, this would automatically make it the central city, but instead they are trying to achieve a homogeneous distribution of decision making.

He explained that the Strategic Metropolitan Plan seeks to be a product of a technical and participative process. To accomplish this, besides the technical research, they hosted different workshops in each municipality, according to the stages of development of the plan (Diagnostic, Vision and List of Projects). This Plan will result in four documents which include the specific plans of each municipality and a common plan representing a combination of the three municipal plans.

Rodolfo Argote stated that they are currently working on a draft Metropolitan Strategic Plan, which will be brought for review to different experts, students and professionals. After this review and adaptations, representatives of the final projects list will be responsible for promoting and implementing the Plan.

Rodolfo Argote explained that the whole process not only will serve for the growth of the metropolitan region, but has already dramatically improved the relationship and collaboration between the municipalities.

He concluded by describing “Digital City” as an important topic being raised in the draft Strategic Metropolitan Plan. It refers to an overall adaptation of the city to technology. Specifically useful for government purposes, in which a digital government would enable citizens to have complete access to project information.

In response to Consul Alberto Díaz question regarding if the border’s topic was incorporated in the Plan, Rodolfo Argote explained that throughout the workshop they held a binational table where all the border issues were discussed and where SANDAG participated.

Tito Alegría, COLEF, raised the water issue, inquiring whether the Metropolitan Strategic Plan considered CESPT’s (Comisión Estatal de Servicios Públicos en Tijuana) future projects or vice versa. Rodolfo Argote, explained that the Metropolitan Strategic Plan, would take into consideration current and future projects being developed by CESPT.

Elisa Arias, SANDAG, in response to the concerns raised over the perceived dismissal of the Jacumba-Jacumé POE project, indicated that the POE is being taken into consideration in SANDAG’s 2050 Regional Transportation Plan as an unfunded long term project.

Action: This item was presented for information. No action was taken on this item
Mario Orso, State Route (SR 11) and Otay Mesa East POE Corridor Manager, began the presentation with background information on the project. He stated that back in the 1990’s, a letter of intent was signed between Mexico and the U.S., which indicated that the next POE to be constructed was Otay Mesa East – Mesa de Otay II; and in order to develop this project it required the completion of the Tecate – Tijuana Highway, Corredor 2000, and SR 125. Mario Orso explained the importance of having these infrastructure requirements to avoid unsuccessful experiences from the past.

Mario Orso explained Caltrans made a series of studies regarding the economic losses as a result of border waiting times. The outcome of these studies was the indication of a higher capacity need, especially since the San Ysidro POE doesn’t manage commercial loads.

Mario Orso stated the Otay Mesa East POE project is focused on achieving a higher competitive level, aided by a new Intelligent Transportation System that will be applied to all the POEs.

He continued explaining that since the Federal Government doesn’t have available funds for this project, they came with a solution in which the POE could be operated by the federal government, but developed by a local government.

Mario Orso indicated that for this new model, Caltrans took over the technical and coordination aspect, working side by side with Mexico; and the financing strategy went to SANDAG, making it the Toll Authority for the SR 11. The funds raised from tolls will also be used for the construction of the POE.

Mario Orso highlighted the project’s current accomplishments which include: the public release of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS); the hiring of a senior investment underwriter, selection of the project legal counsel, the completion of the POE Program Development Study, the signed Memorandum of Understanding (MOU) for stakeholders, the Intelligent Transportation System (ITS) and Traffic and Revenue (T&R) studies, and all engineering permits for SR 11.

He also explained, they still have to work on the harmonizing of tolls on both sides of the border, for which they will need to design a method for border-crossing measurements, in order to have a realistic outline of the situation.

Mario Orso indicated that thought has been given to provide with enough flexibility for future expansion. He added the Traffic and Revenue Study will ultimately determine the size of the POE.

Mario Orso concluded his presentation mentioning next steps, which include: finalizing the Traffic and Revenue Study and EIR/EIS/Record of Decision (ROD); determining the ITS Concept of Operations, and integrating a Joint Vision to implement this project with federal partners and Mexico.
Hector Padilla, Consejo de Desarrollo Económico de Tijuana (CDT), asked if there was required a proportional space set aside for inspection booths and secondary inspections, similar to those at other POEs. Mario Orso, responded that GSA has formulas for determining these space requirements and although GSA is not developing this POE, they still will work with those manuals and the proposals from SANDAG and Caltrans.

Mario Orso, in response to Eduardo Serrano, Consejo de Desarrollo Económico de Playas de Rosarito, stated that both SRs 125 and 905 have all the necessary connections identified and prioritized according to the available budget.

David Mayagoitia, Desarrollo Económico e Industrial de Tijuana, A.C. (DEITAC), asked if the number of commercial and private vehicle inspection booths were available. Mario Orso answered that those figures are still being worked on.

Action: This item was presented for information. No action was taken on this item.

7. NEXT MEETING DATE AND LOCATION

The next regular meeting of the COBRO is scheduled for Tuesday, February 7, 2012, from 3:00 to 4:30 p.m., at SANDAG.

Chair Paul Ganster adjourned the meeting at 4:04 p.m.
UPCOMING EVENTS

WHAT: Cross-Border Media Roundtable (By invitation only)  
USD, Transborder Institute
WHEN: February 7, 2012
WHERE: USD. Institute for Peace & Justice, Room H/I
MORE INFO: transborder@sandiego.edu or (619) 260-4090

WHAT: 2nd Binational Summit USA-Mexico Border Mayors Association  
(By invitation only)
City of Tijuana
WHEN: February 9, 2012
WHERE: World Trade Center - Tijuana
MORE INFO: City of Tijuana Office of Binational Affairs at (619) 699-1996 or 595-5606

WHAT: Competitiveness, Jobs, and the U.S.-Mexico Economic Relationship  
Woodrow Wilson Center. Mexico Institute
WHEN: February 15, 2012
WHERE: Washington D.C.
MORE INFO: www.wilsoncenter/program/mexico-institute

WHAT: The Global Economy and Financial Crisis: Implications for the Americas  
Institute of the Americas
WHEN: February 15, 2012
WHERE: Institute of the Americas
MORE INFO: www.iAmericas.org

WHAT: Americas 2020  
Border Legislators Conference
WHEN: February 15-17, 2012
WHERE: San Antonio, Texas
MORE INFO: www.borderlegislators.org
WHAT: **California/Mexico Presidential Debates 2012**  
San Diego Regional Chamber of Commerce  
WHEN: March 7, 2012  
WHERE: The Westgate Hotel, San Diego  
MORE INFO: www.sdchamber.org

WHAT: **Border Policy Roundtable**  
USD, Transborder Institute  
WHEN: March 23, 2012  
WHERE: Joan B Kroc Institute for Peace & Justice, Room D  
MORE INFO: transborder@sandiego.edu or (619) 260-4090

WHAT: **XXX Border Legislative Conference**  
Border Legislators Conference  
WHEN: March 28-30, 2012  
WHERE: Sacramento, California  
MORE INFO: www.borderlegislators.org

WHAT: **San Diego/Baja California Mission to Mexico VII**  
San Diego Regional Chamber of Commerce  
WHEN: April 16-19, 2012  
WHERE: Mexico City  
MORE INFO: James C. Clark at (619) 544-1376

WHAT: **141st Annual Dinner**  
San Diego Chamber of Commerce  
WHEN: Wednesday, April 14, 2012  
WHERE: Town and Country Resort
500 Hotel Circle North, Grand Exhibit Hall  
San Diego, CA, 92108  
MORE INFO: www.sdchamber.org or Judith Andry at (619) 544-1370 or eventregistration@sdchamber.org

WHAT: **Mexico Moving Forward**  
Center for U.S.-Mexican Studies  
WHEN: May 3, 2012  
WHERE: UCSD  
MORE INFO: www.usmex.ucsd.edu

Key Staff Contact: Hector Vanegas, (619) 699-1972, Hector.Vanegas@sandag.org
OTAY MESA – MESA DE OTAY BINATIONAL CORRIDOR
STRATEGIC PLAN: DRAFT 2007-2011 PROGRESS REPORT
File Number 3400200

Introduction

The Otay Mesa – Mesa de Otay Binational Corridor Strategic Plan (Strategic Plan) was prepared to serve as the tool to achieve a more effective binational collaboration and planning between the San Diego region and Tijuana, Baja California. The Strategic Plan was approved by both the SANDAG Board of Directors and the City of Tijuana in 2007. Every year since 2007, SANDAG has held the Joint Meeting of the Borders Committee, the Committee on Binational Regional Opportunities (COBRO), and the City of Tijuana to hear progress made on the Strategic Plan. This report is being brought to COBRO prior to this year’s joint meeting for input.

The attached draft Progress Report summarizes accomplishments from 2007 to 2011. This staff report identifies areas of effectiveness and opportunities for improvement in the area of binational planning collaboration.

Discussion

The binational border planning vision found in the Regional Comprehensive Plan (RCP) is a key element of the Strategic Plan. The RCP was adopted by the SANDAG Board of Directors in 2004, and calls for the creation of a partnership with Mexico to address binational border planning issues with a focus on transportation and infrastructure, energy and water, homeland security, and the environment. In addition, contributions from an array of planners and stakeholders from both sides of the border also contributed to its development. Finally, the outcomes from the 2004 SANDAG Binational Conference pointed to the need to be more effective in this area. The following are some key reflections on the development and implementation of initiatives included in the Strategic Plan.

1. Focus on an area of opportunity.

   Discussions called to identify an area of opportunity with issues that presented strong possibilities for planning and effective collaboration. The SANDAG Borders Committee and COBRO agreed in 2005 that the Otay Mesa-Mesa de Otay binational corridor was such an area. Transportation, economic development, housing, and environmental conservation were identified as the four key issue areas for evaluation as part of the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan.
It is important to identify timeframes to develop these plans and lead/participating agencies. The planning processes on both sides of the border often run on their own timelines due to Mexico’s three-year duration of its municipal administrations. For this reason, it is important to jointly define the principal actors and timelines to conduct the planning process so that plans can be approved by the Mexican administration that prepares the plan.

2. Two parallel processes were completed: (1) planning on both sides of the border; and, (2) collaboration with interested parties.

While the planning processes may be similar in both countries, different approaches are followed for some aspects, such as public outreach and approval. For this reason a common planning strategy was identified as well as a strong collaboration process with stakeholders.

3. The institutional framework works for planning and binational collaboration.

Although an established planning and binational collaboration model did not exist at the regional level, the existing institutions did function for the Strategic Plan’s development and follow up. The SANDAG structure includes representation from México on COBRO, Borders Committee and Board of Directors. A parallel structure was identified on the Mexican side to provide policy direction, review, and approval processes, including the creation of a new Binational Affairs Commission of the City of Tijuana City Council and approval by the City Council.

4. Patience, mutual respect, and perseverance are indispensable values for planning work and binational collaboration.

The complexity of the border presents unique challenges and opportunities that include two languages, cultures, practices, systems of measurement, currencies, schedules, and holidays. Added to these are the difficulties associated with crossing the border. For this reason, patience, mutual respect, and perseverance have always governed the Strategic Plan’s development and implementation.

5. Monitoring of the Strategic Plan’s Actions

An effective practice has been the periodic follow up on the implementation of actions adopted in the Strategic Plan. The follow up was accomplished through five annual progress reports.

Next Steps

At a future meeting, COBRO will be asked to discuss and provide input on possible next steps for the Otay Mesa – Mesa de Otay Binational Corridor Strategic Plan, including focusing only on specific strategies or linking the Strategic Plan to the strategies included in the new Metropolitan Strategic Plan of Tijuana, Tecate and Playas de Rosarito that is currently under development and the upcoming update of the San Diego Regional Comprehensive Plan.
After COBRO’s review and input, the draft report will be presented at the Joint Meeting of the Borders Committee, COBRO, and the City of Tijuana, tentatively scheduled on Friday, March 23, 2012.


Key Staff Contact: Ron Saenz, (619) 699-1922, Ron.Saenz@sandag.org
INTRODUCTION

The Otay Mesa - Mesa de Otay Binational Corridor Strategic Plan approved by the SANDAG Board of Directors and the City of Tijuana’s City Council in fall 2007, identified several strategies in the areas of transportation, economic development, housing, and the environment. This report is an overview of progress made since the Strategic Plan was completed in 2007.

A. TRANSPORTATION ACTIONS

A1. ISSUE IMPLEMENT THE EAST OTAY MESA-OTAY II PORT OF ENTRY (POE) AND CONNECTING ROADS

EARLY ACTION Establish the East Otay Mesa-Otay II POE Technical Commission to advance planning and implementation of the future East Otay Mesa-Otay II POE and connecting roads as a binational project, in collaboration with Caltrans, SIDUE, and IMPlan, and based upon discussions with the U.S. interagency coordination group.

Since 2007, Caltrans, the U.S. General Services Administration (GSA), U.S. Customs and Border Protection (CBP), the County of San Diego, SANDAG, and the Mexican government continued to make progress to advance the implementation of the proposed Otay Mesa East - Mesa de Otay II Port of Entry (POE) and connecting roads on both sides of the border (Figure 1). Caltrans District 11 has taken the lead on several planning tasks to advance this project. In Mexico, the Secretariat of Communications and Transportation (SCT) also has undertaken required studies for the Mesa de Otay II POE and connecting roads.

The following section is an update on key studies and activities that are supporting the development of the Otay Mesa East-Mesa de Otay II POE project.

PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT FOR STATE ROUTE 11 AND THE OTAY MESA EAST POE

Caltrans District 11, in cooperation with the U.S. Federal Highway Administration (FHWA), completed a Program Environmental Impact Report/Environmental Impact Statement (PEIR/PEIS) in the fall of 2008. This PEIR/PEIS evaluated alternative locations to identify a corridor for the future State Route 11 (SR 11) and a site for future development of the Otay Mesa East POE.

Immediately following completion of the PEIR/PEIS, Caltrans, in cooperation with GSA and FHWA, initiated project-level environmental clearance studies for SR 11 and the Otay Mesa East POE. This Tier II Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is evaluating the design and operational alternatives for SR 11, the POE, and a potential Commercial Vehicle Enforcement Facility (CVEF). The draft EIR/EIS, along with a draft project report, was released in November 2010. The final EIR/EIS and project report are expected to be approved in spring 2012.
In addition, the engineering studies for both SR 11 and the new POE are expected to be completed by spring 2012. The design and right-of-way acquisition are scheduled for 2012 and construction is expected to begin in late 2013, with completion in late 2015.

It also is anticipated that a potential future transit center site adjacent to the proposed Otay Mesa East POE would be cleared in the Tier II EIR/EIS for SR 11 and the Otay Mesa East POE. Since this POE is in the planning stages, it provides a unique opportunity to influence how transit vehicles (and private vehicles picking up pedestrian crossers) will access the POE.

Caltrans, in collaboration with GSA, U.S. CBP, and SANDAG, completed the Program Development Study (PDS) for the POE in July 2011. Furthermore, the team selected a legal counsel for the SR 11/Otay Mesa East POE project.

SANDAG and Caltrans are working jointly to develop a financial strategy to build the SR 11/Otay Mesa East POE project. SANDAG and Caltrans have engaged a Senior Investment Underwriter and Financial Advisor to assist with bond placement and other elements of the project financing. SANDAG and Caltrans are also working with Mexico to conduct a traffic and revenue study for the project.

INTELLIGENT TRANSPORTATION SYSTEMS STUDY

FHWA awarded SANDAG a grant to conduct an Intelligent Transportation Systems (ITS) Technology Pre-Deployment Study for the project. The ITS Pre-Deployment Study is assessing innovative operating concepts and technologies that can help to create a secure, state-of-the-art border crossing. A major focus is to create incentives for passenger and commercial customers to use the tolled border crossing with shorter and more predictable wait times. The data collection will work seamlessly with the advanced traveler information to provide accurate and valuable data to the customer.

ITS technology will collect and provide real-time information on border crossing choices, toll rates and wait times on both sides of the border for the entire San Diego – Baja California region. It is currently envisioned that four high-level systems functions will be implemented along the region’s border including:

1. data collection and analysis
2. enhanced traffic flow management approaching the crossing
3. enhanced traveler information for border crossers
4. revenue collection

PRESIDENTIAL PERMIT

Caltrans submitted the Presidential permit application to the U.S. Department of State (U.S. DOS) in January 2008. It included a description of the facility and its relationship to existing border crossings, traffic information, and projected demand for the new POE, projected financing and construction plans, status of the counterpart project in Mexico, status on U.S. approvals necessary for construction, historic preservation information, and a description of how the POE would serve the national interest.

On December 8, 2008, U.S. DOS approved the Presidential permit, which authorizes U.S. GSA to build the Otay Mesa East POE as a vehicular and pedestrian border crossing.

U.S. GSA FEASIBILITY/FUNCTIONALITY STUDY

U.S. GSA completed a feasibility study in June 2008 that evaluated alternatives to satisfy the projected traffic demand and space requirements at the proposed Otay Mesa East
POE as well as to reconfigure the existing Otay Mesa POE. The preferred alternative calls for the Otay Mesa East POE to function as a commercial and noncommercial facility, includes modernization of the commercial and noncommercial installations at the existing Otay Mesa POE, and takes into account tolls or user fees for the SR 11-Otay Mesa East POE project.

TOLL LEGISLATION

Senate Bill 1486 (SB 1486), the Otay Mesa East Toll Facility Authority Act, was introduced in February 2008 by Senator Denise Ducheny (D-San Diego). SB 1486 was signed by Governor Schwarzenegger on September 30, 2008. The bill allows the Otay Mesa East Toll Facility Act, which authorized SANDAG to, among other things, solicit and accept grants of funds and to enter into contracts and agreements for the purpose of establishing highway toll projects to facilitate the movement of goods and people along the SR 11 corridor in the County of San Diego or at the Otay Mesa East POE. The bill provides SANDAG with various additional powers and duties, including, among others, authorization for SANDAG to issue bonds for the acquisition, construction, and completion of transportation facilities and to impose tolls and user fees for the use of the corridor. The bill requires that toll revenues from the Otay Mesa toll facility project to be used to pay for specified costs, including, but not limited to, repaying bonds, the cost to SANDAG for operating the project, and the cost for capital improvements, pursuant to an expenditure plan. The bill also authorizes SANDAG to enter into agreements with the County of San Diego or a city within that county to accept development impact fees for the construction and reimbursement of improvements in the county or city.

PROPOSITION 1B: TRADE CORRIDORS IMPROVEMENT FUND PROGRAM

In April 2008, the Otay Mesa East POE and SR 11 project was allocated $75 million from the Trade Corridors Improvement Fund (TCIF). TCIF is one of the programs under Proposition 1B (Prop. 1B), which was approved by the voters at the November 2006 general election and enacts the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. This Act authorizes the issuance of more than $19.9 billion of general obligation bonds for various transportation programs.

FUTURE PROJECT FINANCING

A total of $13 million is programmed by the state for the environmental clearance phase. SAFETEA-LU also includes $800,000 for this project, $4.9 million in Border Infrastructure Program (BIP) funds, and an additional $75 million has been allocated toward construction from the state's Proposition 1B TCIF. Depending on the alternative and year of construction, the cost for SR 11 ranges from $300 to $360 million. The POE facility is estimated to cost in the range of $300 to $350 million depending on the functionality of POE.

SANDAG submitted a letter of interest for a possible Transportation Infrastructure Finance and Innovation Act (TIFIA) loan. SANDAG anticipates a TIFIA loan could cover up to one third of the eligible costs for the SR 11/Otay Mesa East POE, and the loan would be repaid with future toll revenues. SANDAG is also forging a Master Agreement with project partners such as the U.S. GSA and the U.S. CBP.
As described previously, SANDAG and Caltrans are working jointly to develop a financial strategy to build the SR 11/Otay Mesa East POE project. The project’s Traffic and Revenue Study will be a key input to the project financial strategy as it will gauge the amount of revenue that can be generated by the project and in turn the size of facility that can be financed.

MEXICO

Garita Mesa de Otay II (POE)

The Otay Mesa East-Otay II POE is a priority project for the Mexican government. In March 2008, Mexico’s SCT released an economic, financial feasibility, and functionality study.

The Mexico POE Project would consist of:

- 27 northbound passenger/commercial vehicle toll lanes.
- 18 SOV toll booths, located on the north end, at the border with the U.S.
- 9 northbound commercial vehicle toll booths, located on the north end, at the border with the U.S.
- 8 southbound lanes.
- 2 southbound commercial vehicle toll lanes, located on the north end, at the border with the U.S.
- 6 southbound SOV lanes, located on the north end, at the border with the U.S.

According to the study and as identified in Figure 2, the preferred alternative calls for a POE that would handle both passenger and commercial vehicles with separate access roads connecting to the Mesa de Otay II-Otay Mesa East POE and SR 11. The 2008 study contemplates user fees of approximately $19.17 pesos (about $1.46 dollars) for passenger vehicles and up to $86 pesos (about $6.56 dollars) for 5-axle commercial vehicles (user fees would be based on the number of axles).

The 2008 study estimated the cost of the Otay Mesa East-Otay II POE project at $391 million pesos (about $29.8 million). The study did not include the cost of the 39 hectares (about 96 acres) already reserved for the POE site by the City of Tijuana, nor the access roads. The Mesa de-Otay II POE would be built through a 30-year concession, and is planned to be a toll facility.

All the road access projects connecting to Mesa de Otay II POE are being planned by the SCT with input from Tijuana’s Metropolitan Planning Institute (IMPlan) and the Secretariat of Infrastructure and Urban Development of Baja California (SIDUE). There is no definite construction start date as this is dependent on a bidding process in Mexico.

The configuration of the pedestrian and public transit access to the planned Mesa de Otay II POE also are being developed. A transit facility is planned to be conveniently located to connect the new POE and the future mass transit service in Tijuana.

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¹ The exchange rate used to convert pesos to dollars is $13.08 pesos per $1 dollar.
Figure 1
State Route 11 / Otay Mesa Port of Entry

Source: Caltrans, 2011

Figure 2
Otay Mesa East-Mesa de Otay II POE and Connecting Roads

Source: C&M Associates, Inc., 2011
ISSUE IMPLEMENT IMPROVEMENTS TO EXISTING OTAY MESA-MESA DE OTAY POE AND CONNECTING ROADS

A. EARLY ACTION
Coordinate with Customs Border Protection and Mexican Customs on the process to fund and implement identified short-term capital and operational improvements at the Otay Mesa-Mesa de Otay Commercial POE.

In 2008, Caltrans completed a project that added approaches for two regular inspection booths and a second FAST² lane north of the existing one (Item 6b, Figure 3). In 2010, the ten-acre parcel (Item 7, Figure 3) adjacent and just east of the Otay Mesa Commercial POE was purchased. In the same year, the Mesa de Otay Commercial POE removed seized vehicles to redirect and isolate traffic (Item 2a, Figure 3). Gamma equipment (Item 2b, Figure 3) and lane dividers for empty trucks (Item 3, Figure 3) were provided. Other proposed Capital and Operational Improvements at the Otay Mesa-Mesa de Otay Commercial POE shown in Figure 3 are on hold until funding becomes available.

State Route 905

State Route 905 (SR 905) is a six-lane freeway being constructed in phases from Interstate 805 (I-805) to the Otay Mesa POE at the U.S.-Mexico Border to serve the POE and businesses and residents in the Otay Mesa area. It connects with other major interstate routes such as I-5 and I-805 and will include grade-separated local access interchanges and a freeway-to-freeway interchange with the South Bay Expressway (SR 125 South).
Free and Secure Trade (FAST) offers expedited clearance to carriers and importers who are enrolled in Customs Trade Partnership Against Terrorism (C-TPAT). It is designed to expedite the clearance of transborder shipments of compliant partners by reducing Customs information requirements, dedicating lanes at major crossings to FAST participants, using transponder technology, and physically examining cargo transported by these low-risk clients with minimal frequency.
B. EARLY ACTION  Explore the feasibility of short-term operational and capital improvements at the Otay Mesa-Mesa de Otay Passenger POE (operations and facilities).

In April 2009 the Department of Homeland Security (DHS) was awarded approximately $21.3 million of American Recovery and Reinvestment Act (ARRA) funds for some initial Otay Mesa POE modernization projects. This funding would cover the cost of land acquisition and design for the expansion project. The modernization project would make improvements to both commercial and non-commercial portions of the existing port.

In July 2009, GSA awarded the Architecture and Engineering design contract for the Otay Mesa POE Modernization project. Construction is subject to the availability of construction funding that has not yet been authorized by Congress.

Some highlights of the proposed Otay Mesa POE modernization include:

- Expansion of the passenger vehicle crossing from 12 to 24 primary passenger vehicle inspection booths;
- Acquisition of a 10.5 acre parcel immediately east of the commercial facility that would accommodate four new commercial inspection booths. This parcel was acquired in 2010.
- Relocation of the existing hazardous waste inspection facility located just west of the southbound vehicle crossing in Otay Mesa.

Staff consulted with GSA on the viability of implementing specific reconfigurations that were identified in the Otay Mesa-Mesa de Otay Strategic Plan and shown in Figure 4.

As identified in Figure 4 a few projects were completed. In 2009, Project No. 4 was completed. It modified lane No. 3 by adding a swing gate for a second SENTRI lane. This serves as a dual use lane and does not include a stacked booth. This also is in addition to an existing dedicated SENTRI vehicle lane available seven days a week including holidays. This dual use lane allows flexible use to process either SENTRI or non-SENTRI vehicles, as traffic conditions warrant. Also in 2009, stacked booths (Project No. 5) were installed on the three West passenger vehicle lanes.

There are currently no active plans for the other projects identified in Figure 4, as they have been suspended pending funding of the future modernization project.

In 2009, U.S. CBP completed installation of the Radio Frequency Identification (RFID) technology at the Otay Mesa POE. Although, this project was not identified on the original list of improvements, it has provided significant operational efficiency advancements to the Otay Mesa POE and other POEs. These upgrades, which include new software, hardware, and the deployment of vicinity RFID technology, were implemented as part of the Western Hemisphere Travel Initiative (WHTI). RFID is already utilized for toll collection on the I-15 express lanes and the South Bay Expressway in San Diego County and could be a cost effective means of tracking and cataloging freight movement through the Otay Mesa border crossing system. The data transmitted by RFID can track and identify vehicles and provide specific information on items being transported as well as border crossing history. In addition, devices can be moved from one lane to another at nominal costs. U.S. authorities estimated that RFID technology could shave six to eight seconds off each inspection because information will appear on an officer's computer screen before a motorist even arrives at the booth.
This technology paved the way for an improvement not previously identified. The Ready Lane, which began operation in May 2011 at the Otay Mesa POE, is a dedicated primary vehicle lane for travelers entering the U.S. at land border ports of entry who carry a Western Hemisphere Travel Initiative (WHTI) compliant RFID-enabled travel document. Examples of WHTI compliant documents are: U.S. passport cards, enhanced drivers licenses, trusted traveler cards (NEXUS, SENTRI, or FAST), military identification cards (for members of the U.S. armed forces on official orders), U.S. Merchant Mariner document (for U.S. citizens on official maritime business), and enhanced tribal card (where available).

Five Ready Lanes were installed and replaced the existing westernmost northbound inspection booths. These improvements include the installation of K-rail on the westernmost lane beginning just north of the northbound bridge to provide a dedicated access lane to the five inspection booths.

**Figure 4**
*Otay Mesa Passenger Port of Entry*
*Suggested Capital Improvements*

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<table>
<thead>
<tr>
<th>1. Construct access to allow employee vehicles to exit the employee parking lot directly onto the northbound SR-905 lanes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Remove k-rail, install steel bollards (or k-rail) and tire shredders (port runner system) along the west and east egress pavement and widen for additional lane(s).</td>
</tr>
<tr>
<td>3. Construct retaining wall, sidewalk and pavement along west edge of the import cargo facility to allow buses to board passengers.</td>
</tr>
<tr>
<td>4. Modify lane #3 for SENTRI/regular vehicles, dual use (not stacked).</td>
</tr>
<tr>
<td>5. Install tandem booths along west portion of primary inspection. (Pending results from San Ysidro Stacked Booth Test).</td>
</tr>
<tr>
<td>6. Modify visitor parking lot. East half of lot for visitors, west half for SENTRI vehicle processing.</td>
</tr>
<tr>
<td>7. Construct a slip ramp entrance to the northbound lanes. Allow busses to re-board passengers and have direct access to the northbound SR-905 lanes.</td>
</tr>
<tr>
<td>8. Install signage - Parking for official use only.</td>
</tr>
<tr>
<td>Bi-national Effort</td>
</tr>
<tr>
<td>9. Implement reversible lanes concept. (International effort)</td>
</tr>
</tbody>
</table>
MEXICO

In 2009, the City of Tijuana repaved the south and northbound lanes connecting to the Mesa de Otay POE with ‘white topping.’ The landscaped area between the southbound and northbound crossing was removed to add an additional northbound passenger vehicle lane. The northbound taxi lane that connects to the Mexican Customs facility and runs parallel to the southbound crossing lanes will eventually be eliminated when the POE’s modernization is completed (Figure 5).

The configuration of the pedestrian and public transit access to Mesa de Otay improvements at Avenida Josefina Rendon and the SENTRI lane access remain in the planning stages. Recommendations from the SANDAG-IMPlan study “Evaluation of Tijuana’s Public Transportation Facilities at the Otay Mesa – Mesa de Otay POE; South Bay BRT” completed in 2008 were considered in this planning. These plans are dependent on the commencement of United States construction to modernize the Otay Mesa – Mesa de Otay POE.

IMPlan will continue to work with stakeholder agencies on both sides of the border to ensure efficient pedestrian and transit movement and connectivity. When preliminary POE designs are developed, more detailed discussions would focus on pick-up and drop-off points for public transportation near the Mesa de Otay POEs.

**Figure 5**
Otay Mesa/Mesa de Otay Port of Entry

1. Pedestrian Bridge and Ramps
2. Flag Pole
3. Drop Off/Pick Up
4. Taxis Parking Area (42 Spaces)
5. Services/Information

- Pedestrian Walkway
- SENTRI Lane
- Bus Lane
- Public Transit Route (Buses)
- Public Transit Route (Taxis)
- INDAABIN’s Project Area
- ADUANA’s Project Area

Source: IMPlan, 2009
EARLY ACTION  Collaborate with the City of San Diego on the Otay Mesa Community Plan update in relation to transportation implications of future land uses changes under consideration.

SANDAG continues to collaborate with the City of San Diego in its Otay Mesa Community Plan update. The Draft EIR is anticipated to be released for public review in early 2012. Most of the technical studies have been produced or updated, and the City is completing the Traffic Impact Study (TIS) to provide input for the Noise and Air Quality studies.

NEW ACTION  Support the implementation of technologies to measure cross-border wait times of northbound commercial vehicles at the Otay Mesa-Mesa de Otay Commercial POE.

In March 2007, Caltrans and SANDAG completed a study funded by the U.S. Federal Highway Administration (FHWA) to determine what Intelligent Transportation Systems (ITS) or other commercial technologies are available to monitor, measure, and report on commercial vehicle wait times at the Otay Mesa POE. The study was divided into two stages. The first stage identified high level requirements for the systems, reviewed ten potential technologies, and described the essential features of the selected solutions.

Of the ten technologies reviewed during Stage 1, the following three technologies met the criteria for further exploration in Stage 2:

- **Automated License Plate Recognition (ALPR):** This license plate recognition technology has the capability of reading the license plates of incoming vehicles at select locations to identify, catalog, and track freight movement through the Otay Mesa border crossing system. The information is stored in a central database and would provide aggregated data on border wait times. ALPR can also track information such as registered driver when additional system-to-system links (i.e. state registered vehicle database) are incorporated. ALPR technology is flexible in the sense that individual cameras and supporting infrastructure can be changed, moved, operated, updated and integrated from one lane to another. However, installation costs will be incurred for any removal and reinstallation of equipment.

- **Radio Frequency Identification (RFID):** RFID is already utilized for toll collection on the I-15 express lanes and the South Bay Expressway in San Diego County. RFID can be an inexpensive means of tracking and cataloging freight movement through the Otay Mesa border crossing system. The data transmitted by RFID can track and identify vehicles and provide specific information on items being transported as well as border crossing history. RFID devices can be moved from one lane to another at nominal costs.

- **Global Positioning Systems (GPS):** When combined with cellular networks, GPS could efficiently track the exact vehicle location and catalog truck movement through the Otay Mesa border crossing system. Essentially, the GPS receiver sends data into the cell phone network, which forwards the information to e-mail, computer browser, or cell phone. GPS technology could potentially minimize the need for additional equipment other than the GPS receiver and Internet browser.

The Stage 2 Report, completed in June 2007, evaluated the viability, cost and high-level requirements of these three technologies for the Otay Mesa Commercial POE. Findings from this report indicated that each of these technologies is customizable and environmentally protected from the
elements. The only universal requirement among the technologies is an active high-speed broadband connection for real time monitoring.

The report concluded with recommendations to field test each of these technologies to further assess the capability of the technology, the quality and consistency of data provided, and the potential impacts on daily operations. However, if field testing were not viable due to budgetary and scheduling restraints, the report recommended deploying the ALPR technology.

In December 2007, FHWA began working on the field test program to measure the time required to cross the international border at the Otay Mesa-Mesa de Otay crossing. Stakeholders from the U.S. and Mexico were invited to participate in the study, including cross-border motor carriers, freight forwarders, logistics companies, Caltrans, SANDAG, State of Baja California, the Instituto Municipal de Investigación y Planeación de Ensenada (IMIP), Mexican Customs, U.S. CBP, and Mexico’s Secretaría de Comunicaciones y Transportes (SCT).

Stakeholders in the San Diego/Otay Mesa attended sessions to discuss user needs for the cross-border travel time deployment as well as any related impediments to successfully collecting cross-border travel time data. Stakeholders were instrumental in defining the total cross border trip area where travel times will be collected, and identifying the intersection of Calle 12 and Bellas Artes in Tijuana as the beginning of the queue for trucks in peak season.

Both GPS and ALPR were considered for deployment at Otay Mesa and were evaluated against the following user requirements:

- Total cross-border travel times (historic data);
- Total cross-border travel time with FAST, empty, and laden movements differentiated;
- Real-time information on delay; and
- Measures of travel times between multiple points within the U.S. and Mexico Customs compounds.

During 2008, the top three technologies, RFID, GPS telemetry, and ALPR were evaluated. GPS telemetry was chosen as the primary means of collecting travel time information at the Otay Mesa Commercial POE because it was anticipated that GPS data would yield the most robust data set, as opposed to RFID and ALPR that would require more installation of hardware, and therefore be more costly, to get the same potential results.

Subsequently, FHWA’s consultant contracted with a third-party provider to pursue negotiations with motor carriers in the study’s target population and gain access to GPS data. They were successful in securing agreements to collect data from five motor carriers. The outcomes of this study have not yet been released.
NEW ACTION Collaborate with the County of San Diego on the East Otay Mesa Specific Plan Amendment in relation to regional transportation implications of local circulation element changes under consideration.

On August 1, 2007, the San Diego County Board of Supervisors approved several amendments to the County’s East Otay Mesa Specific Plan, General Plan Circulation Element, and Bicycle Transportation Plan. Specifically, modifications to existing and planned roads were pursued to accommodate SR 905, SR 125, and proposed SR 11 alignments. Some important changes that would accommodate the latest Caltrans design for SR 11 and the Otay Mesa East POE are outlined below.

- Delete Michael Faraday Drive from Lone Star Road to Airway Road to avoid potential conflict with SR 11/Enrico Fermi Road ramp.
- Change road classification for Enrico Fermi Road, between Otay Mesa Road and SR 11, from four-lane Major to Enhanced four-lane Major. This modification will add turn lanes to accommodate traffic at the Enrico Fermi Road/SR 11 interchange due to the deletion of Faraday Drive.
- Extend Lone Star Road easterly to intersect with Siempre Viva Road east of SR 11.
- Extend Siempre Viva Road easterly to intersect with the new extension of Lone Star Road.
- Extend Airway Road easterly to intersect with the new extension of Siempre Viva Road.

In 2010, the Specific Plan was again amended to recombine Subarea 1 and 2 into a single Specific Plan. No major revisions were made to the land use or circulation plans with the 2010 amendment, except for a boundary change that resulted from a voter initiative. Its primary purpose was to simplify and clarify permitting and development requirements during a period when numerous landowners were processing permits.

ISSUE FACILITATE IMPROVEMENTS TO CROSS-BORDER AND REGIONAL PUBLIC TRANSPORTATION SERVICES

EARLY ACTION Initiate advanced planning work to extend the South Bay BRT service between Eastern Chula Vista and the Otay Mesa POE.

The planned South Bay BRT project is a 21-mile, reliable, high-frequency transit service between the Otay Mesa POE and downtown San Diego via eastern Chula Vista. Figure 6 illustrates the South Bay BRT alignment.

Advanced planning work for the South Bay BRT alignment between the Eastern Urban Center in Chula Vista and the Otay Mesa POE was completed in December 2007. SANDAG currently is preparing an Environmental Impact Report (EIR) for the South Bay Bus Rapid Transit (BRT) project and the Draft EIR is anticipated to be released in summer 2012. Extensive public outreach commenced in fall 2009 and continues as part of the environmental clearance process. The South Bay BRT project is on schedule to be implemented in 2014.
Figure 6
South Bay Bus Rapid Transit (BRT) Service

Source: SANDAG, 2011
EARLY ACTION: Evaluate the City of Tijuana's draft Public Transportation Plan, focusing on routes that would serve the Otay Mesa-Mesa de Otay POE and the proposed East Otay Mesa-Otay II POE

SANDAG completed a study that gathered information on ridership and current and planned transit routes serving the Mesa de Otay POE in Tijuana. In addition, current and future gaps in transit services to accommodate cross-border travel via the Otay Mesa-Mesa de Otay POE (MX) were identified.

The study developed several recommendations, which are based on the assumption that pedestrian crossings will increase at the Mesa de Otay POE in response to the forecasted growth in eastern Tijuana and implementation of the South Bay BRT service in the San Diego region. The findings and recommendations focus on improvements to pedestrian and public transportation infrastructure to facilitate access to both sides of the border.

The following are the recommended next steps.

1. Implement a public transportation station in Tijuana, similar to the proposed South Bay BRT at-grade station, at one of two sites on the east side of the Otay Mesa - Mesa de Otay POE (MX) (Alternative 1), or on the west side, with transit only lanes from Avenida de las Bellas Artes (Alternative 2).

2. If public transit facilities in Tijuana are developed on the east side of the access road, build a pedestrian bridge from the west side of the access road, where pedestrians enter Mexico after passing through the POE.

3. Improve pedestrian infrastructure leading to and from the Otay Mesa – Mesa de Otay POE (MX) along Mexico’s auto access route to Avenida de las Bellas Artes. This can be limited to the east side of the access road if a pedestrian bridge is constructed.

4. Provide shuttle services between IMPlan’s proposed transit network trunk routes on Boulevard Industrial (Highway 2D) and the Otay Mesa – Mesa de Otay POE (MX). The shuttle could also take advantage of its proximity to the Tijuana Airport and provide direct service from the Otay Mesa – Mesa de Otay POE to the airport. This route could serve the tourism market from San Diego by providing an option to use the Tijuana Airport.

5. Provide direct service between the Otay Mesa – Mesa de Otay POE and the Central de Autobuses (Central Camionera) in Tijuana—a large bus station which provides interregional bus services to Baja California and the interior of Mexico. This service could serve the tourism markets between Baja California and United States as well as interregional markets. Such a link would also greatly expand mobility options for residents of San Diego/Tijuana by providing a direct connection to the many destinations in the interior of Mexico accessible from the Central de Autobuses. Because the bus terminal is located in the eastern area of Tijuana, a connection via Otay Mesa is potentially more convenient for travelers from the U.S. than using the San Ysidro crossing to the west.
SANDAG staff shared the study’s findings and recommendations with IMPlan for its review and evaluation. Comments received from IMPlan were incorporated in the final Technical Memorandum.

Findings from this evaluation will inform transit planning activities at the Otay Mesa – Mesa de Otay and the future Otay Mesa East – Otay II POEs. In the interim, IMPlan will work towards defining the location of the pick-up and drop-off points for public transportation near the Mesa de Otay POE.

**Transit Routes 1 and 2**

The City of Tijuana has been incorporating the Federal Program of Mass Transit Support to develop studies to be delivered to Mexico’s National Infrastructure Fund (FONADIN), which require the review of SCT, SEDESOL (Secretariat of Social Development), and SHCP (Secretariat of Finance), with the purpose of securing funding for project investment.

The transportation study titled Technical Legal and Financial Study on Route 1 has been finalized. The preliminary project design and the cost-benefit study are currently being revised for the approval by FONADIN for financing. Route 2 study is under development and would be next in line after Route 1 is approved. This Route includes the pick-up and drop-off points for public transportation near the Mesa de Otay and Otay II POEs.

Once both are approved two high volume trunk lines will be constructed. Route 1 would traverse 18.4 Km or 11.4 miles and connect downtown Tijuana with the Puerta México (San Ysidro) POE and the southeastern part of the city. Route 2 (BRT type) would connect the Mesa de Otay area (including the POEs) along a 30 Km or 18.6 mile route to Santa Fe and Ciudad Industrial on the southwest portion of the city (Figure 8).
EARLY ACTION  Evaluate the potential for extension of the South Bay BRT service to the proposed Otay Mesa East border crossing along the future SR 11

A technical memorandum to evaluate the potential extension of BRT (or other alternative transit service) to the Otay Mesa East POE was prepared in 2008 to advance this strategy. Two alternatives were evaluated as to how transit from the Otay Mesa East POE would connect to the proposed South Bay BRT serving the Otay Mesa POE and to the San Diego regional transit network. One alternative would connect the Otay Mesa East POE via Siempre Viva Road to the South Bay BRT, and the other would connect to the South Bay BRT via SR 11.

In addition, six types of potential transit service were evaluated to learn which would provide the best service. They were as follows:

1. Extension of South Bay BRT
2. Branch of South Bay BRT
3. Extension of MTS Bus Route 905
4. Shuttle Service from Otay Mesa POE Station
5. Shuttle Service from Otay Mesa Road Park and Ride Station
6. Extension of Airway Road Transit Service

Pedestrian and vehicle access to transit at the proposed Otay Mesa East POE also was evaluated. Since this POE is in the planning stages, it provides a unique opportunity to influence how transit vehicles (and private vehicles picking up pedestrian crossers) will access the POE. Several recommendations
were made on providing better access for transit, private vehicles, and pedestrian crossers. The following are key elements that were recommended for consideration in the POE site plan:

1. The Siempre Viva Road/SR 11 interchange should be at least three-quarters of a mile away from the POE. As such, an access road adjacent to SR 11 from Siempre Viva Road to a designated drop-off area would provide direct, unimpeded access for transit into the interior of the POE. Placing the access road adjacent to SR 11 would allow for minimal impact to potential commercial/industrial development adjacent the POE.

2. Access into the POE should limit the amount of interaction between transit vehicles and commercial traffic. It is assumed that commercial traffic will have an exclusive access road into the Commercial Vehicle Enforcement Facility (CVEF) from the new POE. It will be critically important to ensure that the configuration of the Otay Mesa East POE does not require transit vehicles to wait in or cross queues of vehicles waiting to cross the border. To facilitate this goal, a transit guideway is recommended.

3. The access road with transit-only lanes in the center/median into the POE pedestrian drop-off is recommended; the locations for drop-offs/platforms should be placed in separate areas with the transit station nearest the POE pedestrian processing facilities to ensure transit priority to the POE. Private vehicles (non-transit vehicles) should not be allowed to enter the transit station.

The following recommendations were made in regards to the intermodal station requirements for the Otay Mesa East POE:

1. The station platforms should be located within an eighth of a mile from the pedestrian crossing for the POE, or less if possible. This will reduce the total crossing time by allowing the pedestrians to reach the transit station—and its amenities—in the fastest manner possible.

2. The station should be located centrally along the pedestrian path to the Otay Mesa East POE pedestrian crossing facilities. If possible, the Otay Mesa East POE should be designed to consolidate pedestrian processing facilities on one side of SR 11 (either east or west), which would allow direct access to transit facilities without building pedestrian bridges across the highway. This should also include an area for private vehicles dropping-off pedestrian crossers. Ideally, both northbound and southbound pedestrian crossing facilities should be located on the same side of the highway, so that transit facilities in both the U.S. and Mexico can be consolidated for maximum user convenience. By comparison, the design of the San Ysidro and Otay Mesa POEs has led to pedestrians being processed in the same direction of travel as vehicular traffic (i.e., to the right of the roadway), since the facilities in the U.S. and Mexico are consistently on opposite sides of the road, and transit passengers must cross the highway for at least one direction of travel.

3. The station design should remain flexible and have sufficient area/curb to accommodate boarding areas for a shuttle, a conventional 40’ bus, a 60’ BRT vehicle, or all three.
4. If the Otay Mesa East POE station is a terminal station for South Bay BRT or another route (i.e., MTS Route 905), it will need to accommodate additional layover vehicles to maintain operations reliability.

5. The station should accommodate the purchase of fares with either dollars or pesos.

6. The station should accommodate a bus turnaround.

Building on the findings of this study, SANDAG staff prepared a conceptual transit center proposal to serve this POE.

Staff has estimated that a two-acre site would accommodate two bays for one BRT route, two bays for one local bus route, two taxi stacks, two jitney stacks, passenger drop off/pick up, and potential space for long haul transit operators. Scenarios B and C show potential locations for the transit center pending additional planning and design for POE pedestrian inspections (i.e. if pedestrian inspections were to take place in the eastern side of the POE, then a two-acre parcel as shown in Scenario C would be most appropriate for the transit center).

Caltrans will evaluate the footprint of the conceptual transit center in the Tier II EIR/EIS for SR 11 and the Otay Mesa East POE.

SANDAG staff will continue to collaborate with stakeholders on both sides of the border to ensure transit and pedestrian access is properly considered for the future Otay Mesa East-Otay II POE.

**NEW ACTION** Collaborate with the San Diego County Regional Airport Authority in the upcoming market demand study of a cross-border terminal connection between Otay Mesa and Tijuana International Airport toward its possible implementation.

In January 2007, the San Diego County Regional Airport Authority evaluated feasibility issues related to a cross-border terminal between the United States and Tijuana International Airport. In addition, in May 2008, the Airport Authority completed a market demand study of the cross-border terminal to evaluate existing demand and capacity at Tijuana International Airport (TJL), review data on existing U.S. passengers that travel from the Tijuana Airport, conduct a survey of San Diego residents that may use the Tijuana Airport if a convenient cross-border connection existed, and develop projections of expected passenger growth at the Tijuana Airport.

The San Diego County Regional Airport Authority Board decided not to dedicate additional funds to further study the cross-border terminal but included it in the Regional Airport Strategic Plan.

In 2008, in an effort to advance the San Diego-Tijuana Airport Cross-border Facility (CBF), a private investment group, the Otay-Tijuana Venture, LLC, purchased 52 acres of undeveloped industrial land in Otay Mesa to develop the U.S. side of the cross-border airport terminal project. Its intent is to build a full-service cross-border passenger facility. The proposed San Diego-Tijuana CBF project includes the construction and operation of the CBF and an above-grade pedestrian bridge linking border facilities in the United States with a commercial passenger airport terminal at TJL.
The CBF would enable ticketed airline passengers to travel between Mexico’s Tijuana and San Diego, California, via an enclosed, elevated pedestrian bridge. The CBF will consist of a main building on the U.S. side of the border housing U.S. CBP inspection facilities along with shops and services to accommodate travelers; an approximately 525-foot pedestrian bridge from the main building on the U.S. side connecting into Tijuana’s passenger terminal on the Mexican side; and parking facilities and areas for car rentals and potentially bus service on the U.S. side. The CBF is expected to serve 2 million passengers annually, a number that is forecasted to increase to 4.9 million by 2030.

The following summarizes important milestones:

- Approval of the Presidential Permit from the U.S. DOS was granted on August 4, 2010.
- The City of San Diego City Council approved this project on January 10, 2012.
- The project developer (Otay-Tijuana Venture, LLC.) anticipates that the CBF Phase 1 program will be under construction in 2012 with an anticipated opening in late 2013.

**ACTION** Implement the Advanced Passenger Information System (APIS) for crossborder bus operators as a pilot program at the San Diego-Tijuana land POEs and evaluate the system’s effectiveness.

In early 2005, U.S. CBP increased the percentage of crossborder travelers that were fully identified when entering the United States through land POEs, which resulted in longer wait times. People traveling on buses must descend from the bus, proceed to the pedestrian inspection facilities, and then re-board the bus. Reportedly, travelers crossing the border by bus have experienced waits of up to six hours.

To address this issue, U.S. CBP and the Secretariat of Tourism of Baja California agreed to work jointly with local bus operators to find a mechanism that could reduce the border waits. Since late 2005, an Advanced Passenger Information System (APIS) has been in place for commercial airline and vessel operators.

APIS provides U.S. CBP with electronic pre-arrival and departure manifest data on all passengers and crew members, which results in enhanced border security. An advanced manifest is an electronic file that registers traveler’s information, such as name, citizenship, date of birth and travel document, which is submitted to U.S. CBP through an on-line transmission system.

Following this model and after cancelling a pilot implementation in December 2006, U.S. CBP has indicated the agency will consider developing a pilot project. No start date has been given yet.

**ECONOMIC DEVELOPMENT ACTIONS**

**ISSUE** PROMOTE CREATION OR EXPANSION OF COMMON EMPLOYMENT CLUSTERS ON BOTH SIDES OF THE BORDER AND ADDRESS FUTURE INDUSTRIAL LAND USE SUPPLY AND DEMAND

The 2007 San Diego REPS identifies demographic and economic challenges facing the San Diego region and promotes a region-wide strategy to meet these challenges and improve the competitiveness of our local economy. The strategic goals identified in the 2007 REPS include: housing affordability; labor force preparation; investment in goods movement, energy, and water infrastructure; economic monitoring; and financial competitiveness. In addition to the reservation of prime employment land for industrial purposes, these regional issues mirror the issues identified in the Otay Mesa-Mesa de Otay Binational Corridor Strategic Plan, including housing supply and affordability; transportation infrastructure, such as State Route 905 and the proposed Otay Mesa East POE and connecting roads; availability of land for non-retail employment; and protection of existing industrial sites. On March 28, 2008, the SANDAG Board of Directors accepted the REPS as an element of the Regional Comprehensive Plan.

The REPS’ Strategic Goal 4 called for reserving prime employment land (existing and vacant) for light industrial and research and development uses and to establish a redevelopment process that would renew and retain existing industrial lands for similar uses in the future.

One of the key recommended actions was to update the Employment Lands Inventory and request that all jurisdictions keep the on-line inventory up-to-date to maintain timely and accurate data on land availability. The previous update was in the year 2000.

The 2008-09 Employment and Residential Land Inventory Task Force completed the inventory of available land, including a qualitative assessment of its availability and a market analysis to assess the adequacy of the supply.

In September 2009, SANDAG and the San Diego Regional Economic Development Corporation completed the San Diego Region 2009 Employment and Residential Lands Inventory & Market Analysis report. In November 2009, SANDAG updated the Regional Economic Development Information (REDI) system, an internet-based mapping, analysis, and reporting tool to keep the inventory up to date and provide broad public access to it.

The purpose of compiling the land-based inventory databases is to help address concerns expressed by land brokers and developers, as well as businesses in our high-technology industry clusters, about the increasing costs, rapid absorption, and pressure to convert existing “industrial” land over to a residential or commercial use. The region has a limited supply of these “prime” industrial sites. In addition, these industrial sites are where a significant portion of our emerging growth high-technology companies are clustered, and these companies and sites provide the best opportunity for future economic growth and expansion.

The report highlighted the following significant characteristics for the Otay Mesa study area. Nearly 60 percent of the region’s Gross Developable Employment Land is located in five planning Areas. Three of those are located in the Otay Mesa study area, which include Otay (2,201 Acres or 22%), Otay Mesa (1,343 Acres or 13%), and Chula Vista (811 Acres or 8.1%).

In addition, of the 10,000 gross developable acres, 20 percent (2,040 acres) are immediately available for development (can be developed within one year). More than 36 percent of these immediately available acres are located in the planning areas of: Otay (391 acres or 19.2%) and Otay Mesa (343 acres or 16.8%).
The City of San Diego has 690 acres of immediately available employment land. Fifty percent of these acres are in Otay Mesa (343 acres) while more than 99 percent of the immediately available employment land (391 acres) in the unincorporated County is in the Otay Planning Area.

**EARLY ACTION**

Within the framework of San Diego Dialogue’s Crossborder Innovation and Competitiveness Initiative, begin the implementation of selected recommendations from the Borderless Innovation study outlined below:

Initiate a crossborder program to foster scientific and technology relationships, awareness of research, and commercialization of discoveries in the life sciences between the San Diego-Baja California region and other regions in Mexico.

In December 2006, San Diego Dialogue launched a binational project, the Life Sciences Gateway Initiative, which sought to forge binational relationships among researchers, scientists and investors for establishing crossborder programs in the life sciences. Partners include Mexican academic institutes with advanced life science facilities from the regions of Guanajuato, Jalisco, Morelos, Nuevo León, and Baja California. The initiative involved a series of roundtables and seminars among leaders from Mexico and California focused on establishing strategic partnerships in clinical research, manufacturing and venture investing in biomedicine and biotechnology.

San Diego Dialogue and Global CONNECT assessed the development of a Cleantech Industry Cluster in the San Diego Region. Cleantech industries produce a wide range of products and services that optimize the use of natural resources, offering a cleaner or less wasteful alternative to traditional products and services.

In June 2007, Global CONNECT completed a study titled Cleantech Industry in San Diego – An Assessment of Assets and Capabilities for the City of San Diego and the San Diego Regional Economic Development Corporation. With several leading Cleantech companies having a presence on both sides of the border, the study acknowledged that the San Diego – Baja California border region offers an ideal location that no other emerging Cleantech hub can offer: close proximity of high technology R&D and competitively priced advanced manufacturing capabilities. Baja California also offers an option for firms that may find the amount of land available for large scale manufacturing limited in San Diego or prohibitively priced.

In 2007, the San Diego Dialogue produced the first briefing paper titled Borderless Biotech & Mexico’s Emerging Life Sciences Industry, which outlines progress on this collaborative effort. The report describes the San Diego border region as a portal for borderless biotech due to its strategic location along the U.S.-Mexico border and the unique opportunity to work with Mexico’s emerging life science industry. Merck & Co., and its subsidiary Merck, Sharp, & Dohme - México, sponsored a multiyear initiative to link regions in Mexico with strengths in the life sciences with San Diego. This initiative began in 2007 and was completed in 2010.

In 2008, stakeholders from the Mexican regions of Cuernavaca, Guadalajara, Guanajuato, and Monterrey began the process of formally establishing the Mexican Life Sciences Alliance to collaboratively promote their capabilities internationally, including a showing at the San Diego BIO tradeshow in June 2008. They also agreed to co-develop a proposal to the Inter-American Development Bank (IDB). Under a three-year grant, IDB funding would be used to support
Alliance activities to build commercialization infrastructure (e.g., training and policies) within participating research institutions, business support services for new life science startup companies, and international outreach for research and business development opportunities which include linkages with San Diego’s life sciences community. Under the proposal UCSD Extension (San Diego Dialogue and Global CONNECT) and Merck & Co., would serve as partners to the Alliance.

The Mexican Life Sciences Alliance became formalized as a Mexican civil association (asociación civil) in 2009, and submitted its proposal to the IDB shortly thereafter. Due to difficulties securing matching funds required by the IDB during the economic downturn, the Alliance’s proposal was put on hold. Member regions are continuing to pursue development strategies with state and local sources of support.

Beginning in fall 2009, San Diego Dialogue and Global CONNECT launched a process of providing advice and input to new Mexican life science start-up firms. Among the five companies accepted into the program, two have offices in Otay Mesa. These were referred to CONNECT for participation in its Springboard coaching and mentoring program, and by June 2011, three of the five companies successfully completed the program. San Diego Dialogue and Global CONNECT continue to have ongoing relationships with regions in Mexico. Beginning in September 2010 and running through February 2011, both organizations partnered with Mexico’s Technology Business Accelerator (TechBA) office in Phoenix, Arizona, to provide coaching and mentoring services to high technology companies that wish to further develop their business networks in the San Diego region. Of the ten companies in the candidate pool, four presented to intake panels in San Diego. Following the intake panels, two companies were selected for additional mentoring to refine their market entry strategy. Having completed the program, both companies are currently focused on lining up the resources needed for execution. Global CONNECT and the mentors remain in contact with the companies to provide referrals and introductions on an ongoing basis.

**ACTION** Collaborate with the City of San Diego in the Otay Mesa Community Plan update to evaluate future land demand for high value industrial clusters, considering the unique characteristics of the evolving crossborder economy and competing demand for vacant land in the San Diego region

The City of San Diego held workshops with the Planning Commission to discuss issues related to the Otay Mesa Community Plan update. In January 2007, the focus of the workshop was on industrial lands supply, demand, and absorption for the Otay Mesa community planning area, as well as the implications of the Economic Prosperity Element policies of the Draft General Plan.

SANDAG continues to collaborate with the City of San Diego in its Otay Mesa Community Plan update. The Draft EIR is anticipated to be released for public review in early 2012. Most of the technical studies have been produced...
or updated, and the City is completing the Traffic Impact Study (TIS) to provide input for the Noise and Air Quality studies.

**EARLY ACTION** Establish the Crossborder Innovation and Competitiveness Center

The Crossborder Innovation and Competitiveness Center concept remains on hold. However, there are other ongoing activities between the University of California at San Diego (UCSD) and the Scientific Research and Post Graduate Education Center in Ensenada (CICESE) that hold promise for enhancing the competitiveness of the crossborder region. These activities include UCSD’s California Institute for Telecommunications and Information Technology’s (Calit2) collaboration with CICESE in areas such as high bandwidth communications under the LambdaGrid project and on metagenomic studies of marine life via the CAMERA project. These projects show the development of future enabling technologies in IT and the life sciences, which are important industries for both San Diego and Baja California.

**NEW ACTION** Explore the consolidation of employment clusters through the establishment of business service centers such as science and technology parks.

The City of Tijuana, Tecate, and Playas de Rosarito Draft Metropolitan Strategic Plan proposes to identify and establish industrial clusters zones.

IMPlan will develop a clusters study with the available diagnostic information and the necessary studies. These zones would be mapped with their appropriate land use designations.

**HOUSING ACTIONS**

**ISSUE** ADDRESS FUTURE HOUSING SUPPLY AND DEMAND, HOUSING AFFORDABILITY ISSUES AND OPPORTUNITIES, AND INFRASTRUCTURE NEEDS OF EXISTING AND FUTURE RESIDENTIAL LAND USE

**NEW ACTION** Promote comprehensive housing developments within Tijuana portion of the study area, which would include providing space for recreational activities, sports, green areas, and public facilities and services to improve the quality of life.

IMPlan, the State of Baja California, and local developers continue to collaborate on developing the area of Valle de las Palmas in southeast Tijuana. This development was designed to meet growing housing demand in Tijuana in a sustainable manner. Smart Growth concepts are being incorporated into this development.

The focus of the sustainability of this development revolves around three points: social equity, ecological balance, and economic development. The social development of the community will involve strong community leadership, community involvement of local residents, and good relations between neighbors. The ecological balance of Valle de las Palmas involves concentrating the housing and commercial activities in one area of the development, while maintaining another part for the natural environment, and promoting renewable energy. The economic development of Valle de las Palmas is designed to promote a high-technology industrial park that caters to such industries as aerospace, automotive, solar energy, information technology, and biotechnology.
More recently, the Smart Growth concept is being addressed in the City of Tijuana, Tecate and Playas de Rosarito Draft Metropolitan Strategic Plan. IMPlan currently has two main leading projects: Valle San Pedro and Ciudad Natura. Both projects are being designed according to Integral Sustainable Urban Developments model (or DUIS). DUIS refers to developments that comply with the territorial ordinance of the State and Municipalities; the efficient supply of public services; economic growth of the region; integration with the current urban center; and mitigation of damages to the environment.

Valle San Pedro is a project proposed by the Mexican Federal Government, the State of Baja California, and Urbis Casas (land developer and homebuilder); IMPlan is working on the planning methodology to enable the system to adopt DUIS. Valle San Pedro has been certified as the first DUIS in Mexico and was presented at the 2010 Shanghai World Expo. It is projected that the community will grow to over a million residents over the next 20 years.

The 2009 PDUCPT promotes smart growth practices such as land use densification and infill development of urban zones as a strategy to avoid sprawl and to concentrate access to urban services.

NEW ACTION Collaborate with IMPlan and the Urban Land Institute (ULI) on sharing resources, planning techniques, and strategies as they relate to Smart Growth planning.

In 2009, IMPlan updated the City of Tijuana’s Urban Development Program (Programa de Desarrollo Urbano del Centro de Población de Tijuana or PDUCPT). The PDUCPT is updated every five years and grants the City zoning authority to regulate land use. IMPlan coordinates the preparation of the PDUCPT and also oversees implementation of long-term urban and regional planning.

The planned land use includes a system of territorial units that would include one central urban area and the identification of 24 sub-urban centers. A hierarchical transportation network of commercial corridors and services also will be developed. The formation of districts and neighborhoods will be developed at a different scale through future specific plans.

The program identifies where planned land use areas would increase density, mixed used, and public infrastructure. In addition, the program incorporates recent Secretariat of Social Development (SEDESOL) regulations that require that communities become more self-sufficient in order to reduce the use of automobiles.

To advance these goals, the City of Tijuana has established a series of plans that include improving the transportation network and implementation of a mass transit system.

Additional progress towards the implementation of this strategy was the 2008 SANDAG binational event, titled “Smart Growth and Sustainability on the Border: Opportunities for Collaboration with Strategic Partners,” conducted with support from the Consulate General of Mexico in San Diego, the City of Tijuana, IMPlan, and the Urban Land Institute (ULI).

This event focused on regional sustainable planning in Tijuana, the Smart Growth experience in the San Diego region, as well as emerging issues and next steps in the San Diego region.
EARLY ACTION  Collaborate with the City of San Diego in the Otay Mesa Community Plan update to evaluate the potential to convert industrial land use to residential and its regional implications

SANDAG continues to collaborate with the City of San Diego in its Otay Mesa Community Plan update. The Draft EIR is anticipated to be released for public review in early 2012. Most of the technical studies have been produced or updated, and the City is completing the Traffic Impact Study (TIS) to provide input for the Noise and Air Quality studies.

ENVIRONMENTAL ACTIONS

ISSUE  ADDRESS CONSERVATION OF SENSITIVE HABITAT AND URBAN RIVER CORRIDORS (E.G., ALAMAR RIVER AND OTAY RIVER WATERSHED) AND WATER QUALITY

EARLY ACTION  Support plans for habitat restoration and rehabilitation along the Alamar River riparian corridor.

In March 2008, the City of Tijuana allocated funds to IMPlan for the Phase I planning and construction of the Alamar River Expressway. A portion of these funds will be used to canalize a section of the Alamar River with cement. Previous plans called for canalizing the Alamar River with impervious materials that would allow filtration and recharging of the aquifer, as well as increasing the supply of potable water. However, this modification is proposed to safely channel water to the Tijuana River, which also would protect homes, infrastructure, and property.

The canalizing of the Alamar River would be approximately three kilometers which is the same length as the first phase of construction of the Alamar River Expressway. The new canal would begin at the area known as the “Bocina,” where the existing cement channel linking the Alamar River to the Tijuana River channel ends, and extend toward the intersection of Manuel Clouthier Boulevard. The Alamar River Expressway will eventually extend east, linking to roads connecting to the future Mesa de Otay II POE. Future channeling work extending east along the Alamar River would be more consistent with the original plans to use impervious materials.

In 2010, SIDUE allocated funds for the channelization of the Alamar River. This would protect nearby infrastructure, homes, and businesses from possible flooding and support development of future infrastructure around the River such as the planned Alamar Expressway (Vía Rápida) that would connect Tijuana’s Rio Zone with the future Otay Mesa East POE. This project is currently under construction.

Alamar River Upstream

The Tecate River in Tecate, Mexico, begins as Cottonwood Creek in the U.S. and then is called the Alamar River when it enters eastern Tijuana. It has been severely impacted both on the floodplain and within the riverbed. The Tecate River was once a reliable source of clean water that over the years has been contaminated by rapid unplanned residential and industrial development. This rapid growth has resulted in significant negative ecological and social impacts, including: destruction of sensitive habitat areas; pollution of soil, air, and waterways; overdraft of the aquifer; and extensive erosion. The effects of this pollution are present in the Alamar River downstream and the Tijuana River Estuary where water from this river enters and eventually flows in the Pacific Ocean.
Fundación La Puerta (Fundación), in partnership with Rancho La Puerta resort, has actively supported environmental, social and educational projects, including the preservation of endangered native plant and wildlife habitat within Tecate and the surrounding border region.

In spring 2008, the State Commission for Public Services in Tecate (CESPTE), La Puerta Foundation (FLP), and the Border Environmental Cooperation Commission (BECC) signed a collaborative agreement to construct “Wetlands for the Restoration of Tecate River” with a total investment of nearly $147,000 (equivalent to $1.5 million pesos).

These wetlands were restored in early 2009 and will more effectively cleanse the river’s water, create areas for groundwater recharge, help reduce floods, and provide refuge and food for resident and migratory birds. The project covers 5.2 acres (2.1 hectares) of land adjacent to the river with plant species that help improve the quality of the water, most of which comes from the Tecate wastewater treatment plant and the Tecate brewery. This project has the potential to improve water quality in the portion of the Alamar River located in the Strategic Plan’s study area. It also could serve as a prototype for habitat restoration planned for that area.

In addition, the Fundación spearheaded the Tecate River Park Project, which includes the creation of community parks, recreational areas, and preservation of wetlands and habitat for a cleaner river.

This project represents only about one-tenth of all the restored wetlands that Fundación and CESPTE envision for the Tecate River. Future funding is being explored by these organizations.

**ISSUE** COLLABORATE WITH THE U.S. EPA IN THE BORDER 2012 PROGRAM, THE BINATIONAL AIR QUALITY TASK FORCE, AND THE SAN DIEGO COUNTY APCD IN BINATIONAL CLEAN AIR EFFORTS

**EARLY ACTION** Support the San Diego APCD cross-border clean air demonstration projects.

In 2005, the Air Pollution Control District (APCD) received a grant from the U.S. Environmental Protection Agency (EPA) to fund the San Diego/Tijuana Clean Diesel Demonstration Project, with the objective of mitigating the air quality impact of increased cross-border, heavy-duty diesel truck traffic. This project was completed in early 2008 and retrofitted 50 cross-border trucks with Diesel Oxidation Catalysts (DOCs) plus a Spiracle crankcase filtration system.

In 2008, the APCD received another grant from the U.S. EPA to fund the second phase of the San Diego/Tijuana Clean Diesel Demonstration Project.

In 2009, the second phase of the project was completed. Ten border drayage trucks were retrofitted with Diesel Particulate Filters (DPF). DPFs reduce particulate matter emissions by 85 percent.

In 2009, the APCD also applied for a grant from the EPA’s National Clean Diesel Funding Assistance Program to retrofit crossborder drayage trucks. However, funding was not awarded for this project.

**Comprehensive Road Rehabilitation Project in the City of Tijuana (Programa Integral de Repavimentación)**

According to the Border Environment Cooperation Commission (BECC), Tijuana’s air pollution problems are primarily caused by vehicular emissions and suspended dust.
particles. As part of the Border 2012 Program, EPA and SEMARNAT performed an emissions study of the border region, which ranked the Tijuana-San Diego metropolitan area air basin as first in the U.S.-Mexico border region in terms of pollutant emissions derived from mobile and area sources, including: nitrogen oxides (NOx), sulphur dioxide (SO), carbon monoxide (CO), and fugitive dust (PM10 and PM2.5).

Based on this information the City of Tijuana recognized the need to tackle these air pollution problems through improving its infrastructure. Its primary roadway system showed deterioration from potholes, erosion, shifting asphalt, and leveling and runoff problems caused by the uneven terrain of the city. Most roadways were over 30 years of age and had exceeded the average 8-14 year life cycle for asphalt pavements. Historically, the City had allocated a significant portion of its public works budget (US $750,000 on average) for the rehabilitation and maintenance of its principal roadways, particularly for the repair of potholes. However, despite this maintenance, the roadways continued to show substandard travel conditions, due to aging, weather, and high traffic volumes.

After analyzing various options for implementing a comprehensive solution to this problem, the City determined that the most viable long-term solution was the rehabilitation of the primary roadway system with a concrete overlay known as “white topping.” Cement concrete has a longer useful life and lower maintenance requirements compared to asphalt. Consequently, asphalt could be several times more expensive than white topping over the project’s life cycle.

In 2009, the City of Tijuana applied for a North American Development Bank (NADB) loan of US $109.8 million certified by BECC to complete construction of the Comprehensive Road Rehabilitation Project in Tijuana, Baja California. This represented 85 percent of the financing and of the total project cost of US$125.46 million.

The loan financing was provided under an innovative public-private financing structure designed to finance the project with debt for a term of 20 years. Under this arrangement, the private contractor, Cementos Mexicanos (Cemex), entered a construction and financing agreement with the City of Tijuana, which was converted into a long-term debt obligation between the City and NADB.

The project consisted of the rehabilitation of 160 km (100 mi) of primary roadways and an area of 4.3 million square meters (46.3 million square feet), and also included the rehabilitation of storm drains, construction or reconstruction of curbs and sidewalks, and the restoration of landscaping adjacent to the roadways.

The rehabilitation is anticipated to improve air quality in the region by facilitating traffic flows through improved road conditions and fewer street closures for repairs, eliminating the asphalt debris, and reducing the need for constant pothole repair using hot asphalt mix. The use of white topping instead of asphalt will also mitigate the heat island effect, as well as increase the efficiency of street lighting.

Greenhouse Gas (GHG) Emissions

The study titled GHG Emissions due to Vehicle Delays at the San Diego – Baja California Border Crossings addresses the public health concerns related to GHGs in the context of global climate change. It includes a study of estimated GHG emissions due to northbound vehicle delays at the three San Diego County-Baja California border crossings (located in San Ysidro, Otay Mesa, and Tecate) in FY 2009.
Estimations were based on emission rates derived from EPA’s latest mobile vehicle emission simulator model, MOVES2010. FY 2009 emissions were approximately 80,000 metric tons (MT) of CO2Eq for the three border crossings combined, comprising 0.5 percent of total on-road transportation emissions in San Diego County based on the latest 2006 inventory. The study showed that Otay Mesa contributed 30 percent of total emissions and heavy-duty diesel trucks at the Otay Mesa commercial crossing contributed the most on a per vehicle basis (15.3 kg CO2Eq/crossing).

The paper includes recommendations to reduce GHG emissions for the border region including increasing SENTRI participation, decreasing border delay times, and creating a border crossing process that allows drivers to turn off their engines while waiting in line.

**EARLY ACTION**

Link the creation of conservation areas to the objectives and goals established in “A Binational Vision for the Tijuana River Watershed” and the Border 2012 programs.

The California Biodiversity Council (CBC) is a statewide council established to design a strategy to preserve biological diversity and coordinate implementation of this strategy through regional and local institutions. The Council holds tri-annual meetings around the state to improve coordination among state and federal land management agencies and local interests.

In 2006, the CBC’s “Biodiversity along the Border” Committee created two working groups: the Tijuana Estuary Issues Working Group and the Las Californias Working Group. The Tijuana Estuary Issues Working Group focused on conservation easements and issues related to the Tijuana River Valley management, while the Las Californias Working Group focus was on exploring the implementation of actions outlined in the Las Californias Binational Conservation Initiative report.

At the CBC’s October 2007 meeting, the Las Californias Working Group presented the following recommendations: (1) create a Las Californias Binational Working Group to continue to collaborate on binational conservation between Mexico and the U.S. through the leadership of Mexico’s Secretariat for the Environment and Natural Resources (SEMARNAT) and the California Resources Agency; (2) seek funding sources for a community sewer system, sedimentation basins, and trash management to enhance the water quality of the Tijuana Estuary and its watershed; and (3) explore developing a tire recycling plant in the San Diego region. The CBC accepted the report, and directed the Group to follow up on these recommendations and continue meeting through the Las Californias Binational Working Group, as the Tijuana River Estuary Issues Working Group’s activities were scheduled to sunset after the October 2007 CBC meeting.

The Las Californias Binational Working Group last met in 2008. Due to a lack of funding this group has not convened a meeting since then. However, parallel discussions and efforts continue on both sides of the border.

**The Nature Conservancy**

In 2009, Terra Peninsular and the owners of the 4450-acre Rancho Rodeo del Rey completed the conservation management plan for the ranch, which established four management areas: limited development, transition, cushioning and nucleus. The majority of the property is devoted to conservation, with compatible cattle ranching maintained consistent with the ranch’s history. The ranch is a significant addition to the adjacent 12,500-acre Sierra Juarez forest decree reserve. Also, that same year, TNC
acquired the 1,080-acre Jacumba-Eade property in eastern San Diego County, which is part of the proposed Park-to-Parque habitat linkage that will connect San Diego County parklands to open space/parklands in Baja California. The property is anticipated to be transitioned to the California State Park System as part of the Anza-Borrego State Park.

TNC and a consultant (Conservation Biology Institute, CBI) prepared a draft Conceptual Area Acquisition Plan (CAAP) for the Las Californias (Figure 9) area to identify key potential acquisitions, focusing in San Diego County, but including areas within Baja California. In 2011, TNC, Terra Peninsular and CBI also prepared a Conservation Plan for the Sierra Juarez as part of a submittal to CONANP (Comisión Nacional de Areas Naturales Protegidas) that would expand the protected forest decree area of the Sierra Juarez. A similar document was prepared for the Sierra San Pedro Mártir and a new proposal was prepared to establish Protected Natural Area status for Bahía San Quintín.

Parallel to these conservation efforts, in 2009-2010 TNC’s consultants prepared an assessment, “Maintaining a Landscape Linkage for Peninsular Bighorn Sheep,” that identified key research and potential conservation recommendations for this species along the San Diego County-Baja California transborder area. Following up on those recommendations, in 2012, TNC contracted with the University of California, Davis’s Wildlife Health Center (WHC) to capture and track mountain lions in eastern San Diego County along the transborder area. Also in 2012, TNC expects to contract with the San Diego Zoo’s Institute for Conservation Research (ICR) to survey and photo-monitor bighorn sheep and mountain lions from the border to the Sierra Juarez and to collect non-invasive samples of genetic material to assess the level of breeding among California and Baja California populations of bighorn sheep (and potentially also of mountain lions). Future studies and conservation planning are expected to be initiated in fiscal year 2014.

State Commission for Public Works in Tijuana (CESPT)

In early 2009, the State of Baja California allocated funds to its State Commission for Public Works in Tijuana (CESPT) for a zero sewer discharge program that seeks to ultimately eliminate the City’s sewer discharge into the Tijuana River Watershed and the Pacific Ocean. Funds will be used to provide sewer connections to many neighborhoods in Tijuana, and include monitoring and inspections. The secondary treated sewage would be recycled and sent through purple pipes to irrigate city parks and green spaces. This program marks a significant milestone in reducing the flow of sewage across the border. One of the first neighborhoods to receive sewer connections was the neighborhood of San Bernardo located in and around Las Laureles Canyon. Currently, sewage from San Bernardo discharges to the Los Laureles canyon on the Mexican side, which then flows across to Goat Canyon on the U.S. side to the Tijuana River Estuary, eventually draining into the Pacific Ocean. This new infrastructure would essentially stop the flow of sewage result in improved water quality in the Tijuana River Estuary.

U.S. Department of Homeland Security

The Secure Fence Act of 2006 passed by Congress, authorized U.S. CBP to build fences and access roads along 670 miles of the U.S.-Mexico border. On April 1, 2008, then DHS Secretary Michael Chertoff waived certain environmental statutes, as authorized by the Illegal Immigration Reform and Immigrant Responsibility Act, to gain expedited access to the U.S. Department of Interior (DOI)-managed lands and other lands for these border security projects. At that time,
Secretary Chertoff reiterated his department’s firm commitment to environmental stewardship through the use of best management practices and by providing funding for mitigation measures.

On January 14, 2009, DHS signed a Memorandum of Agreement with the DOI regarding environmental stewardship measures related to the construction of border security infrastructure. As part of this agreement, $50 million has been set aside for environmental and regulatory mitigation in the FY 2009 Border Security, Fencing, Infrastructure and Technology appropriation. DOI manages public lands along over 900 miles of the southwestern border. Its biologists and land managers have examined the expected impacts from these projects and proposed a range of mitigation measures.

For the California border area, two DOI agencies, Bureau of Land Management (BLM) and Fish and Wildlife Service (FWS), collaborated with DHS to identify project impacts and develop and implement mitigation measures. The measures include studies to understand border impacts on wildlife and land acquisition to offset permanent and temporary losses of sensitive species and their habitats from construction of border infrastructure. In addition, The Nature Conservancy (TNC) has been actively involved in discussions with the BLM on identifying priority conservation areas that would foster Las Californias crossborder habitat linkages.

The collaboration has funded a study of Peninsular bighorn sheep (Ovis canadensis) movements near the San Diego/Imperial county line adjacent to the international border. BLM and FWS also have identified appropriate lands for acquisition with habitats for affected federally listed threatened and endangered species including coastal California gnatcatcher, quino checkerspot butterfly, and arroyo toad. DHS has provided $8 million toward acquisition. Currently a conservation “gap”, the targeted acquisition is approximately 1,900 acres on which The Nature Conservancy has a purchase option. Upon purchase, the land would be added to the Refuge to be managed in perpetuity for its high biological resource values, and will complete a large core habitat area and provide vital linkages between current Refuge lands and adjacent conserved lands managed by other Federal, State, and local agencies, and private organizations in the vicinity of the international border. The acquisition will further strengthen the northwestern border of the Las Californias Binational Conservation Initiative at the interface of urbanized metropolitan San Diego County with natural landscapes.
Tijuana River National Estuarine Research Reserve (TRNERR) and Los Laureles

During coastal storm events, the effect of raw sewage, sediment, and trash generated upstream, such as in the Tijuana community of Los Laureles Canyon, impacts Tijuana and San Diego beach water quality, coastal and ocean resources.

Agencies and Non-Governmental Organizations (NGOs) both from the U.S. and Mexico continue to seek solutions to the problems that plague the Los Laureles Canyon and the Tijuana River Estuary.

In 2009, the TRNERR secured a grant from the United States Environmental Protection Agency (U.S. EPA) to, among other tasks, hire a full-time Watershed Coordinator. The Watershed Coordinator’s role is to seek to establish and maintain regular communication and cooperation between the Reserve and other programs, organizations, and government entities whose actions influence the long-term health of the Reserve.

The goal of this three-year TRNERR/U.S.E.P.A. project is to further develop programs aimed at restoring and protecting the water quality, habitat, and environment of the Tijuana River Watershed. The Watershed Coordinator is conducting on-the-ground watershed improvement projects in Mexico and the U.S. and spearheading larger, longer-term efforts to expand the ability of regional agencies to manage sediment in coastal ecosystems.
The Watershed Coordinator is promoting the following projects:

- Control erosion in Los Laureles Canyon and promote work in that area as model for other locations
- Prevent sediment from entering the Reserve
- Secure conservation easements in urban canyons in Mexico
- Tire reutilization designs and construction
- Trash consolidation and tire recycling

In Tijuana, the TRNERR along with support from Mexico’s SEMARNAT have identified the Los Laureles sub-watershed to receive restoration to its riverbed, re-vegetation, and conservation of land. IMPlan is facilitating direct communication with property owners of designated conservation lands in Los Laureles to set aside land.

Since December of 2009, large quantities of sediment have been controlled as part of the “Border 2012 Park” in Tijuana. This first of its kind project features engineered and patented retaining walls made from recycled tires. Fifteen thousand used tires has been used as part of the effort to reduce the flow of waste tires into the Tijuana River Estuary, to help harvesting water for restored slopes, and as one of the steps to promote new public policies in Mexico.

In addition, an engineered solution to produce high quality pervious pavers has been put to the test last spring. A collaborative effort between the Watershed Coordination, the UCSD Jacobs School of Engineering and a group of residents from Los Laureles canyon; the project will ensure a daily production of standardized commercial quality pavers.

After years of negotiation with the City of Tijuana, the construction of sediment basins in Los Laureles canyon has been initiated. The first project started last fall but additional funding is needed to complete other important components. Their piece of infrastructure is a key component on the plan to reduce sediment flows at the source.

The Watershed Coordinator obtained permits from Mexico’s SEMARNAT to import approximately 20,000 native plants to Tijuana. Some of these plants will be used to restore reconstructed slopes in Los Laureles, and the rest would become part of the first ever “Native Plant Nursery” in Tijuana. This one-acre parcel located at the municipal nursery has been granted to the watershed coordination group.

In 2009, the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center initiated the San Diego Coastal Storms Real Time, Remote Erosion Monitoring and Outreach Pilot for the Los Laureles area. This project proposes to combine real-time sedimentation monitoring technology and educational outreach efforts in Los Laureles Canyon to address this binational pollution problem in the Tijuana River Watershed.

This project’s goal is to quantify data on upstream sedimentation/trash generation and provide outreach efforts that integrate members of the Los Laureles community directly in the monitoring, training, and instituting a local alert system. In this manner, technology efforts will provide researchers and community stakeholders on either side of the U.S.-Mexico border a mechanism to evaluate and implement best management practices to reduce risk to human health and the environment.

In support of these projects, SEMARNAT has provided the funding to hire approximately 450 temporary workers in three different seasons, each one lasting three months. This approach helps to generate local employment, involves local residents in the implementation of the Watershed
Coordination projects, and carries an environmental education component.

Project benefits include:

- Implementation of an advanced warning system and emergency evacuation plan that involves local community members will also assist in ultimately saving lives during coastal storm events.
- More accurate alert systems to warn the public of imminent health hazards.
- May be applied to northwestern Mexico and Southern California where similar steep canyons and low-income communities exist.

Real time data and other valuable information can be found at the project Web site at www.sdcoastalstorms.org.

Trash Tracking

This research project is an important and necessary first step in the process of implementing new waste disposal policies in both Tijuana, Mexico and the United States. In order to strengthen anti-dumping laws and enforcement in Mexico and prevent waste-export from the U.S., a scientific record of the refuse problem must first be produced. This research project aims to track and record the flow point-source waste debris in the Tijuana River Valley from the Los Laureles Canyon to the TRNERR. Dump-site debris will be categorized, the sites will be classified, and all data collected will be recorded into a database. Research results will be mapped using geographic information systems and will become foundational evidence for legislative and regulatory change. By project’s end, stakeholders will gain insight into storm-induced pollution flows, international resource management, and cross-border waste management.

Additional funding will be sought to carry out specific activities and to assist with key planning efforts in the watershed.

Legislation

In 2009, SB 167 (Ducheny) was signed by Governor Schwarzenegger. It focuses on reducing the impacts associated with waste tires along the California-Mexico border. It allows state fees collected for tire recycling to be used on collaborative projects in Mexico to keep tires from reentering California’s waste stream.

U.S. EPA

The draft United States – Mexico Environmental Program (Border 2020 Program) Sub-objective 3d proposes to identify and implement every two years at least one project to reduce the level of bacteria, sediment, and/or trash that enters the Tijuana River. Examples of potential projects include demarcation of federal land in floodplains to prevent irregular settlements, establishment of conservation easements, use of sediment control best management practices, and trash cleanup programs.

In addition, Sub-objective 4b proposes to develop a binational website that displays timely information on beach advisories on both sides of the border in the San Diego/Tijuana area, and ensure operation of website through 2020.

**NEW ACTION Support APCD efforts to implement the SmartWay Transport project in the San Diego region.**

To advance SmartWay Transport goals, EPA conducted a Truck Stop Electrification (TSE) study. The study evaluated TSE services to the international POEs. TSE focuses on services to reduce idling by freight trucks waiting to cross the border. It will be shared with
stakeholders, including SANDAG, to refine the concept and understand opportunities and barriers to implementation.

The study applied its findings to examine how AI/TSE could be implemented at the Otay Mesa-Mesa de Otay POE. According to SANDAG (2006) the average wait time for a truck at the Otay Mesa-Mesa de Otay POE is estimated at two hours. It is calculated that a cargo truck idling for one hour uses one gallon of gas and emits 24.69 lbs. of GHG gases.

After research and discussion with various stakeholders, three viable adaptations of the AI/TSE concept were developed to avoid trucks slowly idling in a queue while they wait to access border crossing facilities:

- **Traffic Controls on Existing Roadways:** This approach uses traffic controls on existing roadways to process truck crossings in “batches.” Traffic signals are used to stop vehicles, which are encouraged or required to turn their engines off, and drivers wait for a period of time while batches of vehicles in front of them cross the border and clear the roadway. This strategy would not include TSE technology.

- **Mandatory AI/TSE Facility:** This approach requires all vehicles accessing a POE to enter a parking area, turn off their engines, and wait for a signal to cross the border via an appointment.

- **Voluntary AI/TSE Facility:** Trucks accessing a POE have the option to enter a parking area with an appointment system, TSE equipment, and amenities, or they can choose to use the traditional (congested) approach to the customs facility. Drivers would pay to use the facility in exchange for reduced fuel costs, a resting environment, use of amenities and possibly (depending on the procedures) a shorter wait time.

The study also focused on how AI/TSE could work at the current Otay Mesa POE and the planned Otay II POE. Based on the characteristics of the location of the POE – congestion, length of wait, land availability, local climate, need for new/upgraded infrastructure, cost, and willingness to pay – the following conclusions were determined about the value of AI/TSE in these locations:

- **Otay Mesa-Mesa de Otay POE:** Due to high population density and expensive land costs in the area, the most effective AI/TSE approach would be a mandatory traffic control approach on the existing roadway, or a voluntary off-site AI/TSE parking area that serves the POE by a designated roadway.

- **East Otay Mesa POE:** since more land is available in the area, a mandatory on-site parking facility would be most effective.

Based on the study’s key findings, EPA made the following recommendations:

**Recommendation 1:** All new POEs should consider strategies for reducing idling through infrastructure and border crossing processes in their planning. The BECC and NADBank should consider an evaluation of AI/TSE approaches as air emissions mitigation strategies. NADBank could leverage AI/TSE facilities through loans for new ports. Decisions not to have anti-idling should be justified by showing that approaches are not viable or that air quality benefits are not sufficient over the life of the facility.

**Recommendation 2:** Existing POEs with congestion issues should evaluate options for retrofitting with anti-idling infrastructure and determine which model (with which adaptations) could work. Anti-idling retrofits
will not be appropriate or feasible for all border crossings.

Recommendation 3: For the Mexican side of the Otay Mesa border crossing, the U.S. and Mexico should jointly conduct a feasibility study to evaluate and compare the cost and effectiveness for: 1) a mandatory on-road AI approach that uses traffic controls to “batch” trucks through the port using the existing access road and lanes (Strategy A) and 2) a fee-based, voluntary, remote, off-site parking/TSE area that serves the port via a dedicated roadway (Strategy C). The study should involve extensive outreach with stakeholders, especially those in the trucking and shipping sectors to make sure that the strategy is consistent with patterns of drayage logistics at the POE.

Recommendation 4: For the Mexican side of the Otay II crossing, if congestion is predicted over the life of the facility, the project planning should include an AI/TSE facility that is incorporated into the port infrastructure so that all vehicles accessing the POE would use it (Strategy B). Otay II project planning should analyze options for using a portion of toll fees for the new port to cover the cost of the TSE facility. This facility should be evaluated as a possible staging area for access to the Otay Mesa POE as well, via a dedicated roadway.

**Border 2020 Program**

The Draft Border 2020: United States – Mexico Environmental Program (Border 2020 Program) is the latest cooperative environmental initiative and builds on previous binational efforts, particularly the Border 2012. The Border 2020 Program was released for public comment in fall of 2011. Policy Objective 1 in the Draft Border 2020 document relates to the previous AI/TSE efforts.

By 2020, it proposes to reduce the number of vehicles operating in the border region that do not comply with the respective vehicle emissions standards; to limit the international trade of used vehicles that are not allowed to drive on the country of origin; and reduce vehicle emissions at POEs, through anti-idling and other feasible reduction measures.

Emissions from vehicles are a significant source of air emissions impacting border communities. Under this objective, the U.S. and Mexico seek to develop co-benefits strategies to reduce vehicle emissions (criteria pollutants and GHGs) in the border region, including improved fuels availability, improved engine standards, compliance with respective emissions standards, limiting the exports-imports of used vehicles, vehicle inspection and maintenance efforts, and reduced idling while waiting at POEs.